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INEBRIETY...

A Clinical Treatise on the Etiology,
Symptomology, Neurosis, Psy-
chosis and Treatment

AND THE

MEDICO-LEGAL RELATIONS

BY

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the Study of Inebriety, etc., etc.

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DEDICATED

TO THE MEMORY OF THE GREAT PIONEER PROPHET,
STUDENT AND TEACHER OF INEBRIETY AS A DISEASE,

DR. JOSEPH EDWARD TURNER,

who was born in Bath, Maine, October 5, 1822. He was the promoter, founder and superintendent of the first inebriate asylum in the world for the medical care and treatment of inebriates, opened at Binghamton, New York, in 1864.

For over forty-five years he urged that inebriety was a disease and should be studied and treated the same as any other malady, and that the inebriate was curable by scientific means and measures in special surroundings.

These facts were maintained with heroic persistency and pressed with martyr-like courage, in season and out of season. He was opposed, condemned and finally driven out of the institution of his own creation, and persecuted as a charlatan up to the time of his death, July 4, 1889.

This volume is offered as a slight recognition and tribute to the man and his work, who was literally a discoverer of a new realm of scientific medicine.

1896-7
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Dr. J. E. Turner
Warden

PREFACE.

The alcoholic question is positively one of the greatest medical and social science problems confronting the civilization of to-day. This is clearly evident from the widespread efforts and activities of societies, churches, political parties, humanitarians, philanthropists and scientists to overthrow or control the evils from this source; and from the intense interest in the various efforts, ways and means of prevention and cure.

Every sociological and scientific study of degeneration and disease reveals the magnitude of the alcoholic influence, and its intimate relations to individuals and society, and its destructive effects on the social, hygienic and physiological development of the race.

Inebriety was regarded as a disease centuries ago, long before insanity was thought to be other than a moral disorder, and yet the studies and literature up to recent times have reversed this. Inebriety is considered a voluntary vice and moral evil, and insanity a disease.

Notwithstanding the advances of scientific medicine and the studies of mental disease, the theories of moral causation and moral remedies still occupy a prominent place in the discussions of inebriety.

The purpose of this volume is to group and study the phenomena of inebriety and its varied symptomology from the scientific point of view, and show that the teachings of ages ago are sustained by modern research, and that inebriety is not a moral disorder, but a distinct neurosis and psychosis, preventable and curable by the use of physical and psychical means and measures.

As in other scientific work, the studies must begin with a knowledge of the causes and the conditions which follow and precede inebriety and are dependent on them, and from this data to trace some uniform law of origin, growth and development.

Statistical data with tables and charts are omitted, because their conclusions are variable and open to sources of error, and of necessity more or less transient and uncertain. Experience has shown that a clinical description of cases and studies of the surroundings and conditions suggest a great variety of exciting and predisposing causes that furnish a wealth of facts for farther and more exact work.

The studies and conclusions embodied in this volume are the result of a practical experience beginning in 1875 as Assistant Physician in the New York State Inebriate Asylum, at Binghamton, New York, and extending from 1878 up to the present time as Superintendent of Walnut Lodge Hospital, Hartford, Conn. In addition to this, the work as editor of *The Journal of Inebriety*, which was first published in 1876, has furnished a somewhat intimate acquaintance with the scientific literature on this subject, both in this country and Europe.

From this experience with its accumulated data of history of cases, an effort is made to arrange and compare a great variety of facts and their relation to each other, and trace some of the laws which evidently control their movements, confirming the conclusion that inebriety is a disease both preventable and curable from a larger knowledge and the use of more exact scientific means and measures.

The medico-legal relations which center about the inebriate and his conduct have developed many very startling questions of responsibility that are coming into increasing prominence.

The chapters in this book give an outline of the confused theories and teachings concerning the practical relations of crime and the responsibility of the inebriate. The importance of this subject is merely indicated in this work, with the hope that in the near future a more extended study will be given in a separate volume on the practical relations of inebriety and crime and their medico-legal considerations.

One of the prominent conclusions which the evidence in this work sustains is that inebriety is a disease and its phenomena are controlled by uniform laws, which move with exactness and certainty along lines of origin, development, decline and extinction; also that it is possible from a larger knowledge and study of these causes to prevent, cure and stamp out this neurosis with the same certainty as in germ diseases.

The physiological and chemical action of alcohol on the brain and nervous system has been the subject of many exhaustive studies, and the impression has been encouraged that alcohol is the specific and only cause of inebriety. This, a clinical examination of the history of cases, fails to confirm, but indicates that the use of alcohol is very often a symptom of disease and later it becomes an active cause, hence a specific study of this drug gives only a limited view of the great factors and causative agents of inebriety.

This work is practically a continuation and more advanced study of the subject so admirably begun by the late Dr. Norman Kerr, of London, England, in his work on "Inebriety and Narcomania," which passed through several editions and is still being sold. It is also intended to make prominent the conclusions from scientific studies, that the entire problem is one of scientific, curative and preventive medicine, which the trained physician is most competent to study and understand. Hence, it is a

medical topic in which medical men should be students, teachers and authorities in the efforts of cure and prevention.

As an outline view of a great new continent in which the facts presented stand like mountain peaks, leaving wide stretches of undiscovered country, this book is offered for the distinct purpose of creating new interest in a wider and more exact study of the neurosis and psychosis which are called inebriety and alcoholism.

T. D. CROTHERS, M. D.

HARTFORD, CONN., Jan. 1911.

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CHAPTER I.

INEBRIETY AS NOTED IN ANCIENT CIVILIZATION.

Synopsis.—Subject discussed eight thousand years ago. Archæological researches of Egyptian Tombs, show that inebriety was a disease in that early day. Papyri found in the tombs describe the disease and its remedy. How these records were preserved. The same strains and unrest produced inebriety. Egypt a land of banqueting and wine and beer as votive gifts to the gods. Great quantities of wine used at religious feasts. People became drunk. Efforts to restore them. Beer made at a town called Quede. For centuries this was the great beer producing town. Complaints of writers about the dissipation of the people. Method of making wine and the suppression of the vineyards by a royal edict. Instance of a great battle. Settled by the use of wine. Priests medical men at that period. Led in the efforts to reform. Theories of the effects of spirits and suicides. Reigning monarchs become total abstainers. Sale of wine and beer prohibited. Restrictions concerning intoxicated persons. Poor people made slaves for excessive drinking. Rich people had their property confiscated from drinking to excess. Edicts that no spirits should be used at times of war. Mummies have Papyri about them showing that they died from the use of liquor. First specialist who treated inebriety as a disease. First homes where people were confined for medical treatment. Inscriptions on the walls of the tombs show methods of treatment. The use of water, purgatives, also the use of opium and salts were prominent remedies. Women drinking to intoxication noted. Pictures of scenes. Researches in Babylon show similar struggles to overcome the use of spirits. Cuneiform inscriptions on bricks dug up at Neppo. Capitol punishment as a remedy. Secret remedies used. Incidents and stories.

There is something startling in the fact that the alcoholic problem was a subject of intense interest and discussion at least eight thousand years ago. The researches of the various archæological societies, particularly in Egypt, among the long buried records in pyramids and tombs, the pictures on the walls and the writings on papyri, enclosed in the sarcophagi, show that the disease of inebriety was recognized, and the means of cure and prevention studied at least five thousand years before the Christian era.

The religion of that ancient civilization decreed that the preservation of the body was necessary in order that

the soul, when it returned, in the long ages to come, should have the same tabernacle to take possession of, that it had vacated at death. For this purpose the body was embalmed, pyramids were built, and temples and tombs were erected to contain the body; records and inscriptions, papyrus rolls were inscribed, containing the history of events of the lives of the dead; the political achievements of individuals, and the religious thought and endeavors of sages, thinkers, law-makers, kings and warriors of that time.

The climate of Egypt, its warm, dry, drifting sands, moving with every breath of wind, made the country peculiarly fitted to become a vast Valhalla of imperishable records. At this day miles and miles of tombs, buried deep in the hot sand for long centuries, are yet uncovered. In the records found of the great events occurring in the reigns of long lines of Pharaohs, we read of the reforms which they promoted, the edicts they promulgated and note that the life in those far off days was as full of excitement and unrest as ours at the present. The same strain and stress seemed to culminate in the same mental and physical exhaustion, and desire for rest, which characterizes our modern civilization.

Egypt was a land of banqueting, the celebration of feast days, religious rites, and sacrifices were frequent and wine and beer were the votive gifts made to the gods. These, with great quantities of provisions, were brought to the temple on feast days, and laid on the altars. It was supposed that the spirits of the departed ones came back and partook of the spirits of these foods, after which the remainder was distributed to the priests and temple worshippers. Pliny the Elder tells us that on one occasion ten thousand jugs of beer and five thousand vessels of wine were offered to the gods. On another occasion the king donated the product of five hundred vine-

yards as a special offering. On the tomb of another king, among his great virtues, is mentioned the fact that, during his reign, he gave for sacrificial purposes an offering of two hundred thousand jars of wine and half a million jugs of beer. After all services, the foods were eaten and the liquor was drunk by the worshipers, and at Memphis a temple was provided with chambers where these offerings could be consumed.

They were practically religious banquets, and were finally suppressed for the reason that they were considered injurious to the peace and good order of society, and also because they afforded opportunities for plots and intrigues against the government. Another reason was given that both priests and worshipers were made stupid from drink, and often had to be taken home by the slaves, or to the banks of the river and left there to become sober. In their stupid condition they were often robbed by thieves, and then they made complaints to the courts of the wrongs they had suffered. We can believe, in the absence of any direct information, that those far-off judges repeated the same dictum with equal solemnity that we hear in our modern courts, that "drunkenness is no excuse for crime, or the suffering and losses which follow."

A town called Quede seems to have had the monopoly and the reputation of producing the finest beer, and for several centuries it was the "Milwaukee" of that country, and is mentioned frequently.

Wine was the favorite drink of the people, and on some of the tombs built at least five thousand years before the Christian era, there are descriptions of the method of manufacture, and the different kind of wine used. Many pictures show the process of extracting the juice of the grape, and the various methods of planting and cultivating vineyards. One writer complains of adulteration

which caused much stupor in the drinker. Palm-tree wine was condemned because of its rapid intoxicating qualities, and beer was thought injurious, because it bloated its victims. Large vases of wine were sealed up and placed in the tombs of the wealthy to give nourishment to the soul, when it came back to look after the body; these wine jars are found just as they were placed. The wine, of course, long ago disappeared, but many of the jars are covered with descriptions of the manufacture of the wines and the culture of the grapes, as well as other general events of the time.

One of these vases, now in the British museum, found in the tomb of a monarch, who lived over six thousand years ago, contains the statement that the wine was made from white grapes, and that the king had suppressed the culture of this kind of grapes, save only in the royal vineyards. It is stated that drinking this kind of wine is never followed by evil results. On another vase is a story of a great battle between the kings of upper and lower Egypt, during which beer from seven thousand jugs, mixed with the blood of prisoners and slaves, was left on the field by one retreating king. The enemy following, stopped, and drank the beer, and as a result became intoxicated and were easily destroyed.

While both beer and wine were used to propitiate the gods, as offerings to them, their injurious effects were recognized, and many efforts were made to suppress or limit their use among the common people. The priests, who were the medical men of that period, seem to have led in the efforts for reform. On the tomb of one of them is a prediction that if wines and beers continued to be used by all classes, the nation would be doomed to destruction, and deserted by the gods. Another tomb contains an equally ominous prediction, and declares that a small quantity of wine and beer will clarify the soul, and give

it greater power in the other world, but if large quantities are used, it will stupify and chill the soul, and keep it in a place of torment. On a third tomb the theory of reincarnation is outlined, and the cause of excessive drunkenness in some men is said to be the possession of the spirits of loathsome animals. Another statement declares that the victim of the excessive use of liquor, who becomes stupid, falls down and breaks his head, liberates the spirit from the body before the gods want it, and hence is doomed to a long period of punishment.

From the very earliest records, mention is made of different efforts to suppress the excessive use of spirits. When the reigning monarch was a total abstainer, strenuous laws were passed forbidding the use of wine, except on special occasions, but when the monarch himself was a drinker, there were few if any restrictions.

Some of the legal enactments to suppress the use of alcohol and punish the inebriate, have a very modern sound. At one period, the sale of wine and beer was prohibited, except in shops on side-streets, away from public observation; and the dealer paid a tax for the privilege of selling, and was forced to provide clean rooms, with places for persons who became intoxicated; or he had to take them home at his own expense, particularly after night-fall. Poor people who drank and were boisterous were fined heavily, and often made slaves to the government until the fines were paid. Rich people who became inebriates had their property confiscated, particularly if they persisted in drinking to excess in public, making themselves disagreeable to others.

One king boasted that he never lost a battle when he prevented his soldiers from having wine or beer before the engagement. Another statement is made that bread and water are the most powerful stimulants to give soldiers strength and courage on the march. The incident is

mentioned, that after a victorious battle, the king and his army made a great drink offering to the gods. In the midst of their drunken joy and stupor, the enemy returned and frightful slaughter followed. Later, an edict was made, that no wines or beers should be given in the campaign, and no vinous offerings to the gods should be used, until the troops had returned home. Wines and beers were kept in the homes of the wealthy, in rooms built for the purpose, where they could be used in secrecy; and on some of the mummies are papyri indicating that death was due to the use of liquor.

In one of the tombs there is the statement that the occupant, a priest, was skilled in the treatment of madness following the use of wine. He was, no doubt, one of the first specialists to treat inebriety and the drink disease. On another tomb is the statement that the deceased had built a house, where persons who were made mad from wine and beer were received. This was probably the first inebriate asylum, and dates back five thousand years before the Christian era.

Another mummy was evidently in life a favorite priest in the family of a drinking king, and the inscription describes his skill and success in his efforts to keep the monarch from drink madness. Numerous pictures and inscriptions on the walls of the tombs refer to the treatment of the drink excess, which seems to be confined largely to sobering the victims. These pictures show intoxicated persons, brought home by their slaves from the temple or banqueting halls; the efforts made to force fluids into the stomach through funnels, with resultant vomiting; and the giving of enemas, following by purging.

In many instances, streams of water were poured on the heads and backs of intoxicated persons, while rubbing, kneading, flagellation, and pressing the body, were means

used to remove the effects of the drink excess. Another picture shows a man covered with a robe, from the openings in the folds, vapor is escaping, indicating a steam bath, made by putting hot stones in water. Some of the papyri give accounts of the use of opium and salts as remedies. One contains the description of an injury on the head, which made the victim drink madly. Another speaks of the action of the sun taking away all power of self-control, and leaving the victim a drunkard. All these suggest physical causes.

Women appear to have drunk as freely as men. Some of the pictures show banqueting halls in which women were clearly intoxicated. The head-dress and robes, falling from the shoulders, show that they were both hilarious and stupid. Later they are vomiting and being carried out by attendants.

Researches in the ruins and temples of Babylon give distinct intimations of similar battlings with alcohol, during the civilizations that flourished in the cities of the Euphrates and Tigris valleys. Grapes were cultivated and wine was the common drink. The cuneiform inscriptions on the bricks dug up by Neppo, tell the same story of drunkenness and of the efforts to correct it. About the same remedies and means were used to make the victim sober, as were used in Egypt, and some of the bricks contain bills of charges for services rendered on such occasions. Dashing cold water over the victim and whipping him with brushes were the common remedies.

One king appeared to have made an offer of great preferment with large sums of money to the courtiers who would abstain from liquor. A certain prince once took the prize and soon after became intoxicated. The king ordered his instant death, and gave his opinion that such a man was unfit to live. On one of the bricks is a statement that has a very familiar and modern sound. It

records the fact that a certain priest had discovered a medicine for drink madness which he would sell to any one for a certain sum of money. On another brick it is said, that a priest had given a certain monarch a drug, which prevented him from becoming intoxicated, and yet enabled him to drink freely. In both of these instances the inference is that these specific drugs were secrets, and were only sold to those who could pay for them.

The specific discoveries of modern times are antedated by several thousand years, and probably further researches may tell us more of the wonderful remedies used in those old days. There were saloons and wine shops in ancient Babylon, and men who drank to excess were punished by whipping or enslavement. Although these records are fragmentary and broken, they give abundant evidence that inebriety as a disease attracted attention and was a vital study, and that many of the physical causes were understood. No doubt further researches will supplement this evidence.

Our struggles with the alcoholic evil, our methods of license and prohibition, are mere repetitions of the earlier attempts made in the dawning of civilization to deal with the self-same curse. Many of the early Grecian writers on this subject made reference to ancient Egyptian literature. One of these references is given by Theophrastus, a Grecian philosopher, describing the sickness caused by wine, and the medicine used to cure it. This was taken from an old papyrus, and is stated as we would at present give the history of a clinical case illustrating some fact or theory. The following is a rough translation. The wife of a certain king in Egypt, having drunk a large quantity of Cretan wine, became immoderately mad, and strangely affectionate, embracing and kissing every man she met; from laughing and singing she became angry and quarrelsome and wanted to strike every-

body. She was violent and suspicious of everything; everybody in the house was frightened, and took great precautions to avoid coming in contact with her. Then sorrowful and lamenting, she prayed to her dead relatives and friends in plaintive songs. She was then overcome by sleep, during which she snored loudly. On awakening, spirits of antimony were given, and water poured over her head and body, followed by inunctions of oil, after which she recovered. This very clear description of an attack of acute intoxication was no doubt made the text for an elaborate thesis, which is lost.

Galen, one of the early Grecian physicians, describes some remedies for the disease which follows the use of wine. He divides the remedies into two classes, and does not state what they are, but gives a theory of their action in some detail. The first remedies were to be used before the wine, the object of which was to prevent its fumes from rising upward and affecting the brain. The second remedy was to be used after the stupor and debauch, to drive out the fumes of wine by the bowels and kidneys. These and other very quaint references show that the treatment of inebriety was very seriously considered in those early days.

CHAPTER II.

THE RECOGNITION OF INEBRIETY AS A DISEASE.

Synopsis.—Herodotus wrote of inebriety, calling it a "Drink Madness." Many philosophers insisted that inebriety was inherited and laws were passed forbidding women and boys to use wine. Severe restrictions enforced to produce total abstinence. Inebriety likened to dyspepsia in the first century of the Christian Era. Ulpian a Roman Jurist commented on the disease and its legal remedies. Laws were passed providing that murders committed during intoxication should be remitted because of disease. Drunkenness and Madness considered synonymous, Condillac's views. Dr. Rush's teachings. Cabanis' book on Inebriety. Salvator's work on Inebriety, its Pathology and Treatment. Other authors who wrote freely on this subject. Dr. Todd's lecture on The Need of Inebriate Asylums. The literature on this subject and its cold reception. The English Lunacy Commissions and its Reports in 1844. The influence of the Washingtonian Movement in 1840. Work of Dr. Turner, beginning in 1846. The first asylum opened at Binghamton, N. Y. in 1864. The first medical society to take up this subject in 1870. The first Journal published devoted to this subject in 1876. Other Journals published. The International Congress on Inebriety in 1887. The slow recognition of the subject and the laws which govern its growth. Difficulties which the study encountered.

Among the many references to inebriety in the Greek literature was that of Herodotus, who wrote in the fifth century before the Christian era. He asserted that drunkenness was a madness and sickness of both soul and body, which could be overcome by proper remedies and methods. Diodorus and Plutarch also declared that the drink madness was an affection of the body, which had not only destroyed kings and nobles, but had done infinite damage to the world, and they followed these statements with suggestions of how to correct and remove these maladies.

For several centuries the physical causes of inebriety were recognized by the Greek philosophers, who insisted upon the tendency of this affliction to transmit itself to the next generation. At different times laws recognizing this evil were passed, forbidding women and boys to use

wine. Frequent reference was made to the madness which sought solace in wines and liquors, and in Spartan times very severe restrictions were enacted against the use of liquors during athletic training, and urgent council given to abstain from wine when any great work was to be done.

In the first century of this Christian era, St. John Chrysostom urged that drunkenness was like dyspepsia, and was a physical madness, which could be prevented, and should be treated as any other ailment. In the next century Ulpian, the Roman jurist, referred to the irresponsible character of inebriates, and the wisdom and necessity of treating them as sick men. His views were embodied in several laws, which clearly distinguished the physical nature, and need of physical treatment of such cases. Ulpian's commentaries on Roman laws contain many references to these enactments. The literature of Roman civilization affords abundant evidence that drunkenness was recognized as a bodily disorder often uncontrollable, and frequently resulting in veritable madness.

In the 13th century, one of the kings of Spain enacted laws recognizing inebriety as a disease, lessening the punishment of the crime committed while under the influence of spirits. One of these laws provided that when murder was committed during intoxication, the death penalty should be remitted, and the prisoner be banished to some island for a period not less than six years. In the sixteenth century the penal codes of France and many of the German states contained enactments which recognized the disease basis of inebriety. All punishment for crimes committed during these states varied according to the conditions of the prisoner at the time. Drunkenness continued beyond a certain point, was regarded as a condition of insanity and irresponsibility. In many of the medical writings of the age, drunkenness and madness were men-

tioned as synonymous, and curious ideas concerning the nature and treatment of the evils are recorded.

In 1745, Condillac, a French philosopher, wrote, expressing clear views of the disease of inebriety, also that the state should recognize and provide means for its treatment. He asserted that the impulse to drink was like insanity, an affection of the brain which could not be reached by law or religion. Dr. Benjamin Rush, of Philadelphia, in his lectures given in 1790, set forth the same theory, supported by a long train of reasoning. To him belongs the honor of first elaborating and outlining ideas which were accepted half a century later. In two essays entitled "The Influence of Physical Causes Upon Moral Faculties" and "An Inquiry into the Effects of Ardent Spirits upon the Human Body and Mind," he described the disease of inebriety, dividing it into acute and chronic forms, giving many of the causes, of which heredity was a prominent one; also urging that special measures be taken in the treatment, which should be in a hospital for the purpose. At this time his views were clear and distinctive, although they were not published in book form until 1809. They were entirely independent of all previous observations. In 1802 Dr. Cabanis, of Paris, wrote fully endorsing the views of Condillac, that inebriety, like insanity, was a disease that should be studied, and that it was a distinct form of mental disorder, needing medical care and treatment. Professor Platner, of Leipsic, published a paper in 1809 (the same year Rush's writings appeared), affirming that inebriety was like an insane impulse and a form of insanity which should receive medical care and be studied by the aid of science. In 1817 Salvator, of Moscow, a physician of some eminence, published a pamphlet entitled "Ebriosity, its Pathology and Treatment." He divided drunkenness into two forms, remittent and intermittent, and urged that

they be treated by physical means. Esquirol, in 1818, described a condition of the nervous system which caused inebriety. In 1822, Buhl Cramner, a distinguished physician of Berlin, wrote a small book defining inebriety as a state of irritation of the brain and nervous system, to be cured by physical means, because it was purely of physical origin. In Europe the writing of these four men, Platner, Salvator, Esquirol and Cramner, placed the subject on a scientific basis, paving the way for a wider and more thorough study. Although Dr. Rush had written on the general subject more definitely than the others, yet his writings were practically unknown.

Dr. Eli Todd, superintendent of the Hartford Retreat for the Insane, began to urge in 1828 that the inebriate be treated as insane. This was taken up by a committee of the Connecticut State Medical Society in 1830, which reported on the necessity of an asylum for the medical care and treatment of inebriates. They recommended in an elaborate essay that it was expedient to establish such an asylum for the cure of inebriates. This report was written by Dr. Todd, and was a strong plea for the recognition of inebriety as a disease, and of its curability by physical means. This report was published in the transactions of the Connecticut State Medical Society and is remarkable for its clear conception of the subject, so far beyond the current opinions of that time. In 1833 Dr. Woodard, of Worcester, Mass., in his yearly report, urged that inebriety is a disease, and curable as other diseases in asylums for this purpose. This called new attention to the subject and was the beginning of a literature which has attained much prominence, especially in this country. In 1839, Dr. Roesch, of Tübingen, in a volume on "Spirituous Liquors," urged that inebriety be considered a disease. He elaborated the idea and pointed out the errors of other authors at some length. The

English Lunacy Commission in their report in 1844 urged that inebriates should be regarded as insane, sent to asylums for treatment, and not punished as before. Dr. Nasse, of Boon, followed, urging the same view, in a pamphlet which was widely circulated.

Despite the weight and authority of these scientific men, their views attracted little or no attention; if noticed it was with derision and scorn. Although the Washingtonian movement of 1840 brought the matter of inebriety into great prominence, the interest was ephemeral, and soon forgotten. Yet the records were important, for the men inaugurated a new movement, and gave the world a clearer conception of the cause of alcoholism, started the modern scientific medical men in their search for the causes of the drink evil in the weakened or diseased condition of those who became its victims.

Therefore, in 1846, Dr. J. Edward Turner, of Maine, began a most enthusiastic effort to found an inebriate asylum for the physical care and treatment of this class. By herculean efforts against great opposition, he succeeded in founding an asylum at Binghamton, New York. In 1864, twenty years later, it was changed to an insane asylum. The history of this work will appear in another chapter. In 1870 a medical society was formed, which still continues its work in the study of this subject, and in 1876 the *Journal of Inebriety* was first published as its organ. In 1884 a kindred society with a like purpose was established in London.

In 1887 an international congress was held in London, in which leading men from all parts of the world met and read papers demonstrating the progress in the study of the physical causes of this subject. The growth of the theory of inebriety being a disease, and its practical recognition in the last century, will be traced in the next chapter, but at this point it will be interesting to notice

the fact that this great subject is traveling identically the same path, with the same history that has marked the progress of every great scientific truth. First a period of denial, indifference, want of recognition and general skepticism; the world practically deaf to all statements made, the advocates treated with contempt, their claims denied, with contemptuous pity for their ignorance. They are greeted with opprobrious terms, called cranks, enthusiasts, and persons pursuing a visionary project without merit or reality. Now, the second stage is the opposite of the first, that of credulous acceptance, and extravagant recognition and endorsement of the claims made. This is the era of charlatanism, where quacks rush in and take advantage of public credulity and expectation, exploiting the facts in the most extravagant way, and turning them to personal advantage, claiming impossible results, and filling the air with wild statements of discoveries and realities undreamed of before. Then comes a reaction, and a third stage follows; that of critical inquiry into, and recognition of, the facts and their meaning, that of the application of rational means and of the full development of the subject, along lines of exact science. This law of movement is illustrated in the discovery of new countries, where the first reports of its wealth and fertility are treated with skeptical indifference for a time. Then comes the squatter period, of persons who move in, establish towns and make the most extravagant assertions about its richness and value. They are called the boomers. After a few years they sell out and disappear and the actual settlers arrive.

They occupy the lands and develop its resources along rational normal lines. Almost every territory and new country has passed through these stages, particularly in the far West.

The claim that inebriety is a disease has passed its first stage of indifference and denial. The second stage of credulity has come and nearly passed away, and now the third stage of critical study and scientific recognition of the facts and their meaning is at hand. Back of this uniform order of events so common in the evolutionary growth of truth, is another factor which is not well recognized, namely, the intensity of American civilization, and the practical demand that theories and practice shall correspond and not antagonize each other. The question now is, if inebriety is only a vice and moral lapse in the progress of man, why are not the measures used to overcome this condition successful? Why are not the tremendous influences at work in church and state more effectual in checking its growth? If it is a disease incident to, and a part of, modern civilization, then the question of its recognition would seem to afford the only promise of relief. It is these facts that force themselves before the public, demanding examination and scientific study, that must be answered before any clear conception can be had of the present conditions.

CHAPTER III.

EFFORTS TO STUDY INEBRIETY FROM A SCIENTIFIC POINT OF VIEW.

Synopsis.—Assertions that inebriety is a disease bitterly disputed. Insanity thought to be the possession of the devil, while inebriety was recognized as a disease at that time. Washingtonian Movement of 1840 destroyed many old theories. Physical means for cure came into prominence at this time. Literature on inebriety opposed. This opposition brought it into prominence. Dr. Turner's efforts. The inebriate asylum at Binghamton attracted great attention. Resulted in a new discussion of the subject. Other efforts disputed gave renewed prominence. Other institutions opened and were the center of credulity and opposition. First medical society and the first journal increased the agitation and discussion of the subject. The early books and their influence. Early pioneers and their work. Differences of opinion. The first Congress on the subject. The combination of two societies in this country. Various controversies and assertions which were disputed. Some curious theories. The last two congresses against the use of alcohol and their influence.

The assertion that inebriety is always a voluntary vice and a moral disorder, particularly in the first stages, and that the disease theory is untrue, materialistic, and unsound, is urged by persons with little practical knowledge of the subject. Much controversy has arisen and many books have been written on this phase of the subject; but latterly all are so modified, and the former theories defended so very feebly that they appear like echoes from the past.

It is a curious fact that the theory that inebriety is a disease was advanced and defended in many scientific circles and by many eminent men, long before insanity was considered anything more than spiritual madness, or a possession of the devil.

In the second century of the Christian era, drunkenness was believed to be a disease, while insanity was thought to be a mere possession by evil spirits. Then these theories

died away, and the "vice" explanation of drunkenness came into prominence. During the last half century the disease theory of inebriety has been urged and denied with great intensity; and in the sharp reaction of extravagant credulity, quack specifics and gold cures were advocated; now the subject is coming up to the level of exact study and scientific inquiry.

The Washingtonian movement of 1840, in which more than five million persons were pledged to a life of total abstinence, was a great clearing house movement, breaking up old theories and giving new ideas of the nature and character of inebriety. It was literally a sudden and intense projection of the ideas of the moral side of inebriety, into public thought, and while it reacted when the reform wave died out, it served to mobilize and concentrate public attention upon the question, of how far the inebriate could control his malady, and what efforts were needed to enable him to live temperately. This first practical effort to settle these questions was the beginning of the organization of lodging houses for the members of the societies who had failed to carry out the pledges which they had made. This was really the beginning of the hospital system of cure, and was the first means used to give practical help to the inebriate, in a proper home, with protection, until he was able to go out, with a degree of health and hope of restoration.

One of these lodging houses, established in Boston, Mass., in 1857, has grown into the Washingtonian Home of the present day, and is one of the first and oldest institutions in the world for the physical care of inebriates. During half a century this institution has treated thousands of patients and is literally the pioneer in the physical care and treatment of inebriates. In 1846, Dr. J. Edward Turner, a physician of Bath, Maine, became interested in an effort to found and build an institution

for inebriates. His idea was to establish an asylum in the country, where they could be treated as suffering from physical disease, and where suitable surroundings and proper remedies could be applied to break up and destroy the malady. Each inebriate was to be recognized as diseased and sick, requiring first, physical restraint and control, and then forced to live a rational and normal life and be treated with remedies that would help to bring about full restoration. All questions of pledges, will-power, and moral suasion were to be put aside and the patient was treated as a semi-lunatic, or border-land insane man. For eighteen years he pressed this idea with a reformer's zeal and energy, preaching the one doctrine that inebriety was a disease, and curable by wise treatment in an institution, with a singleness of purpose and zeal, which resembled the work of the old martyrs. The opposition which he met was very intense, particularly from religious and other societies. It was urged that it was sacrilege to attempt by physical means to remedy a condition which only spiritual measures could reach. To others it seemed foolishness to assume that drunkenness was a disease and by this means excuse vice and immorality, and lessen the degree of personal responsibility.

Notwithstanding all this opposition a large amount of money was raised, and in 1864 a magnificent building at Binghamton, N. Y., was opened for the reception of patients. It was managed by a company of which the famous surgeon, Dr. Valentine Mott, of New York, was president. Laws were passed incorporating it among the public institutions of the state, and giving it power to control its inmates. An army of chronic and degenerate inebriates were sent to this institution with most extravagant expectations, and soon after, they began to form centers of opposition among themselves and friction with the management arose. They objected to the restraint

and to other measures, insisted on having full liberty, and denied that there was any disease. This increased the difficulties of successful treatment. The board of trustees became involved and a most bitter acrimonious controversy followed. As a result, Dr. Turner, the founder, was forced to leave, and the institution was placed in the care of the State of New York, and soon passed into the hands of managing politicians.

Its history from that time to 1889 was a succession of changes, experiments and unscientific efforts, to care for and restore the inebriate. Dr. Turner, who had literally organized and built the institution, giving over a quarter of a century of his time and his own personal fortune, shared the fate of most reformers and benefactors of the world in being driven out from the creation of his own genius. A few years after he wrote a book entitled "The History of the First Inebriate Asylum in the World,"* in which the story of this controversy and the injustice and wrong which centered about it, is described.†

After nearly twenty years of controversy the state changed this institution into a hospital for the chronic insane. During the time it was used for the care of inebriates, nine different physicians were superintendents, and each one attempted to solve and treat one of the most difficult and complex neuroses without previous training or experience. Of the three thousand or more patients under treatment during that period, the vast majority represented the most difficult chronic cases, and yet the results of the treatment was a matter of astonishment, details of

* Copies of this book can be had from Dr. T. D. Crothers, of Hartford, Conn.

† The American Medical Society for the Study of Alcohol and other Narcotics erected a monument over the grave of Dr. Turner, at Wilton, Conn., October 27, 1909. Commemorative addresses were delivered by Doctors L. D. Mason, H. O. Marcy, T. D. Crothers, and others. This will be embodied in a memorial volume in the future.

which will appear in another chapter. Binghamton, as a pioneer hospital, roused intense interest by the opposition, as well as the most extravagant endorsement of its friends. Both skepticism and credulity rushed to conclusions in regard to the work and its possibilities, ignoring the fact of the magnitude of the subject and the necessity for years of exact study and observation, necessary to understand and treat the inebriate. The organization of this hospital was followed by over a dozen different institutions with a similar purpose. With the exception of one or two they have all disappeared.

In 1870, a number of the superintendents of these hospitals and physicians interested in the physical study of the subject organized a society called The Association for the Study of Inebriety. This has held annual and semi-annual meetings up to the present time, at which the literature and the general study of the subject has been the special purpose. Its papers and work were very severely criticized at first, but the criticism served only to bring the work into greater prominence. In 1876 this association established a journal called the Quarterly Journal of Inebriety, which has been published regularly from that time on. It has been the medium through which all the principal studies of the subject have been published. Like the society it has been bitterly condemned, particularly by the religious press, and even the medical press have looked down upon its work as unworthy of scientific notice. Strangely, from the first, it was more warmly welcomed abroad than at home. Many of its articles translated into foreign languages have had great influence in changing public sentiment concerning the inebriate.

In 1884, a similar society for the study of inebriety was formed in England, with the late Dr. Kerr as president. This society has been very influential and its regular

meetings in London attract much attention by the reading and discussion of most excellent papers. Societies of similar character, giving greater prominence to the action of alcohol, have been formed in France, Germany, Switzerland, Sweden, and Spain.

In 1887, an international congress was held in London for the discussion of the disease of inebriety, and the means of its prevention and cure. Delegates from America and most of the countries of Europe were present. The papers and discussions were published and created a widespread interest.

In 1902, the English society established *The British Journal of Inebriety* as its organ, and for the publication of its transactions. It will thus be seen that the public efforts to study this subject from a scientific point of view, particularly through societies and journals, have been constantly growing.

The change of the Binghamton hospital to one for the care of the insane, was regarded at the time as a serious misfortune, but recent events have shown that public sentiment was not far enough advanced to recognize its real work, or to support it, and that its management by politicians and non-experts would only increase the difficulties. Other institutions, based on special theories of what inebriety is or is not, have failed to stand the test of experiment and so, after a time, were abandoned. Had these early institutions been managed by scientific men and students, and the chronic condition of the inmates been recognized and had they received the support of the public, and full legal power of control, very different results would have followed.

Notwithstanding all these difficulties, the number of persons restored and the bitter experience gained, indicated great possibilities from a clearer knowledge and a more perfect organization.

Many of the early members of the Association for the Study of Inebriety, published books in addition to their contributions to the Journal. Dr. Albert Day, superintendent of the Washingtonian home at Boston for thirty years, issued one of the earliest books, called "Methomania"; describing clearly the disease of drinking and pointing out the possibilities of cure. Later Dr. Joseph Parish, who was for a long time superintendent of inebriate homes near Baltimore and Philadelphia, issued a book called "Alcoholic Inebriety," which gave a very suggestive idea of the disease and its treatment. Later Dr. T. L. Wright, of Bellefontaine, Ohio, published a very philosophic book called "Inebriasm," which was widely read and added much to the subject. Dr. Willard Parker, of New York, and Dr. T. L. Mason, of Brooklyn, both wrote excellent monographs on inebriety, which were widely read at the time. In 1893, Dr. Norman Kerr, an honorary member of the Association wrote a text-book, called "Inebriety and Narcomania." This has been the leading text-book and is the most widely circulated and influential volume on the subject. In 1893 the secretary of the Association for the Study of Inebriety compiled papers, which had appeared in the Journal, and published them in a volume entitled "The Disease of Inebriety." This work has been largely circulated. In 1901 the writer issued a small volume on "Drink Habits" and the same year a larger volume on "Morphinism," both of which have been widely read.

Abroad, among the honorary members of this Association, M. Magnan, of Paris, France, issued a large volume on "Alcoholism." Dr. Lentz, of Brussels, published a volume on "The Manifestations of Alcohol." Dr. Baer, of Berlin, issued a volume called "Alcohol as a Malady." These were large voluminous works and were followed by

a number of smaller works, giving great prominence to different phases of the subject.

All the foreign books made alcohol and its effects on the body the most prominent topics. The American works consider the disease and the etiological conditions of most interest. The claims of the Society for the Study of Inebriety, that the desire for alcohol is a symptom of conditions springing from many causes, has been practically ignored in most of the discussions on the general subject.

Both in England and this country, the two societies for the study of the effects of alcohol have roused very intense controversies, into which laymen and reformers have joined with great eagerness. As a result, a large literature has been accumulated, out of which many new facts have been evolved, and old theories have been put aside. In another chapter some of the conclusions will be given, which the new studies of alcohol from a scientific point of view have made clear.

The theory that alcohol is a stimulant and tonic, and has some food value, is replaced by evidence of its paralyzing narcotic action on both cells and nerves. The peculiar palsy resulting, is found to be very general, and to extend to the next generation, appearing in various defects and complex degenerations; and this is striking confirmation of the disease theory.

The Society for the Study of Inebriety has warmly welcomed these special alcoholic studies, and most of its members took an active part in the work of the Medical Temperance Association. This was formed in 1891 under the presidency of the late Dr. N. S. Davis of Chicago. This new association held its meetings at the same time and place as the American Medical Association. Its papers were largely confined to the effects of alcohol in health and disease, and were published in a journal of its own.

The work of this new association attracted a great deal of attention, stimulating new researches and assisting in breaking up the old theories and notions of the physiological action of alcohol.

Within the last few years, many of the medical journals have taken up the alcoholic problem in a controversial spirit; generally to condemn the advocates of its narcotic action, and support some of the theories of the past; or to explain what seems to them the scientific side of the subject. Thus in the year 1907 nearly one hundred editorials, papers and addresses, on the various phases of the alcoholic subject, appeared in the medical press of this country and Canada.*

The two societies, The Association for the Study of Inebriety and The Medical Temperance Association were clearly occupying the same ground, the one given prominence to the disease of inebriety and the other the physiological and pathological effects of alcohol. It was thought wise that the societies should unite, and this was accomplished in 1904 and the name of the combined societies is The American Association for the Study of Alcohol and Other Narcotics.

The old society for the study of inebriety started from the inebriate and went back to the causes of his malady and the best means of controlling it. The new combined society adds to this the study of alcohol and other narcotics, and traces their effects on individuals and society, pointing out the influences that are inherited and their relation to the psychosis and neurosis of inebriety. This, while not a new point of view, is a broader one, and seeks an explanation of why, in inebriety, the desire for spirits both precedes and follows its use.

The controversy over the physiological action of alcohol becomes a general question, not only to be settled in the laboratory, but from clinical study at the bedside

* See note on p. 38.

and in institutional care. What the particular effects are on the organism, and what contributing causes provoke its use and lead up to the profound degenerations, are the fields to be explored and traced. The International Anti-Alcoholic Congress held at Stockholm in July, 1907, gave unmistakable evidence of the recognition of a new era of the scientific study of the problem.

The various meetings of the friends of temperance, called congresses, held in different parts of Europe for over a quarter of a century, have been devoted to the moral and hygienic side of the subject. Few scientific papers were presented, and the whole subject was considered a great educational, moral problem. The Swedish government, by inviting all the countries of the civilized world to participate in this congress, gave expression to the sentiment, which has been growing for years, that inebriety and the alcoholic problem must be studied from the scientific side, and that it was a question of facts and their meaning, not of old theories and prejudices, which have prevailed too long.

The congress held in 1909, in London, brought out this fact more prominently than ever, and indicated that the scientific study of the subject precedes every other consideration. There can be no question that work in this direction will indicate means and measures for effectually stamping out inebriety, and preventing the evils which follow from it, as is done in other diseases.

Note.—Two works which have a very marked influence in popular scientific literature should be mentioned as most suggestive studies along allied lines, viz.: *Alcohol and the Human Body* by Sir Victor Horsley and Dr. Sturgis and the *Psychology of Inebriety* by Rev. Dr. Geo. B. Cutten. These are most commendable scientific works.

CHAPTER IV.

FORMS AND CLASSIFICATIONS OF INEBRIETY.

Synopsis.—The term inebriety and alcoholism. What they mean. Illustrations of their meaning. The conditions present. Effects of spirits on healthy persons. The neurosis and psychosis. Three general classes of inebriates. First, with a long preliminary period of drinking. Second, persons who use spirits irregularly. Illustrations. Third, periodic drinker. The impulsiveness of their use of spirits, resembling insanity. Illustrations. The influence of saloons developing this class. States of degeneracy from heredity. The psychopathic inebriate. Influence of tuberculosis. General paralysis. Class of inebriates following injuries. Persons who take spirits for intoxication. Inebriates with obsessions and insane impulses. Inebriates with criminal impulses. Their treatment in the police court. Delusional drinkers. **Magnan's** classification. Other efforts to arrange them in classes. Associations with dyspepsia. Illustrations. General considerations.

The term inebriety appears to be the most accurate in describing the continuous or occasional impulse or craving for spirits or drugs. The late Dr. Norman Kerr called it *narcomania*, a desire or impulse for relief from discomfort, unrest and pain.

Alcoholism means accurately, a state of poisoning by alcohol and some special conditions due to this toxic state. Inebriety includes this and indicates earlier and more pronounced active causes. Thus, a man previously temperate is injured, and suffers from shock or some obscure injury, and without any preliminary use of spirits, becomes an inebriate at once. Such a person could not be strictly called an alcoholic. If he began the use of spirits in great moderation at first, and then gradually increased up to a time when he became evidently poisoned from its effects, the term "alcoholism" would properly describe his condition. Both of these terms "inebriety" and "alcoholism" represent degrees of neurosis and psychosis at the beginning.

Probably two conditions, namely, brain instability and hypersensitiveness to pain are more commonly present than any other. Where spirits are used in small quantities, by persons previously healthy, a demand will be created for their increased and continued use. This is a pathological hint of states of depression and deranged functions which call for relief, found most readily in the narcotism of alcohol.

There are innumerable classes of drinkers, and the effort to divide them is beset with difficulties, for the reason that the causes of the desire for spirits and the resistance of the body to spirits are at present largely unknown. Practically three general classes are apparent in a general study. First, those who have a long preliminary period of moderate drinking; beginning with cider, beer, wine and then later taking stronger spirits and using the latter to great excess at times; there appears in this a gradual growth and cultivation of the drink impulse. Second, persons who use spirits infrequently and become intoxicated; the causes are usually accidental, and the effects may be usually pleasant or the opposite. If the intoxication is the culmination of some physical or mental condition of excitement or depression, the recurrence of these conditions will suggest and stimulate the use of spirits up to the point of stupor, as upon former occasions. Thus a number of persons, who are total abstainers in all other conditions of life, drink to excess at some special times or upon certain occasions. One man never drinks, except at the seashore; another only drinks on the occasion of some great sorrow or death in his family, and then abstains, until another similar event occurs. A number of old soldiers are perfectly temperate at all other times, but on occasions of army reunions, when they are frequently intoxicated. The drink craze is uncertain, and due to special exciting causes, which are largely un-

known. A third class may be called "periodic drinkers," who, at times, drink to great excess, with or without any apparent cause, irrespective of conditions or circumstances; their distinct drink storms resemble epilepsy; after the narcotism of the drink has died out, they become total abstainers and have free intervals of indefinite length. The first class are the trained and cultivated inebriates. The second are the unknown, erratic, explosive inebriates, and are the most mysterious and unexplainable.

Often the person will give elaborate explanations of his condition, describing it as the result of certain special causes, but like the third class, it may terminate abruptly when the system becomes saturated and profoundly narcotized. The third class of periodic drinkers may be divided into numerous sub-classes, one of which includes the dipsomaniacs. This, fortunately, is not a very common condition. It is marked by an insane overpowering impulse which is a veritable mania for the time being, and when the full narcotism of spirits comes on, the impulse subsides.

In another chapter, varieties of this form will be described. The periodic drinker appears to be very largely dependent on his surroundings, mental condition, and degree of health, for the time of the return of the drink impulse; hence all conditions of exhaustion, starvation, severe strain with brain and body fatigue, furnish fertile soil for the development and growth of periodic inebriety. In this class are also included the inebriate who drinks from contagion and emotional causes.

There can be no doubt that the presence of saloons and club-houses give increased activity to states of inherited degeneration, and furnish sources of temporary relief to hyperæsthetic conditions, that could be diverted into normal channels by proper hygienic means.

Many persons have been greatly puzzled to explain the presence of inebriety in persons living in surroundings that were antagonistic to the use of spirits, but reference to carefully recorded and studied histories of other cases indicate a range of natural causes which have escaped attention before.

It will be shown later that inebriety and conditions of degeneracy transmitted from the parents will explain many of these mysterious outbursts of inebriety. There is another class of inebriates that are undoubtedly becoming more numerous. They may be termed the "psychopathic class." In them inebriety is simply another phase of existing disease, thus in tuberculosis the acute symptoms often subside when the patient uses alcohol to excess; when the alcohol is withdrawn, the inflammatory conditions of the lungs start up again.

The general paretic always passes through a stage of excessive use of spirits. The epileptic may have a drinking spell in the place of the paroxysm. Quite a large class of inebriates have a history of injury in early life, such as contusion, broken bones, or severe inflammatory fevers with a long protracted stage of invalidism and an apparent recovery. Another class give a history of nutrient disturbances, either overfed or underfed. One author has made a division of the latter class, calling them dyspeptic inebriates in which the digestive disorders are the most prominent symptoms.

The late Dr. Parish described a class of psychical inebriates in which the causes are unknown and confined to the realm of the psychic. The patients never use spirits except at midnight and then only for a brief time. This class, termed the "solitary midnight drinkers," are total abstainers at all other times. Dr. L. D. Masen noted a class of persons who drank a few months before death and who were total abstainers up to this period. For

some unknown reasons they would begin to use spirits to produce continuous intoxication and in a short time Bright's disease or acute pneumonia would cause death. Other observers have noted similar facts and traced them to an overwhelming loss of vitality and premonition of death showing itself in the drink impulse.

The late Dr. Wright called this "senile inebriety" and described cases of persons, whose previous life had been temperate, who suddenly began to use spirits, giving no reason, except that of exhaustion, and dying in a very short time. Another class, which appears to be growing more prominent every year, includes persons generally actively engaged in business and professional work, who suddenly disappear, go into seclusion and drink several days to great excess; then return and resume their work as usual. Such patients never explain these attacks and regard them as spells. In reality they are obsessions and insane impulses, which are only satisfied by profound narcotism from spirits.

There are many remarkable divisions of these insane inebriates whose drinking resembles nerve explosions, and often becomes epileptic in form. One of these classes is that of the secret drinker, who never appears to be under the influence of spirits, and whose drinking is only recognized in the sudden changes of character and conduct. The use of spirits is always denied and his conduct becomes more secretive, and attempts to find out what he is doing, are repelled with great indignation. Many such persons die suddenly and then the secret drinking becomes known. The effects of alcohol vary in different persons, but there are certain mental changes and degenerations, whose uniformity cannot be mistaken.

Another very prominent class of inebriates is noted by criminal conduct when under the influence of spirits. Alcohol seems to provoke intense selfishness and irritability,

with delusions of persecution, and lack of respect for law or order. In the police courts they are termed vicious and treated with severity. Morell, the French specialist, described them as moral paralytics, without any ethical notions of responsibility or duty. They are often seen in the wealthier classes, and are called dishonest, tricky and unreliable. There can be no question as to their physical defects, whether this is due to alcohol or to some inherited weakness is not clear. Probably both conditions are active as causes.

There is a class called delusional drinkers, which are very large, and in some respects prominent among all inebriates. They are noted for extreme optimism, never recognizing any possible danger from the use of spirits in any form, and show much ingenuity in explaining erratic conduct as due to other causes. Such persons pose in the papers and among their friends as examples of the good effects of spirits when taken for years, and are always boastful of what they can do, and how unlike others they are. In reality, they are often most diseased and irresponsible and the appearance of sanity is a very thin varnish. Attempts to classify these cases are hardly possible, except in a general way.

While the general symptomology is more or less uniform, there are so many variations and diversities of defects, and peculiar manifestations of thought and conduct, that it is difficult to group them in any particular classes. Magnan, of Paris, divides all alcoholics into two classes, namely, the constant and periodic drinkers. The first he describes as senile and demented. The second as maniacal and explosive. Dubois calls all inebriates dements and maniacs from toxic causes. Other authors make a distinction of moral and functional cases at the beginning, and then organic and insane farther on.

Delirium tremens is a special toxic stage in the terminal period of drinking. Many divisions have been made and described with great minuteness, but it is doubtful if these distinctions are anything more than mere external symptoms from local causes. This will be discussed in another chapter.

There is a sub-class in which delusional egotism is a very prominent symptom; the patient never acknowledges his condition, but always asserts that other causes than alcohol are responsible. The disordered egotism is a common symptom in nearly all the classes, and where it assumes great prominence, it is associated with other pronounced degenerations, which are so apparent, that this particular symptom cannot be designated as special. It is a common observation that many of the symptoms are due specifically to alcohol. This is only partially true. The patient, who, after drinking, becomes hilarious, and has delirium of exaltations has a peculiar nervous organization, particularly sensitive to the rapid circulation of the blood through the brain. Often these symptoms resemble nerve spasms and are marked by great depression. The opposite class, who are suddenly depressed and melancholic from the action from alcohol, possess a different degree of sensitiveness, and a brain resistance to the toxins. In one there is extreme activity. In the other marked depression.

CHAPTER V.

INEBRIETY IN AMERICA AND ITS PECULIARITIES.

Synopsis.—The general effects of alcohol the same all over the world. More distinct in America. The moderate drinking period short. Men seldom use spirits regularly beyond a limited time. Spirits are used impulsively. More periodic drinking than in other countries. Due to the brain strain and intensity of living. General neglect of rest and quietness. Inebriety in America associated with delusions of wealth and power. The American Inebriate is not a wife beater, but a delirious reformer. He seldom commits brutal crimes, but is a swindler and promoter of great schemes. He dies of heart, kidney and lung diseases. Inebriety moves in waves and currents. Women drink less than in other countries. Spirit drinking more concealed. A distinct form of brain and nerve psychosis. A form of insanity due to the intensity of living. The atmosphere is psychic and distinct factors seem to provoke its growth. More distinctly inherited. Dependent on extremes of temperature, also on foods. Tobacco a grateful narcotic and promoter of inebriety. The American inebriate is a bar drinker and not a club drinker. He drinks at night to promote sleep. He drinks in the day time for new vigor and strength. He has less descendants because of the profound degeneration and nerve injury. He is curable under certain conditions. He is susceptible and wants relief more quickly. Has less power to resist pain. More pronouncedly diseases.

While the effects of alcohol and the conditions which demand spirits for relief are practically the same in all climates and conditions, there are many well marked peculiarities which distinguish inebriety in America from that of other countries. Thus the period of moderate drinking is shorter, and spirits are rarely taken regularly with meals more than a few months or one or two years. Spirits are used in great quantities and impulsively, and the effects are sought for with precipitate haste, and the diseases and mortality which follow are more pronounced and marked.

Many authors have recognized the fact that few persons in active life drink spirits in so-called moderation in this country. The attempts to pattern after the customs of Europe, in having wine at the table and spirits at regular

intervals, ends disastrously, either in excessive use, or some form of disease and invalidism. In active business circles the excessive drinking and sudden collapse of men previously supposed to be temperate, are examples of the failure to drink moderately.

It is noted that business men with a reputation for conservatism and reliable conduct, who suddenly become speculators and erratic in their judgment, are often found to be moderate drinkers. Such persons have delusions of immediate wealth, power, and political achievement, and very soon break down from the excessive use of spirits. Evidently, drinking has destroyed their good sense and judgment. Among the reasons explaining this inability to use spirits in small quantities for any length of time, are the intensity of living, the constant excitement, and the rapid changes in both business and social circles, and the constant strain of every energy of the body to adapt itself to the varying conditions. Associated with this is the neglect of the ordinary functions of the body, particularly those of rest, sleep and nutrition, states of exhaustion follow for which alcohol is taken to give relief and rest. The average drinker, in the psychical atmosphere of America, finds the necessity and occasion for using spirits at any time, for their effects; and if they are not sufficiently potent more is taken until the system becomes saturated.

If this saturation becomes a marked intoxication, he is likely to be disgusted and abstain for a short time; and then start again, with a determination not to exceed a small quantity at regular intervals. Sooner or later this amount is exceeded and another intoxication follows. Thus the average business man, who tries to imitate the European in taking wine at meals, or small quantities of spirits at fixed intervals, finds it impossible and becomes an irregular and spasmodic drinker.

The foreign born resident who continues his former customs of taking wine and beer, after a few years becomes nervous and suffers from some form of neurosis and dies suddenly; while his brother abroad, using spirits in substantially the same way, seems to suffer less. The effects of American life is thus marked in the character of the derangement which follows from the use of spirits; the vast majority of persons are unable to drink small quantities for any length of time and soon become impulsive and excessive drinkers at intervals.

The average American inebriate is peculiar for the delusions of egoism and ambition to acquire wealth and power. He seems to be alert to seize opportunities to lead in great schemes for his own welfare and that of others. He is rarely a wife-beater or an avenger of personal wrongs, but joins mobs and all new efforts to break up some supposed wrongs that are blocking the wheels of progress. The records of courts contain few examples of brutal crimes committed by native born inebriates. Their offenses are frauds, swindles, schemes of deception, or revolutions for profit and social reform; often they become strikers and redressers of wrongs, or promoters of some new projects in politics, religion or business, and like Colonel Sellers, "buoyed up with the hope that there are millions in it."

The American inebriate, even in the submerged class, seldom commits suicide, but dies from hemorrhage or acute inflammation, and in the hospital or workhouse they have little or no resisting power and succumb to any adverse causes or conditions. Dr. C. H. Hughes has declared that the use of alcohol in America is a distinct form of brain and nerve psychosis, which in many ways resembles general paresis, also that the use of alcohol in America is far more dangerous and fatal than in any other country. The excessive mortality from diseases of the lungs, heart

and kidneys noted among inebriates in this country is a very strong confirmation of the above statement.

From a great variety of evidence there are many reasons for believing that inebriety in America is controlled by some unknown psychological wave movement. Some of the facts gathered from different studies indicate such a movement with a duration of from twelve to sixteen years. This is based on the records of towns and cities where it would seem that the arrests for drunkenness slowly increase up to a certain point, and then decrease in a sort of an ebb and flow current. These waves are noted by an unusual interest in temperance work, and great efforts to control and diminish the sale of spirits. After a while they culminate in some high point of intense activity, in society, churches and organizations, then they subside for a while, and in a few years start up again, reaching a certain high point and then declining. Several very marked examples have been traced in the various crusades to diminish inebriety. Thus a high tide of increased alcoholic drinking is followed by intense opposition and wide efforts to check it, public sentiment is alarmed, and moral suasion and other efforts are intensely active to check its growth. Apparently they succeed, and the use of spirits diminishes. Then in a few years it reappears again. The late Dr. Beard wrote that widespread financial disasters and depressions in business always bring to the surface a new crowd of inebriates, who, after a more or less ineffectual struggle to recover, die.

It has been noted that political revolutions, such as pronounced changes of parties and public policies are followed by an increased number of inebriates in the higher walks of life. This is readily explained by the failure of a large number of neurotics and moderate drinkers to adapt themselves to the new conditions of life forced on them, and this creates an intense depression and exhaustion for

which spirits brings the most ready relief. In this there seems to be evident a very close connection between widespread disasters and high tides of alcoholic drinking. An example like the following is not unfrequently seen. In a certain town, without any special reason, an unusual number of saloons were opened and the sale of spirits increased to great proportions so that crimes, pauperism and loss became very prominent. Public sentiment reacted and a great temperance wave followed, which ended in driving out the saloons and a vote of no-license. A few years later, the failure of a very large mill and greatly depressed financial conditions was followed by the reappearance of saloons with crime, pauperism and misery, and again a temperance wave swept over the town, and once more no-license and no saloons prevailed. There is in this a distinct intimation of some great psychological movement sweeping over cities and states and controlling the rise and fall of inebriety. With farther study and more exact knowledge, this subject of psychical wave forces controlling inebriety, opens up a most fascinating field for future discovery. Thus the temperance revivals and crusades and social and political efforts to stamp out and diminish inebriety are not chance and accidental occurrences, but evidences of some great laws which regulate and control the evolutionary movements of the race.

While there is much conflicting evidence in regard to the extent of inebriety in America, there are many reasons for believing that it is slowly diminishing. The sale of beer is increasing, while that of strong drink in some sections is less or remains about the same. There can be no question that there is a sharp decline in the use of spirits among native born Americans. The use of alcohol among American women is also disputed, some asserting that it is increasing, others that it is growing less. While it is more concealed in this country, and is less apparent,

some authors have asserted that the demand for narcotics among American women is increasing, but this fact is only sustained by some local statistics, and in all probability does not apply to the masses. The general fact, which all authorities concede to be correct, is that the use of spirits is gradually declining and that social drinking is less prominent.

Persons of foreign birth still cling to the old customs of beer and spirits at meal time, and a certain class of imitators, who believe that wine and spirits are luxuries continue their use without any special reason. It is evident that the same general causes which regulate the use of spirits among men in active life are influential with women, with this addition, they are more sensitive to the effects of wine and are more active to escape from its injuries. Narcotics and substitutes for spirits are undoubtedly in great demand in certain sections, but it is doubtful if this demand is greater among women than men. Careful studies of persons in particular sections of the country show a marked diminution in the use of spirits or narcotics for any purpose, and this undoubtedly is true in a general way for the entire country.

The psychic influences which seem to be active in the spread of inebriety and its control have been the subject of many essays. Dr. Bowditch, of Boston, Mass., called attention to an apparent isothermal belt crossing the continent marking the center of the most active use of spirits. From this point each way there appeared to be a decline in the use of spirits. A later study indicated other causes than that of climate and pointed to some psychic current and wave, starting from certain centers and spreading along lines difficult to trace, but apparently responsible for the excess and diminution of spirits. Another author asserted very prominently that the presence of inebriety in the community was always followed by a

certain immunity in the next generation. Several authors have endorsed Dr. Reid's studies of heredity and conclude that immunity in families and communities and nations always follows the excessive use of spirits. More extended studies of the facts show that these theories are not well supported and that always in the next generation the lowered vitality, increase of disease and mortality and hypersensitiveness to spirits is most commonly noted. In another chapter this subject will be presented in some detail.

It has been pointed out that the extreme of heat and cold are active as causes in the production of inebriety. Several essays have been written on this topic, but the conclusions are not in accord with the general facts that are known. While it is true that stronger spirits are sought for in the cold climates and lighter wines in the warm belts of the country, the effects of all these drinks are practically the same, irrespective of heat or cold.

The consumption of tobacco has furnished themes for many studies, showing a connection between it and the growth of inebriety. Many startling examples have been presented, but the facts are not numerous enough, or sufficiently studied to support any positive conclusions.

There can be no doubt that the largest factor determining the peculiarity of American inebriety is the contagious excitement and continuous nerve strain, which pervades all societies and business circles, and the resultant exhaustion which follows, is influential in the development and duration of this malady. Thus the average American in all circles is restless and always seeking new conditions of life, changing incessantly with every new prospect of gain; business and work of all kinds are done under a pressure and excitement that gives little chance for proper nerve rest. The emigrant soon catches the contagion of change and, if he is a young man, all his habits of life become keyed to the same incessant strain.

The American inebriate drinks at the bar, standing up, and then hurries out. The club-house and beer-garden have no attractions for him. All attempts to form beer-gardens for working men to sit down and drink in are failures. The pressure of business opposes it. There is no time to spend in such places. If a man wants beer he takes it to his home. The club-house is a visiting place where business and plans are discussed and projects of how to take advantage of the present and future and not for daily relaxation and comfort. The saloon for the poorest classes is practically the same kind of place. The patrons drink standing, plan strikes or talk political topics and questions of profits and more lucrative work.

Tobacco, like spirits, is used for its narcotic effects. Coffee and tea are taken in the same impulsive precipitant way. This intensity of living calls for the relief and narcotism of alcohol, which actually covers up the exhaustion and draws on the reserve strength of the body and mind; thus the American inebriate is constantly discounting his future vigor and strength, and lives on the borders of physical and mental bankruptcy. Often he realizes this in the uncertain changeable way in which different varieties of spirits are used. For a time he is a moderate drinker. Then abstains and drinks at intervals, then uses drugs for substitutes, going from one to the other in a vain attempt to escape the inevitable effects. As a total abstainer and promoter of temperance he is very emphatic and pronounced; as an advocate of spirits he is equally dogmatic. The tendency to go to extremes and settle the whole matter at once, in excess of effort of mind and body, is very apparent.

The average American who begins to fail in strength at the summit of his success, goes off to Europe in quest of health, claiming to be overworked and needing rest and change. He rushes from place to place, becoming more fatigued than at home, and finally returns, bringing with

him a new conception of the medicinal value of wine at meals. Later he is found drinking to excess, and so dies. The young man or woman who, from residence abroad, gets the same conception of the value of wines and liquors at meals, or as tonics, finds after a few years of trial in this country, a degree of invalidism and incapacity, which he or she rarely attributes to the true cause. These are common examples which show that inebriety in America is a mania, a form of paranoia and degeneration that differs from that in other countries. The causes are very complex and include everything which stimulates brain and nerve activity to its highest point of endurance.

In efforts to check and cure inebriety the same incessant movement is apparent. As an inmate of the hospital, he calls for continuous efforts to do something, forgetting that rest is nature's best assistant; when sick at home different remedies and measures for relief are demanded, with a morbid impulse that indicates grave central disturbances. Recovery sometimes takes place in the same extraordinary, unusual way. Quacks that promise cure by mysterious drugs are popular at once, because of the excessive credulity of the victim. Patent medicines and drugs containing narcotics become popular in proportion, as they quiet the nerve irritation and exhaustion of the victim.

It is evident, from a variety of facts, that the use of spirits and drugs can not be taken safely in America, especially in our present revolutionary stage of society and its evolutions.

In business circles this fact is becoming important through the increasing efforts to drive out the use of spirits as a beverage; and also the recognition of the business incapacity of users of spirits, their susceptibility to disease, and their incompetency to endure the strains of business life.

CHAPTER VI.

GENERAL SYMPTOMOLOGY AND DEVELOPMENT.

Synopsis.—Three distinct periods in the symptomology. Description of each period. In the third period patients come under observation. Their symptoms are so prominent. Efforts are made to abstain, or limit the use of spirits. The first stage one of great indifference. The last stage marked by delirium and delusions. Insane reasonings. Exaggerated egoisms. Persons with good reasoning on other matters, are literally insane concerning the use and effects of spirits. So-called moderate drinker is incapable of judging of himself. Examples. Persons living lives of great excitement never realize their danger. Moral palsy common in this stage. Defects of the senses very noted. Emotional depressions common. Muscular control enfeebled. Beer drinkers have nutritive degenerations with enlarged hearts and fibrinous deposits. Muscle workers have low vitality and are able to adapt themselves to changes. Active brain workers have peculiar symptoms, particularly of confusion of purpose and object in life. Many of these persons die from other acute diseases. The face registers these changes. Physical defects. Whitened hair. Blanched face. Feeble muscular power. The display of brutal qualities when drinking. Wide variations of character. Skepticism and pleasure in condemning. Destructive criticism. A hint of an alcoholic mind. Examples. General considerations.

The general symptomology of inebriety may be traced and studied in several distinct stages. The first, extending over months and years, is one of occasional and irregular use of spirits and beer. During this period spirits may be taken to produce stupor and intoxication; this may be followed by disgust and long periods of abstinence. Then spirits are used again and the former aversion does not appear. A second stage is marked by the continuous use of spirits in small quantities, often at meals. The patient justifies his use of them as necessary and medicinal, while toxic conditions may follow they are unnoticed, and supposed to be accidental. A third period begins with an attack of delirium, or some very unusual act or course of conduct which alarms his friends. An effort is then made to either abstain alto-

gether or to limit the use of spirits to a moderate quantity. At this time he may come under medical observation, and is found to be suffering from organic changes with delusional mental states concerning his condition, and relation to others. The first and third periods are very often closely related. In the second stage, a preliminary period of wine and beer drinking may continue for a long time, with only the occasional use of spirits, which at long intervals may culminate in acute intoxication and recovery, going back again to beer or wine. The first stage, in nearly all cases, is one of great indifference to the danger and possible ill effects from the use of spirits. The patient is always confident of his ability to stop, and considers his situation and use of spirits as largely due to trivial circumstances and conditions, over which he has full power. In the later stages delusional confidence in his will power to stop increases with the gravity of the symptoms. Often different forms of delirium and delusion growing out of the use of spirits are realities to him, and are so positively fixed in the mind that they can not be overcome.

In many instances the most ingenious reasons are given to confirm and sustain his confidence in their reality, and no pressure or advice by friends can make any impression or indicate the real character of his mental condition. Persons with good judgment on all other matters will have the most delusional impression of their own conditions, and assert with great confidence that outside influences and undue anxiety and annoyance by friends are active causes of his present stage. This peculiar egotism is a species of general paralysis, particularly of the higher brain centers. It literally means a progressive anesthesia of certain areas of the brain with unconsciousness of the real condition.

The moderate user of spirits, or one who takes a stated amount regularly for years, has a very imperfect conception of his condition and little ability to judge of himself. The use of alcohol to great excess is followed by a demented condition in which the brain is bewildered and unable to act from any clear, rational point of view. Often a moderate drinker will use spirits to great excess and have an attack of delirium, and recover and with it a decreasing consciousness of what has taken place and of the feebleness of his brain power.

In a certain number of cases where spirits have been taken at very long intervals in great moderation, and the person claims to be practically a total abstainer, suddenly he begins to use spirits to excess. A progressive paralysis, with a rapid decline in both the mental and organic activities appears. The following is an example. An active business man who, at long intervals, had taken wine in moderation at banquets and never for any toxic action, and was considered a temperate man, began to drink to excess. He became intoxicated every night, visited clubs and saloons, giving no explanation, or making no effort to abstain. This continued for a few months, when he was finally found dead in his bed. Cases belonging to this class, although not so prominent, have frequently been noted, and the physical effect of the drink craze is beyond all question.

Many persons with highly developed nervous system, living lives of great stress and strain, after some particular shock or disease begin to use spirits. With this a special moral palsy or general failure of the ethical recognition of duty, obligation and consciousness of right and wrong appears. Delusional conditions and perversions of reasoning are early symptoms, and with these, marked defects of character, which constantly increase, are noticed.

In other persons sensory defects are among the most prominent early symptoms.

The defects of the eye and the constant change of glasses; the faults of hearing, taste, touch and in the recognition of odors, are symptoms of palsy of the senses which are recognized by friends, and are among the first symptoms. In other persons melancholia and unusual depression, without any apparent cause or suspicion of wrong-doing, are noted first. Other persons show feebleness of the muscular centers and power of control. Such persons stumble easily, can not hold things in their hands, are easily exhausted and seem to have some form of muscular palsy.

Another class exhibit early derangements of nutrition, particularly marked digestive troubles. Foods and liquids are used impulsively, and produce great disturbance. Later local inflammations and various functional disorders occur. Beer drinkers are often subject to these nutritive degenerations and the excessive anxiety to find remedies for their relief and the obscurity and complexity of such disturbances point clearly to alcohol as a special cause.

The vigor of the brain is very early impaired in such cases, and its faulty activities reflect the poisoned and paralyzed conditions. The muscle workers who use beer and spirits regularly are particularly degenerate, and physically have very low vitality are unable to adapt themselves to changes of environment, and succumb quickly to acute inflammation from any cause. Active brain workers who use spirits steadily, have many symptoms that are peculiar. Thus the delusion of exaltation and egoism is prominent, and the unusual optimism concerning themselves is very marked. Many of these persons have symptoms of paresis, and it is difficult to

determine how far alcohol is the active exciting cause, or the desire for it a symptom of some previous degeneration which is developing. Many of these obscure cases have been the subjects of great confusion in the diagnosis and treatment, but in all there is a continuous anesthesia and paralysis of both the brain and organism. Some of these cases go on to pronounced paresis. Many of them die of intercurrent disease and are not considered inebriates, but the excessive use of spirits is a marked symptom of the history of the case.

In other cases, the eyes and face register the degenerations more clearly than any other part of the body. The voice is another symptom of the palsy from the use of spirits. Many authors have referred to the symptoms of premature old age in comparatively young men. The hair becomes white. The face is blanched or congested, the eye is dull and watery, the speech is slow and broken, and the tones are nasal and feeble. The muscular powers are diminished. Nutrition is disturbed, and such persons are irritable, stupid and childish. These are all pronounced symptoms of inebriety.

The oft-repeated statement that the action of alcohol reveals the real man and his purposes is not true. The sudden display of coarseness and brutality in one who when sober is genteel and kindly, is not uncovering the predominant traits of character. It is simply putting to sleep the higher faculties and allowing the lower ones to control. Instances are noted of persons who become excessively religious when under the influence of spirits, and on recovery this feeling disappears. Persons who are selfish and grasping, when under the influence of spirits, are often most kind and generous. Others are extremely skeptical, pessimistic and bitter while drinking, and when sober are credulous and optimistic in the highest degree.

A noted writer whose stories have been widely read, when under the influence of spirits described the sufferings and miseries of persons in the most wretched conditions of life with great minuteness; when sober such descriptions are rarely attempted, and always treated with brevity. Another symptom, peculiar to the so-called moderate drinker, and particularly so to the one who drinks steadily both beer and strong spirits, is the unreasonable criticism and intense pleasure in condemning and discovering bad motives for all sorts of conduct. This is a kind of pessimism that takes intense pleasure in destroying and retarding everything considered sacred or correct by others. It is asserted that bitter criticisms, which are destructive and unreasonable, are indications of an alcoholic brain. This is confirmed by many striking instances. Very interesting studies are to be made along this line. In the future pages this idea will be brought out.

CHAPTER VII.

PECULIARITIES OF CONDUCT AND THOUGHT TRACEABLE TO INEBRIETY.

Synopsis.—Inaccuracy, mistakes and failures prominent symptoms. Carelessness. Childish explanations and inability to adapt oneself to the condition symptomatic. Examples. Bankrupts, previously honest and careful business men. Traceable to the use of spirits. Sensory derangement and defects of the reason more common in this country than elsewhere among inebriates. Emotional changes significant. Great variations in style and clearness in literary work, point to alcohol, insomnia and nervousness, catarrhal troubles and other conditions traceable to this cause. Neuritis a common sequel. Dr. Kerr's drama of three acts, in the history of inebriety. Great changes in muscular output. Extreme skepticism of the honor of others. Imperfect work, faulty expressions and neglect of important matters common symptoms. Delirium common in so-called moderate drinkers. Examples of concealed drinking. Malaria used to describe it. Many symptoms complex, but all follow distinct lines which may be studied and understood.

Another symptom is the subject of considerable comment, and noted in the carelessness, inaccuracy and increasing mistakes and errors in thought and conduct. Men and women previously exact and accurate in their use of words, careful in recognition of duty, and of scrupulous conduct, show great changes in carelessness and failures to maintain their former character in conduct and thought. Thus persons engaged in work requiring accuracy and strict observance of details show this very clearly. For this reason banking, railroading and engineering projects reveal the alcoholic brain in the mistakes of the persons who are doing the work.

Many supposed temperate men exhibit this peculiar symptom of carelessness and inaccuracy that is traced to their use of spirits. They are discharged, and soon after their drinking becomes prominent. The explanation given is the depression from loss of position and

supposed persecution by friends. In reality, they have been concealed inebriates, and the change of environment and position reveal the real condition. An example which was the subject of much notoriety occurred in a clergyman, whose faults of memory, inaccuracy of statements and neglect of duty became notorious. The physician diagnosed it as brain fatigue and neurasthenia, and sent him on a tour of travel. This ended in pronounced inebriety and death a few months later. The question in dispute was the diagnosis concerning the possibility of his concealed use of spirits being an exciting or predisposing cause, or a symptom of the final collapse. In another instance a banker exhibited very unusual and careless conduct in his affairs. The medical man failed to recognize the alcoholic causation, and ordered tinctures and wines as tonics and stimulants. Within a few weeks he became wildly intoxicated and died a few months later.

Many instances have been noted of bold and reckless speculation by men previously conservative, followed by bankruptcy, the excessive use of spirits and death. These cases are so numerous that mercantile agencies rate very low persons who are known to be moderate or occasional drinkers of spirits. Experience shows that such persons become bankrupts more frequently, and are more uncertain in their health and vigor. It is stated that these defects, particularly of the senses and reason, are more pronounced in this country than elsewhere. As a summary, it may be stated that the absence of caution and a degree of recklessness in the common affairs of life, particularly in persons previously conservative and sane, is a very significant hint of alcoholic anæsthesia; also that unusual buoyancy and unreasonable faith in his own capacity, and credulity of the statement of others, is an additional confirmation. Again, emotional changes from

boasting garrulity to timidity and stupor are additional symptoms.

Many persons exhibit the effects of alcohol in a bright, flashing eye and loud bronchial voice, also assertiveness and absence of dignity bordering on the offensive. Public speakers exhibit these symptoms, and the critical student discovers that they have used spirits to give them additional force and power. In reality, the effects are just the opposite. The clearness of the thought is obscured and the consciousness of the effect of his language and manner is diminished. A revivalist whose dogmatic, assertive manner and delirious expressions attracted great attention, would have periods of great depression and exhaustion after his platform work. A sympathetic doctor prescribed spirits as a tonic, and very soon afterwards he retired to a hospital to be treated for brain fatigue. The actual condition was one of inebriety, and the symptoms were the delirium of intoxication.

In some persons the unusual buoyancy following the use of alcohol manifests itself in word delirium. Such persons tell or write stories that are notorious for their detailed descriptions, but exhibit faults of plan or purpose. A number of literary men use spirits to give fluency and supposed clearness to their work. They rarely realize the unevenness and the purposeless trend of the thought they express; brilliant sentences, high-sounding figures of speech that express nothing and lead nowhere. Many books written by persons when under the influence of alcohol, indicate the mental condition and the alternate exhilaration and depression due to spirits. The plot of a book may be very clear at the beginning, but when drawn out by an alcoholic mind it will vary widely from the original.

Insomnia is often a very significant symptom, and profound debility, resembling collapse coming on sud-

denly, indicate toxic conditions, of which alcohol is a common cause.

There are evidently less congested and red faces among inebriates in America than among foreigners. Many inebriates have a blanched appearance. The action of alcohol after a brief period of flushing the facial arteries and veins, produce constriction and marked pallor. The muscles become paralyzed and a listless, dull expression follows. The emotional changes do not show in the play of facial muscles, and the voice becomes bronchial from the congestion of the mucus membrane.

Frequently for the catarrhal states that follow from the use of spirits, cocaine is prescribed and a new addiction is provoked. This remedy gives new buoyancy, and not unfrequently spirits are abandoned, but this is of short duration. The constant drinker always suffers from changes in the membranes of the nose and throat. This in vocalists and professional men who use the voice freely, develops into aphonia. Obstinate bronchial and catarrhal troubles are effects from alcohol in many instances. When the spirits are taken away the disappearance of these diseases is very marked.

So-called rheumatic pains of the lower extremities, with cramps and numbness, are always significant symptoms of an alcoholic origin. In the so-called moderate and constant drinkers, it is clearly neuritis of a toxic origin. In many cases this is not recognized, and patients supposed to have acute rheumatism, particularly marked by palsy of the lower extremities, are given alcohol as a remedy. In many instances the toxic effects of alcohol seem to concentrate most prominently on the sensory and motor nerves of the extremities.

The late Dr. Kerr divided the symptoms of inebriety into what he called a drama of three acts. The first was that of exhilaration, in which the face was flushed,

the eye was flashing, the heart beat rapidly and a feeling of extreme optimism and satisfaction gave the patient the appearance of new vigor and health. The second stage, the flushed face became more intense and the eye became duller and the previous excitement passed away. The imagination and impulsiveness had dwindled away. The thoughts that were formerly clear became confused, and the posing for effect passed off. The former boldness disappeared. A complete change in conduct and appearance is noted. If his work is automatic it will be slower and more mechanical. A marked depression and departure from the normal is evident. If in the first stage he was unusually confidential and credulous, he now becomes suspicious and hesitates. Finally, the last stage of the drama is marked by sleep, stupor and general unconsciousness of his condition and the surroundings. This is practically a form of progressive paralysis, beginning with excitement and general disturbance of the emotional system, extending to the reason and conduct, and finally ending in stupor and coma. In many persons these three stages are clear and well defined. In others they are somewhat obscure. The first stage of exhilaration may be very prominent or almost entirely absent, as far as symptoms would indicate, but the second and third stages are always present. In persons who have become chronic the period of exhilaration is brief and rarely noticed, but the languor, comfort, rest, and finally sleep, are always present.

Persons engaged in active work use spirits to give steadiness, and put them in the second stage with apparent power of control. The anæsthesia of this stage is the one that approaches the ideal in the estimation of the victim. The first stage of excitement and the last stage of stupor are conditions to be avoided.

The supposed effect of alcohol to give additional force and power is the most delusive. Any work done in this stage is markedly imperfect and faulty, and this is notorious in every department in business and social life. This second stage is prominent for delusions that are more or less peculiar, thus excessive egotism and extreme confidence in capacity to meet every emergency of the present is common.

Another delusion is that of skepticism of the honor of others, and belief of the infidelity and treachery of his family and associates. This later is so marked as to be regarded as almost pathognomonic. It is the materialization of this delusion, and the effort to correct the supposed wrong which often ends in homicide. The inebriate who believes his wife and other members of his family untrue, and that they are plotting his ruin, has reached a chronic stage which demands prompt recognition to avert, and, if neglected, will be followed by crime.

Another delusion is that of wealth and ability to influence and command capital and control others. This should be regarded as a parietic symptom, and very often terminates in general paralysis.

Another delusion or symptom that is very common is that of ability to conceal the use of alcohol and explain the symptoms as due to other causes. They never acknowledge what is so apparent to others, and can never be persuaded that their use of spirits is known, or in any way impairs or diminishes their strength and vigor. This particular delusion is seen in certain circles where persons go away and remain secluded for an indefinite period, and then return, giving full explanations of what they have done. Many instances like the following have greatly puzzled both the family and the physician. A lawyer who goes to Europe every year for rest will dis-

appear from London for one or two weeks, then return with voluminous explanations of his absence. He will appear pale and nervous and much weakened. In another instance an active man goes on what appears to be a hunting tour, then disappears from all observation. He returns with the same voluble explanations and debilitated appearance.

Another significant symptom has been noted in the sudden aging and premature senility of active business men, thus within a brief time and without any special causes, the hair becomes white, the face blanched, the eyes watery, the muscles trembly, and the mind becomes feeble and uncertain. Such persons are known to be moderate drinkers, and perhaps have periods of secretive visits to the country or elsewhere for the restoration of health. The diagnosis of exhaustion and the prescription of spirits and drugs always precipitates the fatality of such cases.

It has been observed that many so-called moderate drinkers are extremely susceptible to delirium, which apparently breaks out from the slightest causes. Thus a blow on the head, a fall, or some sort of a shock or fit of anger develops delirium. In common language, the man is considered crazy in his reason and conduct, but the early recovery fails to sustain the theory. Such persons very soon develop neurotic disease, in which the excessive use of spirits is a very pronounced symptom.

Another fact should be recognized in persons who are known as moderate drinkers, namely, that of sudden extreme prostration and exhaustion without any sufficient cause.

These unusual collapses may often be the result of concealed use of spirits, and strangely are treated by spirits as a stimulant. In some instances an explanation

is given that this condition is due to poor whisky and inferior alcohols, or to some particular event of minor importance. Malaria is a term used to explain the phenomena of exhaustion that is clearly due to the toxæmias from spirits.

Persons who have long before suffered from malarious fever, delude themselves with the idea that their present condition is due to some entailment of the former condition, and not to the secret or open use of spirits. Many persons who use spirits have profound toxic stages marked by chills and fever. In one instance a man of unusual ability and strength, after a period of intense activity and excitement, suffered from what was called malaria. The usual remedies of quinine was supplemented with hot spirits and the case ended fatally. In another instance profound nervous collapse appeared in a previously active man. He was treated with spirits in great excess and the patient became a chronic inebriate, blaming his physician for causing inebriety. In reality, he was a secret drinker before.

Thus the symptoms and effects of inebriety are not only complex and variable, depending upon the person, the surroundings, the condition of life and other factors which should be recognized, but is a distinct neurosis that involves toxicity and constitutional susceptibility.

Delirium tremens will be described in a separate chapter, but it must be remembered that muttering delirium and muscular tremor are very significant symptoms of an alcoholic origin. A periodicity of collapse symptoms and unusual mental conditions should always suggest a possible alcoholic origin. There can be no question that the symptoms from the action of alcohol on the body and mind, either in early or later stages, follow distinct lines of degeneration, and, while complicated, are peculiar and

stand alone in many ways. In the later stages there is little question of the meaning of these symptoms, but in the early stages the finer depressions and changes of character, conduct, reason, habits of work, ambition and purposes are all significant of degenerative processes which should be discovered.

CHAPTER VIII.

PERIODIC INEBRIETY AND ITS SYMPTOMOLOGY.

Synopsis.—Great obscurity concerning the causes of these conditions. Found to resemble epilepsy. Various theories which do not accord with the facts. Patients very emphatic in their explanation of the causes, also confidence of ability to control them. Premonitory symptoms very marked in some cases. In others obscure. Theories of alcohol. Rythms in functional activities of the body. The word habit. Two forms of periodic drinkers. One with irregular free intervals, very common. The other with regular free intervals. The first impressions from the use of alcohol. The future use depends upon this. These impressions powerful in later life. Examples. Hereditary tendencies. Drink craze neutralized by certain conditions. Often periodic drinkers are highly developed nervous persons. Midnight drinkers. Club drinkers. Relation to pneumonia and consumption. Examples. Curious facts. Confusing groups of cases. Difficult matter to form them into any connected whole. Such cases should be studied. The subsidence of the drink craze is followed by other neuroses. Some of them very severe. Examples. Periodic drinkers are very seriously affected. The possibility of restoration not so good. The drink craze may subside, but the tendency of the system to take on periodic explosions, very marked. Examples. Farther studies needed.

The man who drinks steadily, with apparent self-control, attracts little or no attention, but the one who uses spirits to great excess, then abstains for a period, is more noticeable. There is some mystery about this form of periodic drinking, and the impression prevails that these drink impulses are under the control of the victim, and are literally moral lapses which he should and could prevent.

The sudden cessation and total abstinence from all use of spirits is explained by the victim with great exactness, and this is often accepted as evidence of his will-power.

The various theories offered in explanation of why persons suddenly drink to excess and then stop with equal

abruptness, are very numerous among the victims, and are accepted by the public as accurate descriptions.

When the phenomena of these attacks are studied scientifically, they are found to resemble those of epilepsy and other convulsive explosions of nerve energy, with distinct physical causes and conditions not under the control of the will. The assertions of free will and ability to control the drink impulse and to stop at any moment, are not confirmed by the repeated attacks, hence the inference that there are other causes unknown in the production of these paroxysms. Theories offered in explanation do not explain the condition, and are contradicted by the facts.

Careful studies of persons subject to these drink storms indicate distinct physical and psychological strains that have some connection, and precede the outbreak, and, in some instances, they are distinct premonitions of the drink excesses.

In some cases the patient is unconscious of the significance of these physical and mental perturbations preceding the use of spirits. In others, he is clearly conscious of the coming drink attacks. In the latter case he will often conceal these early symptoms, or explain them as due to other conditions, and in some instances make preparations and talk about drinking and the effects of alcohol as if fully aware that he is to have a period of drinking.

In a certain number of instances persons have distinct premonitory symptoms which always precede the drink attack, whether they are conscious of it or not. If conscious, they conceal it, but probably they minimize and overlook the significance of these oncoming symptoms.

One of them is loss of appetite, and great nerve tension, with irritability and unusual excitement. Another

is gormandizing, and inordinate appetite, eating large quantities of food, drinking tea and coffee to excess, etc. Another symptom is intense activity and prolonged work, neglect of rest, unusual excitement and anxiety about his work, family and other surroundings.

Thus a previously lethargic man will become intensely active, and manifest great energy, quite unusual, then suddenly drink to great excess. A previously healthy man sleeping well, will have insomnia for a few days, and then begin to drink, or he will show unusual anxiety of some oncoming serious disease and consult various physicians, and then drink to great excess and forget all his previous symptoms.

To the friends these great irregularities of thought and conduct are not often recognized as premonitory to the drink attack. In such cases there is undoubtedly present some condition of hyperæsthesia of the nerve centers, or profound anæmia and the nervous organization is depressed to a painful degree.

Then the thought of spirits and its narcotic action comes like an obsession which is irresistible. The mystery of the periodic forms of these states occurring at regular intervals has not been explained satisfactorily. It would seem very much like the gathering of toxins in the brain centers, and their explosion calling for relief.

Alcohol used up to the point of stupor is followed by a complete subsidence of all the symptoms, as well as the desire for drink. Then recovery follows. Later the same symptoms recur, with the same ending, and the free interval is marked by the rigid abstinence and disgust for spirits and its effects.

There must be some condition of exhaustion and derangement for which spirits act as a most grateful relief. This relief is only complete when profound narcotism follows.

The very common theories that alcohol is a stimulant, bringing new force and power, are very influential in suggesting and promoting its use at these periods, and the anæsthesia and narcotism which follows confirm the theory. Thus the senses and power of reasoning are deceived by its effects, interpreting the anæsthesia as stimulation and new force. The more spirits used, the more obscure the actual condition and the consciousness of the effects become.

The word "habit," describing certain acts and conduct which seem to be under the control of the will to do or not to do, fails to indicate the conditions of the periodic drinker.

While there are certain acts of automatism and distinct rhythmic uniform movements of the functional activities of the body, it is not certain that they are under control of the will, and can be regulated by reason or judgment. The periodicity of the drink attacks of the inebriate, particularly when they occur at exact intervals, open up a new field of explanations and theories that are not clear or satisfactory.

It is very evident that much of this phenomena is beyond the control of the will. Whether this is the result of conditions which could have been controlled is uncertain.

There appears to be two classes of periodic drinkers. One in which the drink period and the free interval are irregular, uncertain and changeable. In the other, the drink attack is always the same, and the free interval is distinct in length of time as well as the period of drinking.

The former are by far the most numerous and prominent. The drink attacks in these cases are irregular, the length of the attack differing and the free interval variable, sometimes lasting years, but recurring again in about the same way and under the same conditions.

The free intervals continually become shorter as the disease progresses, and often this form of drinking disappears and the patient becomes a regular drinker.

There is a sub-class of this form of drinking that may be termed accidental, contagious, environmental drinkers. These terms refer particularly to causes. Thus one will only drink accidentally on meeting certain boon companions. The contagion of good company brings on the attack, and its duration depends on the same surroundings.

Others drink in certain particular surroundings, and on certain occasions, and are temperate in all other conditions. They are periodic drinkers, but their drinking and periodicity is uncertain, subject to conditions that are unknown, and may vary widely in different surroundings.

Often the length of these attacks seem to be controlled by the effects of the spirits on the organism. Thus in one instance a few hours of toxic poisoning from spirits is followed by reversion. In others, many days of excessive drinking occurs before the paroxysm dies out.

Great varieties of brain instability, physical and psychical exhaustion occur both preceding and following. This is manifest in the diseased, emotional, unreasoning, fitful activities, with changing ambitions and ideals of life, showing much confusion of the reason and loss of control.

Such persons begin the use of spirits, with or without any particular temptation, and not unfrequently in conditions and surroundings that are adverse and repulsive to all use of spirits. There are in many communities persons who have used spirits to stupor and become so thoroughly disgusted with the effects, both physical and mental, that they seldom if ever drink again.

Some physical antagonism to the effects of spirits has been roused in the organism, and the thought of it is

painful. Such persons are emphatic in their explanations of the ability of everyone to stop the use of spirits at will, and often this emphasis is so pronounced as to be unreasonable, and suggest a weakness that is manifest in many ways.

Often persons who are so very emphatic in the condemnation of the weakness of drinking, suggest a personal experience and realization of the effects of spirits. Frequently they are secret drinkers themselves, who use spirits at irregular intervals, recover and show an intemperate zeal in condemning others who use spirits. The physical and psychological repulsion for spirits from a toxic state may last a lifetime, growing with the years, or may die out any time and be forgotten.

It is always a question of great clinical importance to find out the first impressions on the mind of the patient from the action of spirits. If this has been very pleasing, satisfactory and impressive, it will always be more or less permanent, no matter what the distress and disgust may be which follows the subsidence of the drink craze. If the first impressions have been pleasing, there are reasons for believing that spirits will be taken again in later life, but if they have been painful and distressing, that is, after the first excitement, both body and mind have been depressed with pain and uncomfortable feelings, immunity may be expected in the future.

This is only a general rule, to which there are many exceptions. Thus persons who have been disgusted with the flavor and odor of spirits, or persons in whom the effects of spirits have been depressing have been able to overcome this. Later these effects change, and new physical conditions call for the renewal of spirits, regardless of its distaste or pleasure.

There are certain persons who on occasions of great emotional excitement and depression use spirits and be-

come quickly intoxicated from a very small quantity. In such instances there is no particular desire for spirits that precedes the act. It comes on suddenly and without reason. In the treatment of these cases, the early impressions suggest how far possible treatment by mental measures can be depended upon to build up resistance to its farther use.

There are always wide differences in the physiological action of alcohol on the organism. These are to be considered in an early study. Where remedies are given for the purpose of producing revulsion and distaste, or dread of the effects of alcohol, the results have not been satisfactory and can not be, unless the previous history of the patient is known.

If the organism has repelled the effects of alcohol with suffering and pain, a mental impression may be produced that will increase this repellent power, and the recognition of this fact is a very practical aid in the treatment.

In one instance, a business man who had drunk in early life and been profoundly disgusted, then abstained for many years, was advised by the physician to use spirits for debility. Very soon he was profoundly intoxicated, and the exhaustion and mental disgust which followed were very intense. From that time on, the odor of spirits produced nausea, and if he was in a company of persons who were drinking, this produced vomiting. The early impressions became a dominant antagonism to spirits.

Often persons find the effect of spirits pleasant at first, and while the odor may not be very agreeable, the sedative effect is pleasing. In this there is a constitutional predisposition and a bias to use it for its immediate effects. Many of these persons become periodic drinkers, and have distinct periods of intense fascination and pleasure for the effects of spirits, and then periods of repugnance.

In this way a medical prescription containing spirits may awaken some latent tendency, which quickly develops into inebriety. Common examples are noted of men who during their college career have been intoxicated, and at the time seem to enjoy the effects of spirits. They either become abstainers or moderate drinkers. If of the first class, they are likely under conditions of great strain and mental excitement to drink to great excess and become intoxicated, and soon become periodic drinkers.

If of the latter class, they may continue to drink in great moderation and become literally alcoholics. Such men often reason that it is a safe use of spirits to take it in small quantities at regular intervals. In reality these persons frequently drink to great excess, and do not seem to realize that the moderate drinking has anything to do with it.

There is one class of moderate drinkers in which the free interval is very uniform and exact as to time. The following are examples.

A lawyer with a neurotic history, who began to drink in college at intervals, has now, after a period of thirty years, distinct drink attacks every ninety-one days, and three or four hours. These come on very suddenly, irrespective of surroundings and conditions, and last from four to five days.

They are followed by acute gastritis, mental and physical exhaustion and recovery. No efforts on his part have succeeded in breaking up the attacks or preventing their return.

On two occasions he was locked up, and became acutely maniacal. This mania was only quelled by the use of spirits. He now goes to a sanatorium or hospital on the approach of the drink storm. He is given small quantities of spirits and watched carefully, and is thus able to recover in a shorter time, with less debility.

He is perfectly temperate during the interval, and suffers from intense disgust from the smell of spirits or the sight of drinking men. A number of cases have been noted where the free interval was marvelously exact as to time, and no prophylactic treatment could check it.

A second case was that of a business man who never drinks except on Thanksgiving Day. He is a neurotic and used spirits in early life occasionally, but for many years he has been abstinent except on these particular days. He will attend church, dine with his family, seem to be perfectly well, then suddenly the desire for drink will come over him so impetuously that he will go to his room and drink to intoxication for twenty-four hours or more, and then recover.

A third case is that of a physician with an insane ancestry, who for the last five years has drunk on the Fourth of July, and at no other time. He suggests that the noise and excitement provoke a desire for drinking, and that this desire does not occur at any other time.

A brother of his has for years drunk to great excess every second year—on the anniversary of his marriage. The time between the drink storms he is perfectly temperate, and even on off years he says he thinks of drinking on the return of the period, but is able to control himself.

The next year the period for drink arrives, and with it an intense desire which he is unable to overcome. A number of cases have been noted of occasional drinking men, who at certain definite periods drink to great excess. At all other times they seem to have full control.

There is in these examples both a psychological and physical abnormality, which gathers and breaks like a storm in the clear sky. In all probability the eccentric acts and strange conduct of prominent men are due to concealed periodic inebriety.

Many business men suddenly disappear, going to some secretive place with very unsatisfactory explanations and frequently without any ostensible reasons, and return pale and feeble after a week or more, and calling in the physician, are treated for malaria or some other condition of nerve exhaustion. The real cause, periodic drinking, is unrecognized.

Some of these persons seem to be aware of the approach of the attack, and make extraordinary efforts to conceal it and prevent all inquiry or possible anxiety from their efforts. They often show great activity in business, providing for possible emergencies and obligations. In reality, setting their house in order before they go. After an uncertain interval they return and explain their absence with unusual statements. This resembles a reasoning mania, and is only noted because of its unusual character.

Another class of periodic drinkers show no apprehension or anticipation of the drink impulse, which comes on so suddenly as to overwhelm them at once. One man will disappear suddenly, and will return in two or three days, and be unable to explain where he was or what he did.

An instance of this kind was that of a banker who after an interval of fifteen months will suddenly disappear. Apparently he will disguise himself, take a drink, walk out of town, take a way train, go to some obscure hotel, stay two or three days, and be constantly stupid. Then wake up and return, and be very indignant if anybody inquires concerning his acts during this period.

Another man will stop in the middle of his work, buy a quart of whisky, rush off to the woods and conceal himself and drink to continuous stupor. This quantity of spirits generally lasts him two days or more. Then he will return, and, when pressed for an explanation, say that it was his crazy spell.

A number of very sensational disappearances of prominent men, who later are found in distant places, are examples of this class. Very curious explanations are given, but the real facts are concealed. Often the person is known as a temperate man, or perhaps a total abstainer. At all events, above all suspicion of being an inebriate.

An event of this kind was the subject of considerable comment a few years ago, and it appeared that this particular act was one of many which had been known to only a small circle of friends. He was a man of very startling oratorical capacities, and a temperance lecturer of unusual magnitude. In the middle of one of his lectures he became pale, stammered, asked his audience to excuse him, and in the excitement of the occasion disappeared so completely as to excite the most startling apprehension. In reality, he disguised himself and went to an obscure farmhouse in the country, where he remained intoxicated for several days. He then recovered and under disguise went to a distant town and appeared. He was a periodic inebriate in which the drink periods came on suddenly at long intervals.

A number of persons have been noted who did not dare to attend certain festive occasions, such as college or other reunions, or banquets where wine is served. The obsession to drink on such occasions is so strong that they become intoxicated.

There are both physical and psychical conditions present, which are roused into activity, demanding the narcotism.

The late Dr. Parrish described instances of persons who never drank except on moonlight nights, particularly in the fall months. At all other times in the year there was no impulse, but rather a repugnance to the use of spirits.

Instances have been mentioned of persons who never drink except after midnight. The rest of the time they

have no desire. Another class use spirits in the early morning. If they remain sober during these periods there is no danger of the return of the drink paroxysm until the same time the next day.

The periodic drinker is always a neurotic and psychoasthenic, and these peculiarities of time and place which recur with such startling uniformity are due to brain conditions unknown.

Explanations given by themselves or their friends are so obviously unreal as to be unworthy of notice. Nearly all these persons are secretive in their drinking, and show great adroitness in explaining their conduct as due to other causes.

There is not unfrequently traceable a certain ebb and flow in the nerve energy of certain persons, noted by exaltation or depression, and registered by obsessions for spirits. It should be remembered that these drink cycles and periodic obsessions may change into other abnormalities. Such persons may frequently become drug-takers, or show marked disturbance of the brain and nervous system.

Emotional changes are characteristic. Thus intense excitement over trivial things or depression without any sufficient cause, may frequently culminate in the stupor of intoxication, and after this is over melancholia may come on, and perhaps suicidal impulses. A man may at intervals of a year or more become profoundly depressed and drink to great intoxication unless controlled. Then the depression passes off and with it all desire for spirits and another year intervenes.

In a certain number of instances these drink storms break up, and their recurrence is marked by other symptoms of mental perversions. Sometimes suicide follows, or wild periods of speculative mania or extreme suspicion of his associates, and doubt of the integrity of those about

him. Several cases have been noted where a man previously a periodic drinker, suddenly develops startling symptoms of collapse, and concealed manias, which puzzle the physician, and are often the subject of anxious consultations. The patient recovers in a few weeks, and no one traces any connection between these obscure physical states and his previous drinking. In all probability it is only another phase of periodic drinking.

A noted officer in the Civil War drank to intoxication with the yearly reunion of his comrades, and at all other times he was temperate. He moved away where it was impossible to meet his old comrades as before, and for many years afterwards, during the month of September, he suffered from obscure neurosis and psychosis for two or three weeks at a time.

These disorders took on various phases of profound exhaustion, symptoms of Bright's disease, malaria poisoning, paralysis of the lower extremities, insomnia, loss of appetite and high fever. He recovered from all of these, and for the following year would continue in good health and spirits, a perfect abstainer in every particular.

A patient under our care many years ago, who made a good recovery, returns regularly once a year in the month of April, complaining of mental disturbance and depression, sometimes suffering from severe dyspepsia, always from insomnia, and alarmed at his condition. The symptoms are very startling, but pass away after four or five days of rest and quietness.

He is a total abstainer and in a half conscious way fears that his debility will lead up to the drink craze, and hence comes for assistance. There is in this a very marked psychological element, controlled by his general physical derangement.

The periodicities of the drink craze are exceedingly complex, and take on very strange forms, so much so that

there can be no classification or grouping that will apply to any large number of persons. An instance of a very prominent banker, who, after a very serious failure, drank to excess and was placed in an insane asylum. A few months later he recovered and resumed business again, a thoroughly temperate man in all his thought and habits. Years after he failed again and drank as before, recovered; and the third time he failed, drank to stupor and died. In this there was a curious return of the drink impulse under similar circumstances. Several cases have been noted of periodic drinkers, whose drink periods were well defined, contracting consumption on the return of the drink craze.

Two cases of this class drank every six months for many years, on or about the 1st of July. Both of them were taken with acute tuberculosis at the time the drink craze should have appeared. One went to the North woods, recovered, and the following year the same symptoms appeared and soon after he died. The second case went under the care of a quack and was given large quantities of whisky, recovered, in part, but continued drinking moderately and finally died of the disease.

Pneumonia is a very common acute inflammatory condition which is likely to occur at the time for the return of the drink paroxysm.

The connection between the return of the drink impulse and acute inflammation of the lungs is seldom traced, but undoubtedly it is very close; a local form of paresis starts up in the terminals of the pneumogastric nerves, and this is not uncommon in other inebriates, not necessarily occurring only in those who drink periodically.

Very interesting studies have been made of the periodicity of nerve energy, both in health and disease, and there is evidently a very wide field of facts that are now practically unknown. It may be assumed that the periodic

inebriate has developed organic changes in the brain centers that are very serious, and although largely unknown are very pronounced in their symptomology.

It has been stated by good authorities that only very highly nervously organized persons drink at intervals. The coarser and more demented nervous organizations demand spirits continuously. This has some basis in fact, but has not yet been worked out. There is a very close connection between periodic drinking and epilepsy.

Frequently the drink period merges into a muscular paroxysm and a regular epileptic convulsion. The so-called alcoholic epilepsies resemble this, although there are often very confusing details. While the use of alcohol will certainly produce epilepsy, a periodic drinker who has distinct intervals is evidently on the road to this condition, although it may not break out in this particular form.

All such cases should receive the very closest study, and the paroxysms should be regarded with the greatest interest.

CHAPTER IX.

CONTINUOUS DRINKERS.

Synopsis.—The regular drinker more diseased than any other class. The form of diseases. Comparisons with total abstainers. The accumulative action of alcohol. Effects slight at first. Saturation from spirits dangerous. Effects on the psychic centers show derangement of mind. Changes of conduct and appearance. The senses are always disturbed. The surface of the body deranged. Nutrition is seriously effected. Diseases appear ascribed to different causes. Examples of injury from spirits. Mortality greater in moderate drinkers. Stories of long life, fictions. Beer drinkers examples of degeneration. Prognosis bad. Statistics confirm this. Delusions in common life.

The man who uses spirits regularly even in so-called moderation, is literally paralyzed, although he does not realize it. This paralysis is the direct result of continuously taking toxins into the system from the alcohol, and consequent cell starvation.

Very interesting studies have been made of so-called moderate drinkers, who claim to be in good health, and in every instance defects and degenerations have been recognized of great gravity.

Dr. C. H. Hughes has repeatedly called attention to the fact that the moderate or continuous drinker of spirits is more diseased and degenerate, notwithstanding his appearance of health, than one who uses spirits at intervals and recovers.

Dr. L. D. Mason has made many studies of this class, and pointed out the low vitality and feeble power of resistance and extreme susceptibility to disease, noted in such persons. The increased action of the heart is always marked by high tension, and with this comes lack of precision and muscular control, faults of memory, slowness of thought and inability to act quickly.

There are evidently two classes of continuous drinkers. One, who after a time becomes excessive users of spirits, either periodic or spasmodic, at irregular intervals. The other class develops various diseases of which neuritis, inflammation of the kidneys and liver are most common.

They are not called inebriates, and yet the diseases from which they suffer are traceable to the use of spirits. Frequently they suffer from mental troubles that are obscure and difficult to understand.

Eminent authorities, in all departments of medicine, have called attention to the pronounced disease, both of the brain and nervous system, in persons who used spirits regularly. Recent text-books assert very positively that in certain diseases all use of alcohol must be discontinued in the treatment.

The cumulative action of alcohol, when used in small doses, is unrecognized and yet all persons who are moderate drinkers have a great variety of defects, which they ascribe to other causes. In another chapter these effects are presented in some detail. The effects probably begin with deranged circulation, increasing and diminishing the action of the blood, and the oxygen-carrying properties of the red blood corpuscles.

These changes are slight at first, but later the use of spirits prevents the readjustment of the disordered conditions. The minute capillaries fail to convey the blood uniformly to all parts of the brain. The nutrient plasma is diminished. The toxins increase, and diminished force and vitality follow.

When spirits are taken to excess, a point of saturation is reached in which spirits are exhaled by the lungs, and there is a pronounced form of circulatory derangement. There must of necessity be very serious disturbances when the alcoholic ethers accumulate to such an extent as to be exhaled through the lungs.

When the first effects of spirits pass away, there is a sense of suffering and consciousness of low vitality that calls for a renewal of the drug, and in this way the delusion of strength and vigor is created. Clinical comparisons and studies of persons who use spirits daily and those in the same condition who are abstainers, show very striking differences.

In the moderate drinker there is exaltation of the ego, unusual confidence, and unreasoning faith in his strength and ability. This may not be very prominent at first, but grows with the increased use of spirits. His conduct and work become more automatic and mechanical, and less original; he is more incapable of change and adaptation to new conditions.

His pride of appearance and integrity changes. Soon he will suffer from defective eyesight and troubles of hearing and catarrh, will begin to wear glasses, will visit the nose and throat specialist, and be disturbed about chills and drafts. Later he will complain of digestive disturbances, and perhaps change the form of spirits, or combine it with milk or some other substance, increasing the amount and shortening the periods between the times of using it.

Then he will show anxiety and unusual zeal to defend its use and claim its tonic and medicinal powers as seen in his own experience to be very valuable. This reasoning is often marked by inconsistency, of which he is oblivious.

Very soon the face and skin show congestion and palsy, literally vasomotor paralysis of the capillaries seen in the face, and associated with this are pains along the track of the large nerves, called rheumatic.

Insomnia comes on and the physician diagnoses neurasthenia, brain exhaustion, or perhaps night-sweats and chills suggest malaria and catarrhal and bronchial trou-

bles give hints of incipient tuberculosis, and the patient is sent to another climate.

Together with this there is irritability, emotional changes and other prominent symptoms. The moderate drinker sooner or later becomes an invalid, and patron of physicians, both regular and irregular. His credulity and skepticism suggest all sorts of means and measures, which invariably fail to bring relief.

Then comes proprietary medicines, and should they happen to contain opium, the improvement of the symptoms are so marked that he becomes an enthusiast in the hope of recovery.

In all this search for health there is no thought of the moderate use of spirits as a primary cause. His increasing weakness and complex symptoms suggest different kinds of spirits which he uses with great eagerness and confidence.

One fact impresses itself on the mind of the patient—that he is unable to do what he did formerly, and that he is gradually becoming weaker. His low vitality and profound exhaustion after mental and muscular activity and the slow power of repair from injuries attract the physician who ascribes it to other causes. A sudden chill and acute pneumonia end fatally in a few days.

The diagnosis of Bright's Disease is sometimes made, and the advice to stop the use of spirits is followed by depression and so-called collapse that forces him to resume its use again.

After a time the constant user of spirits, even in great moderation, will show some disturbed states or defects and degenerations of some particular class or of some particular organ of the body. Thus, in one case a moderate drinker exhibited emotional changes, was excitable, suspicious and angry without cause. This was very unusual

in his conduct. Another man was indifferent, stupid and neglectful of common every-day duties. His former caution and conservatism changes to the other extreme and he becomes a speculator, is visionary and unwise in his thought and conduct.

Probably the derangement of nutrition recognized in capricious appetite is the most common disturbance. A great variety of nutrient disturbances occur that resist all treatment.

In practical, every-day life where exact, uniform work is required, the moderate drinker becomes more and more incapable. Men working on the railroad or in positions where exactness of work as to time and accuracy are required are very soon discharged as incompetent.

This inability is due to faulty sense perceptions and feeble reasoning powers, with uncertain memory and inability to act rapidly and with clear judgment. Employers of coarse muscular-labor workmen recognize that the daily output of work is greatly diminished in persons who use spirits constantly.

Thus groups of Italians who use spirits daily are uncertain, and their muscular output is unreliable, particularly in emergencies. Injuries of any kind also are more serious, with a slower convalescence than in others who are abstainers.

The steady beer-drinker is a very marked example of progressive degeneration. The delusive appearance of health noted in the workmen about breweries, and particularly on the docks at Liverpool is contradicted by the high mortality and frequent fatal results from insignificant injuries.

A large percentage of beer drinkers die before middle life, or are invalids and taken to hospitals to pass the remaining years.

It is a curious illustration of popular ignorance that the moderate use of spirits and beer is thought to favor ideal health and longevity, and that if the user could continue its moderate use the best results would follow.

Repeated stories in the daily press of persons who use spirits in small quantities regularly for long periods of time, and not only do not suffer, but are better for it, are often found to be mere myths; for while it is possible for some persons living in quiet surroundings, with little or no mental strain or activity, to use small doses of spirits regularly for a period of years, experience shows that they are the exceptions to the rule. Careful studies of moderate drinkers show that they always develop some chronic disease, and become broken down in a very few years.

Dr. Mason, in a recent study, showed that both beer and spirits taken in moderation always develop diseases, and are followed by a shortened life and complex degenerations from which there are few if any exceptions.

Many studies have been made of persons of this class, with a view of determining their freedom from disease and their average mortality, but the results have always been a confirmation of the statement that all persons who drink in moderation suffer more or less from degenerations, either acute or chronic.

In business circles the moderate drinker is regarded with suspicion, particularly as to his capacity, reliability and stability. He may be tolerated, but he is regarded as a doubtful factor in the hard, grinding struggle of trade.

In the social and scientific world many men are known as moderate drinkers, and there is very little question about their mental impairment, and yet after a time a strange, unusual will is revealed at death. Their affairs become involved in strange financial difficulties. Their

credulity and unusual conduct are marked in some startling way.

An example was that of a noted statesman who suddenly exhibited a most extraordinary course of conduct, and a short time after he suddenly died. The fact of his moderate drinking explained this sudden lapse of good judgment.

Many instances are prominent where all unexpectedly changes of religion, occupation, conduct, judgment, caution and all other conditions which have marked the previous career occur, and are traceable to the cumulative degenerative action of alcohol, which has been used for years in so-called moderation.

It may be stated as a fact, the exceptions to which only prove the rule, that the moderate and steady user of spirits is always diseased and degenerate, whether we recognize it or not. He may do his accustomed work, but it will be automatic. His mental and muscular vitality is impaired. His resistance to disease is diminished and his susceptibility increased.

He is not only aged, but his vitality is reduced to the point where restoration is more and more uncertain. The drink craze may die out, and he may be a total abstainer, but how far he can recover is an open problem. It has been stated elsewhere that moderate drinking in this country is far more serious than in Europe. This fact is founded on statistics. Recent studies of the beer drinker and the user of wines and spirits in Europe show the same conditions, only less marked.

Thus in Munich, the home of the supposed finest quality of beer, heart and kidney diseases prevail to an alarming extent, and circulatory diseases constitute one of the largest factors in mortality, and these, more and more, are traced to the toxæmias due to alcohol.

It is a curious fact not recognized that the constant drinker suffers from delusions concerning himself. Where he is an active brain worker it is absolutely certain that he can not continue the use of spirits any great length of time without marked impairment, and yet he never realizes this, but is constantly deceiving himself with the faith that he is able to do as much as ever and with the same skill and vigor.

The muscular worker has the same faith and confidence in his ability, but actual measurements of his output prove the delusion that he is laboring under. The evidence of the impairment of the moderate drinker is accessible, can be studied in every community.

In institutions the effort to restore such persons is attended with great difficulty and prolonged invalidism.

CHAPTER X.

INEBRIETY A FORM OF MORAL INSANITY.

Synopsis.—What moral insanity represents. An accurate scientific term very common in inebriates. Marked following inebriate ancestors. Indicating arrested development. Can be acquired. Examples frequently noted. Symptoms common to chronic inebriates seen in persons at the beginning of inebriety. Alcohol destroys the moral sense first, in some persons very prominently. Examples given seen in both extremes. In the supposed intellectual and wealthy classes and in the lowest and most defective. Should be recognized in the study and treatment. A particular form of degeneration going through successive stages. A form of insanity not recognized in the books. One that is more or less common in certain circles of society. When convicted of crime cannot be defended by any known symptoms of insanity, hence are punished as responsible. A new field for psychical study that will occupy a very large place in the future.

The term moral insanity represents a condition of the brain in which all sense of right and wrong, duty and obligation is feeble or wanting. Recent exhaustive studies of the brain and mental phenomena indicate a loss of the ethical sense, and the consciousness of the right relations to others, in many persons who otherwise seem to be normal, but whose truthfulness, honesty and respect for law and the feelings of others seem to be entirely wanting.

The term moral insanity has been used to describe this condition, and in a general way it may be considered fairly accurate, because it describes a condition which exists, although but little known. It should be studied more, for no real reform in public or private life is possible until the causes are removed.

In inebriety these symptoms of moral defect are common, no matter what the conditions and standing of the persons may be. It seems to follow the poisoning from alcohol, and in some cases very markedly. Two classes

appear prominently—one hereditary, and the other acquired. Wherever there is a marked history of heredity, of alcoholic parents, or of neurotic degenerate ancestors, a feeble or deficient consciousness of right and wrong is found.

Alcohol used continuously retards growth, diminishes vitality and prevents development. Drinking parents have deficient vitality and are unable to transmit to the next generation full normal vigor. The last and highest formed element of brain power is the first to suffer from alcohol.

Hence drinking parents seldom have children with normal consciousness, sensibility and ethical growth. This faculty will be wanting or very feeble in development. This is the rule to which the exceptions are rare. The defect may be associated with much intelligence, intellectual capacity and power to conceal this condition.

A man prominent in the political world acts in private life as if devoid of all sense of justice, of right and wrong, and duty to others. He is untruthful and dishonest, and when his own interests are concerned will sacrifice any person or principle to gain his ends. His parents were wine dealers and drinkers, both of them waiting on customers over the bar.

Only one child grew to manhood who entered politics as a trade. He is temperate, but a moral paralytic, or a moral maniac, with capacity to conceal his condition.

A man who became one of the greatest swindlers and forgers of his day, was able to keep out of prison by intrigue and cunning, came from drinking parents. To his associates he is known as being without any sense of duty and obligation to any one, and is a literal brigand.

That these conditions are due to inheritance is apparent from the following:

A boy with parents who drank excessively was taken in infancy and educated in a most careful way; all the higher faculties were cultivated to an unusual degree, and he entered the church as a brilliant clergyman. He was found to be untruthful in regard to himself, suspicious of others and grasping, even up to the border of theft in many matters. The collections in church had to be kept out of sight, and always suffered if they passed through his hands.

He became involved in spreading scandal, and seemed oblivious of the danger of such conduct, and broke up one church by his irregularities. For ten years, until his death, he was in continual trouble with every church he was associated with. Here the evidence was clear that he had inherited defective conscientiousness, which defect no training or surroundings could overcome.

In cases where inebriety has been acquired by accident, such as contagion of surroundings and conditions of living, these moral insanities vary widely and are not so general.

In one instance excessive untruthfulness and dishonesty in all business relations was associated with sympathetic tenderness to associates. In another, intense suspicion and doubt of the honesty of others was associated with an extreme desire to be truthful personally.

Another individual was intriguing, secretive, treacherous, and uncertain in his talk, and yet lived otherwise a moral, upright life.

These are examples of a class almost infinite in variety and manifestation, and all show profound changes in the moral faculties. The more common forms are illustrated in this case: A. B., a business man of good reputation and standing in the community, began to drink after a protracted illness from typhoid fever. Two years later he became an inebriate. His mind continued

bright and clear, but his character changed. He was deceitful, suspicious and slanderous, and thought his sons and clerks were robbing him, and that his wife was in league with them.

He had his books examined by an expert, and was still in doubt when they were found correct. He told falsehoods about his business and family, and grew more and more egotistical about his mental capacity to grasp and decide all matters. He was harsh and tyrannical to his wife at times, lost all pride of character in the community and sense of obligation to others.

He was exacting in everything done for his own interests, and oblivious of others' feelings and tastes. As a patient he was intensely selfish and grasping, even to theft, was fawning and obsequious, promising everything and doing the opposite.

In the summary of the common symptoms following the use of alcohol, untruthfulness, or a low respect for their word, is most prominent. A man who previously took pride in the correctness of his promises and statements, will become indifferent to his word, whether true or false.

A man previously honest and trustworthy will be found doing dishonest things, cheating persons, taking advantage in little matters, and failing to act fairly in the interests of himself or others. Then follows suspicion of motives and conduct, doubting the honesty and purity of persons.

This deepens into delusions of intrigue and deception of others, extreme pessimism and doubt of everything; or a state of mind follows in which the distress of others is pleasing.

Recklessness in the use of money, throwing it away without motive or purpose, or extreme parsimony to hoard it, and grasping selfishness, equally unreasonable, are common. As in other insanities, exaltation of the

ego follows, and intense confidence in themselves, their power of reasoning and their ability to do anything possible is present.

Many persons who exhibit all these symptoms appear to be but little changed in other respects. They carry on business, seemingly make good plans and execute them, and appear to casual observers the same.

These insanities seem to concentrate into particular lines or ranges of thought. In one case an inebriate lawyer doubted the honesty of everyone and thought no one was pure or had good motives, and yet he acted rationally on all other matters. In another case a teacher, who had drunk many years, became a secret thief, purloining everything which he fancied, and when likely to be detected restored them in some mysterious way.

He appeared honest and talked honestly, and yet when not observed took every opportunity to appropriate anything that came in his way. A number of cases of inebriates have been reported where this kleptomaniac impulse took on certain peculiar forms. Thus, one man while drinking stole Bibles; another jewelry, and when discovered gave them up freely. One man stole wash-tubs. A woman inebriate always took aprons and towels; another man stole soap, and so on.

The most unusual and unreasonable things are taken, concealed and given up freely without any sense of the nature of the acts. One class of inebriates exhibits this insanity in malicious slander, another in extreme suspicion, others in vindictiveness to resent real or imaginary evils, others in immorality and impurity of act and thought. Many of the chronic cases exhibit all these phases in one.

The oft-repeated statement that "inebriety is criminality," is true in a general sense, when criminality is understood as a course of conduct in which duty, right, and obligations to others are ignored. The inebriate has

physically defective senses; he is not able to adjust himself to the outside world correctly, because his knowledge of its relations is imperfect. His power of reasoning is also deranged, because the impressions from without are faulty and the integrity of the normal action of the nervous system is impaired.

The coarser physical lesions in the inebriate are well recognized and can be traced in all cases. Beyond these, conduct indicates the higher moral defects and changes. Mental changes, as loss of pride, of character, of honor, respect for the truth, of duty to others, low motives or no motives, extreme pessimism, are the first and common changes wrought by alcohol which lead up to criminal acts.

The paralyzing action of alcohol is first seen on the moral brain in the dullness and defective workings of its higher functional activities. The change observed when a man is under the influence of spirits is vaguely called the removal of the restraint of reason and the dominance of the animal impulses—the brute triumphing over the real man. In reality it is palsy of the consciousness, a cutting off of some part of the higher brain, and consequent management by the lower brain and its workings on animal levels.

Impressions are vague, the meaning confused and obscure; the higher relation of events and conditions of life are unrecognized. It is asserted that three per cent. of all persons born are without normal consciousness of right and wrong. They have retarded brain development. The part of the brain which determines moral control, or consciousness of the higher duties is wanting or undeveloped.

Such persons are defectives, and insane in the general meaning of that word, and like demented, are incapable of normal, healthy adjustment to the relations of life.

In cases where an apparently normal state of this brain function has existed and then a great abnormality follows in thought, word and conduct, disease is present. Comparisons of the conduct and character of inebriates before their use of alcohol and after they become regular drinkers, bring out some startling facts that are yet unrecognized.

From the lowest type of the demented inebriate at the bottom, to the moderate drinker and fashionable clubman at the crest, there is a distinct relation and chain of cause and effect. The clear moral insanity of the one is traceable up to the other without any sharp dividing lines. The moderate drinker and clubman, who proves to be a defaulter, or one who is involved in conduct that is criminal, or who becomes a principal in crime, is suffering from disease differing only in degree, but not in kind from the degenerate inebriate tramp.

Moral insanity is a very prominent phase of inebriety. Its absence in any given case is an exception to the rule. A man with a high moral development, usually after he becomes an inebriate, may return to the form and externals of his previous character. He may be more emphatic in his display of some qualities such as religious observance and duty, and yet in business or social matters be oblivious of all obligation.

One such man who prayed for inebriates and lectured on temperance carried on an intrigue and sold his influence to the highest bidder. Another man acted as an agent for the sale of stolen goods, and at the same time carried on a great reform revival; and another was engaged in gold mine swindles, while lecturing every night for gospel temperance. The moral insanity was called hypocrisy, and, in legal phrase, was malicious, criminal and vicious.

In reality it was degeneration and disease, the breaking down of one part of the brain while the others remained

apparently clear. In our Civil War a noted general drank to excess at times. Previously he was noted for his hearty frankness and honesty, but was found unreliable, intriguing and failed when needed most. He showed petty weakness and untruthfulness, with malice that was unknown before in his conduct. He finally died a moral wreck, after the war was over, having become almost criminal in his thoughts and acts.

A clergyman became a secret inebriate and later became involved in a low intrigue and was turned out of the pulpit. He was insane; his consciousness became palsied, and for a time he taught ethical truth automatically. The possibility of one part of the brain being affected and the rest doing normal work, and this condition being concealed, is a reality which experience frequently confirms.

The inebriate who has lost pride of character and sense of duty and obligation, truthfulness and honor may seem to be the same in many ways for a long time, but sooner or later this diseased moral condition will spread, and his whole organism show degeneration. The following are the notes of some cases which have occupied public attention and been the topic of much bitter discussion.

CASE 1. John Blank. His father was a strolling actor of irregular character and an inebriate. He married a woman of average ability from a good family. The father died before John was born, and two years later his mother married again. John was brought up with great care and tenderness. His later education was of the best character. He was the leader of his class as a scholar and an athlete. To his mother and intimates he displayed an intense selfishness, putting his interests and desires above those of all others, and had no consideration for pain and distress that he caused to those about him.

He was cruel in his conduct to anyone who was in the way of his achievement of any purpose or desire. He finally became a lawyer, and was thoroughly unscrupulous in money matters, although not miserly or avaricious. As a politician he was without honor or pride of character and would stoop to anything to accomplish his purpose.

He married a rich woman and soon after swindled his father-in-law, and possessed himself of a large property. Then he drank and began to live a fast life. Had a mistress and attended horse races. Wherever he went he swindled and falsified, and was feared by everyone who had any dealings with him. He went into stock gambling and was swindled and swindled others. He was cruel and violent in his conduct toward his wife and children. After a period of excessive use of spirits he killed his wife and made no effort to conceal it or run away.

On trial his schemes for deception and fraud were revealed to the astonishment of everyone. Truthfulness, honor, duty and all the qualities which go to make character were absent. He was convicted of murder, but the sentence was commuted to life imprisonment.

In this case the moral idiocy was inherited. The higher part of the brain was undeveloped and beyond the reach of culture and education. Without education he would have sunk to a low tramp criminal and burglar, and been a pauper degenerate, dying early. With education he became a high-grade criminal, because he was unable to appreciate ethical truth or moral relations. He was insane from birth; alcohol intensified and developed this condition. The insanity was of the higher ethical brain, and concealed, except to those who knew him intimately.

CASE 2. The second case came from a good family, and was normal in all his relations to others; was truthful, honest and seemed generous and very kind. After a

severe attack of typhoid fever, during which he was given large quantities of spirits, he began to use alcohol daily. His father died and left him in charge of a large business interest. His character changed. His regard for his work was lost. He was suspicious of his mother and brothers, and took money out of the business and concealed it. He left his home for a hotel, and when drinking excessively, wrote violent, scandalous letters to his family and employees. He associated with low women, but treated them harshly, refused to give them money and was constantly in trouble. No public exposure disturbed him. He was frequently in court for petty swindles, and refused to pay unless forced to. His business declined and was finally taken out of his hands, and he became a low blackmailer and beggar, drinking at all times and places. He was examined for lunacy and decided to be sane. No symptoms of insanity were found; nothing but wilfulness and vicious cunning was the opinion of Philadelphia experts. Finally he was convicted as an accessory to murder and incendiarism and sent to prison for life. This was clearly moral insanity, acquired and intensified by drink. His family and early history showed no trace of defective conscientiousness or moral weakness.

His parents were temperate, moral people, church members, above all suspicion. In his early life he attended church and Sunday-school, and had a lovable, attractive character. He began his business career with his father, and seemed in every way honest and honorable. He displayed excellent judgment, and was entrusted with large business interests, which he faithfully executed. During his illness with the typhoid fever his father died, and on his recovery he was put in charge of the business. A total change of character which followed his recovery might have been due to the spirits given, or to

the injury to some brain centers from the fever. At all events, the use of alcohol intensified and fixed this condition. In both of these cases a great deal of mental vigor and apparent sanity was associated with his low morals and brain force. In the latter the experts could find no impairment of reason or memory, and concluded that his conduct was simply vicious.

These facts describe conditions and symptoms that are not well known, but exist in a certain proportion of all inebriates and persons who use spirits. The change of character and the failure of the last-formed faculty of the brain, termed the "ethical sense" of right and wrong, is characteristic of the action of alcohol.

In addition to this, there is a class of persons in whom this ethical sense is wanting or very feebly developed before alcohol is taken. In such persons the use of spirits would simply intensify and increase the previous degeneration; and it is persons of this class which furnish the largest number of recruits of low criminals.

No matter what the previous condition has been, inebriety signifies a special and pronounced damage of the ethical sense which may be termed moral palsy.

Studies of drinking men bring out this fact, and show that no matter what the other forms of degeneration are, this peculiar defect is always present. Whether this is a transient palsy due to physical changes or whether it is a permanent cutting-off and breaking down of some functional activity, is disputed. Many authors consider it an inherited condition and seen only in persons whose ancestors have been diseased.

The practical character of this phase of inebriety comes out in the question of responsibility for crime and conduct that is unusual and antagonistic to law and order. Many interesting questions call for an answer; thus, is it possible for one to use alcohol either as a constant or

periodic drinker, and retain his former consciousness of duty, obligation to himself and others?

In pronounced toxic states from spirits this consciousness is evidently wanting. Is it possible to recover fully this ethical sense of right and wrong after repeated toxic states? These are some of the questions which can only be answered by a study of accurately observed facts, and not from theories or opinions.

So far, the moral palsies, so common in all inebriates, are very significant symptoms that should be recognized and studied in every effort towards prevention and cure.

CHAPTER XI.

GENERAL CAUSES AND FAVORING CONDITIONS.

Synopsis.—Explanations of the causes very numerous. Each patient feels competent to explain the causes in his case. Egotism a common symptom. Loss of pride and character another symptom. Physical exhaustion often precedes the drink stage. Heredity a very active cause. Nervous diseases indigenous. Alcohol most grateful remedy. Children given wine in early life have a predisposition later to use spirits. Persons with bad training. The alcoholic impulse is grown and cultivated. It may appear suddenly. It may break out in middle life from causes that are dormant. It may appear any time from some change in the brain. Obscure conditions may be active causes. Diet important and active as an exciting cause. Periods of life when it is more likely to break out. Shock of the first intoxication leaves an entailment. Symptoms of drink neurosis. Psychic symptoms. The demand for alcohol and relief which it brings. Danger of using alcohol as a remedy. Unknown vitality and resisting power. Early physical impressions continue in after life. Examples. Alcohol dangerous in aged. General considerations.

It is a curious fact that the inebriate and his friends have unusual confidence in their ability to explain the causes which impel men to drink, and explain the reasons why spirits were first taken. This is one of the few disorders in which almost everyone has an opinion and feels very free to express it, at all times and upon all occasions.

In a work on "Drunkenness," published some time ago, the author made very prominent the causes and the exact reasons why spirits are taken. Among other things were mentioned heat, cold, hunger, thirst, weakness, anger, sorrow, loss, success, death, birth, overwork, no work, want of sleep, and so on; covering nearly every condition of life and occupation.

The author was so impressed with the accuracy of his studies that he seemed to fairly revel in details and explanations of how and why the drink impulse developed.

He was very confident that the judgment of a large number of inebriates furnished the most accurate data in the study of causes and motives which impelled the drink craze.

His book, like many others, contained evidence that the author himself was a victim, and was simply enlarging his experience. If the study of insanity was based on the opinions of insane men, and their motives and conceptions, it would be very confusing and doubtful, and the explanations of the causes would vary with each individual.

In much the same way the inebriate who describes with minuteness how the first use of spirits began, and the conditions which favored its continuance is not likely to be accurate. Literally, very few inebriates can give any rational reason why spirits were used at first, although afterwards, while under the influence of spirits, they are very profuse in their reasons and explanations.

On recovery these are forgotten, and the patient acknowledges his inability to tell why, or give any clear explanation as to how, he first began to use spirits.

Occasionally a person is conscious of intense pleasure from the effects of the spirits, and of his inability to resist its use. Many persons take spirits for the first time without any thought of its danger, which they never realized fully until in later stages when an effort is made to give it up.

Most inebriates have a very faint idea of the danger from the use of spirits, and the struggle to abstain is a mere matter of promises; words with a delusive confidence in their ability to control the desire.

The explanations offered by the inebriate, of how he became addicted and how he can escape, are most unreal; and yet they are accepted by his friends and associates as practical facts.

The egotism of inebriates is one of the first signs of degeneration. This occasionally merges into mania or slight forms of melancholia. It has been stated by many authors that all inebriates are both maniacal and melancholy, and the evidence on which this is based is strikingly confirmed in many instances.

In a study of a large number of inebriates, there appear to be two distinct ranges of causes prominent; one of general physical and psychical exhaustion that has preceded and follows from the use of spirits; the other, some distinct constitutional degenerations and defects due to heredity or physical and psychical causes existing long before spirits are taken.

A large number of persons in the first class exhibit a history of distinct physical disorders, particularly dyspepsia, bad nutrition and exhaustion from unhygienic methods of living. Persons who are burdened with care and worry, and who suffer from continuous nerve and muscle strain, are marked examples.

Thus speculators, merchants, mechanics, artisans, farmers, and workmen who are struggling for bread and wealth, and endeavoring to accomplish some particular purpose, and find great difficulties in adapting themselves to the changing conditions; also persons who carry great loads of care and responsibility, or men with limited incomes and large families; who are perpetually strained to provide for the necessities of life, and whose constant thought is the fear of failure. Ambitious men, who are straining every nerve to attain their desire; and avaricious men, struggling to pile up money; and so on, through the list of almost every condition of life, with its burdens and responsibilities; there are states of exhaustion and debility which call for relief from some source. The effects of this constant strain and struggle is marked

by exhaustion, irritability and general weakness, both muscular and mental.

Alcohol, of all other drugs, gives the most delusive relief, through its narcotic action; and this is interpreted as permanent help, and so, in a short time, the remedy is used continuously.

Its accumulative action not only covers up the exhaustion, but develops toxic states for farther and more profound debility.

There is another class in this country whose life and training prepares them for inebriety and drug-taking. They are persons who suffer from idleness and hyper-nutrition and become poisoned and debilitated. They are persons without occupation and without exercise, who overeat, and from the toxæmic states from food find relief in spirits and beer.

Opium, when taken to relieve pain, is sometimes continued unless its effects are disturbing, but spirits are the most common remedies which give relief and cover up the toxic conditions.

Another class because of unhygienic surroundings, badly ventilated rooms, workshops, factories and homes, suffer from states of starvation and cell poisoning, which are the favorite soil for the growth of inebriety.

Occupations that require incessant readjustment of those engaged, to accommodate themselves to the new conditions, often produce the same effect. Alternations of heat and cold and continuous changes, experienced by traveling men and persons engaged in steamboating and railroading; or occupations where fear is always dominant and continuous emotional strain is present, always react in exhaustion and distress, from which inebriety follows most naturally.

It must not be inferred, that these very general conditions of exhaustion which depress and lower the vitality

of the body, always end in an intense desire for alcohol, or in inebriety. It is only intended to show that a large number of persons who drink to excess do so from physical exhaustion, which precedes the use of spirits.

This number is so large that these causes can be rationally considered as most frequent in both predisposing and exciting inebriety. Of course, there is always a certain number of persons to whom alcohol is distinctly repellent and painful, and with whom it does not act as a narcotic at first. That this condition can be overcome by its continued use is sustained by experience.

An English author wrote at some length to show that the first effects of alcohol, increasing the circulation of the blood in the brain, was painful and depressant and that its narcotic action was exceptional. He argued from this that the use of alcohol had to be cultivated, and no previous condition would make it attractive from the first. This has not been confirmed by experience.

It is safe to assume that the narcotic action of alcohol is certain to be pleasing and attractive where conditions of exhaustion prevail, hence these may be called causes.

A second range of causes may be grouped under the term hereditary, constitutional conditions, which will be discussed in some detail in other chapters, but at present will be merely outlined. Thus, in a large and variable percentage of cases in which inebriety is present, there is a distinct neurotic and psychopathic condition, which is traceable to the ancestors, and is clearly transmitted to the next generation.

In this class there are very marked histories of nutrient disorders in childhood, physical defects, infantile diseases which are particularly serious and followed by serious entailments.

Infantile diseases, in the children of inebriates, are always more severe; and inflammatory conditions, from

the slightest causes, are prominent. Frequently the mentality of the child is marked by great extremes, either of precocity or dullness, or the child may seem very irritable, and excessively sensitive and impulsive.

At puberty many complex symptoms appear which are confusing, and attended with low vitality, hyperasthesia. It is at this time that alcohol is found to be a most soothing medicine, no matter in what form it may be given; and later it becomes a beverage, and then, a train of degeneration begins, which ends in inebriety.

It often happens that children of neurotic and moderate drinking parents are given wine and beer in childhood, often as a medicine, on the theory that it has some food elements. This fixes the inebriate tendency, and develops a predisposition, which is almost certain to break out in later life, with or without any visible exciting causes.

Children of this class, who are subjects of intense solicitude and overcare by parents and who are trained to depend on drugs and medicine to overcome discomforts and suffering, are being prepared for inebriety, which in all probability will break out in the future.

Proprietary medicines, given in childhood, particularly tinctures and narcotic compounds, have the same effect in preparing the soil and making it possible for inebriety in the future.

Common examples are seen in almost every community, where nervous, feeble children from neurotic and moderate-drinking parents are the subject of continuous medical care, and who are taken to Europe, and travel about the country for the purpose of securing more vigor and strength; practically overfed and always overdosed.

Such children, when they grow up and pass through college, as a rule, become inebriates. Wine drinking for

strength and exhilaration, and then for sociability, quickly develops into pronounced inebriety. In this class are included persons who are supposed to be trained as total abstainers, and yet hygiene of the nervous system has been utterly disregarded in their education.

The boy who has been trained a rigid abstainer, may be a psychopath, and suddenly, under any circumstances, be overcome by a drink impulse, and use alcohol to great excess. Frequently such cases are the wonderment of the friends, who suppose that simply temperance training in early life would secure an immunity from an alcoholic breakdown in the future; the heredity is not understood.

Some very interesting instances have been noted of the breaking out of the drink impulse at most unexpected times and places.

It appears in some cases that there must be some conditions that may be atmospheric or electrical, and, at all events, controlled by forces entirely unknown, which bring on this drink impulse at the sea level or in the mountains.

A number of cases have been noted where these hereditary neurotics drank only at the seashore or at some high mountain levels. At other places they were able to control the desire and be free from all use of spirits.

Often indiscriminate education applied without reference to a neurotic and nervous organization develops psychopathic degenerations, which lead up to spirit and drug taking. This is a very frequent history of many cases who are very highly trained along lines that favor exhaustion, bad living and irregular development, and this is almost sure to end in this way.

It is this sort of education and training, outside of natural adaptation and capacity and without reference to hereditary entailments, that results in a poor doctor, a weak minister, a feeble lawyer, and a slack business man;

whose entire life is a failure, with inebriety and drug taking as a frequent possibility.

In such persons there is continual disappointment, inevitable, from their ill adaptation to the circumstances; and, as a result, there is low vitality, insomnia and various conditions that naturally call for a narcotic, of which spirits is the most prominent.

Many writers have called attention to the influence of diet in early life, as an active cause for the use of alcohol later.

The late Dr. Wright traced this condition in a large number of instances, and concluded that the inebriety of middle life was very often traceable to faulty nutrition in infancy.

The late Drs. Parker, Parish and Wilson, from long experience with the wealthy classes, reached the same conclusions. In such cases there are clearly over-stimulation in infancy and childhood; the diet, excessively rich in proteids and albumenoids, soon breaks up the metabolic equilibrium, which is never fully restored.

Thus, toxic poisonings, beginning in infancy, go on through various stages; and the balance between waste and supply is disturbed, and the perversions and derangements become more intense and organic. For these disturbances, drugs are used, and alcohol is the most prominent sedative.

On the other hand, where nutrition is defective and poor in quality, or from some peculiar notions special foods are used, similar results follow, of which malnutrition and starvation are prominent. There is no doubt that both classes, those who suffer from an alcoholic heredity, and those who have no entailment of this kind, are largely influenced by the nutrition of childhood.

It is an interesting question, on which authorities differ, namely, how far tea and coffee, used in early life, favor

depressions and perversions, which finally lead up to the drink impulse. There can be no doubt that they are causes, both active and predisposing, in a certain number of cases.

A great variety of evidence has been published, showing the influence of tea and coffee in early childhood, and its special predisposing tendencies to the use of alcohol in later life. Dr. Mason has given some striking examples in his studies of cases treated at the Fort Hamilton Inebriate Home, particularly of persons, who after the use of spirits in infancy, were total abstainers until middle or later life, and then became inebriates.

One example was a boy who was treated with spirits and wine for several months in early childhood and grew up a total abstainer until about thirty years of age. Spirits were given for insomnia at first. In later life a severe attack of pleurisy came on, and with it an impulse to use spirits which he was unable to resist.

Another example was a boy, who from some heat stroke in early life, was given wine or spirits. He was a total abstainer until after forty years of age; then, while convalescing from typhoid fever, a craze for spirits began, which continued until his death a few years later.

These and other cases mentioned showed distinct connections between the early and later use of alcohol which are more than accidents.

The late Dr. Parish reported a case of a very eminent man who was treated with spirits for an attack of typhoid fever when a boy. He became a famous teacher of medicine and was a temperate man in every way, and yet whenever exhausted the impulse to use spirits was very pronounced. Later in life he gave way to this, and it was found that he became profoundly stupid from a small quantity of spirits; at other times spirits were repugnant. The later years of his life were a continuous

struggle to avoid exhaustion, and thus abstain from the use of spirits.

Belonging to the same range of causes, and illustrating the wide diversity of conditions which precede the drink craze, are the following examples. A young man without hereditary predisposition became profoundly intoxicated at a college banquet. Later, when a clergyman, whenever dining with a large company, he suffered acutely from an impulse to drink and with the horror and vivid impression of the first attack. He finally was obliged to keep away from all public banquets for fear he should become intoxicated.

A very temperate, vigorous man, who became wealthy suddenly, drank to stupor with his friends in celebration of this event. For years afterwards every success and special exaltation at his attainments was followed by an intense desire to use spirits.

Another example, showing the opposite effect, was of a strong business man, who, though thoroughly temperate in every way, yielded to the solicitations of his friends and became intoxicated on a certain occasion. He was intensely nauseated and suffered from a low fever for several days after. Later, the odor of spirits was followed by nausea and intense disgust, and the rest of his life he was unable to attend dinners where wine was used, or to stay in the company of persons who were drinking, and, when obliged to do so, went home and suffered from a low form of fever.

A lawyer, who drank heavily during his college career, suddenly developed the utmost horror and exhaustion from the sight and smell of spirits, and had to go to bed whenever he came in contact with drinking men for any length of time.

There was in this something more than a mental obsession. There was both a psychological and physiological

aversion, which depressed him in a remarkable way. Familiar illustrations are those of persons, who, after profound fatigue and weariness, are given alcohol medicinally, and the pleasing effects leave an impression on all later life.

Such persons frequently become intoxicated on the recurrence of any special fatigue. In the meantime, they are total abstainers and abhor the condition which follows from fatigue. Persons who have had unusual toxic effects from spirits are often noted for the intensity of their efforts to help others avoid similar conditions.

Examples like the following are not uncommon: An inebriate, after years of drinking, becomes restored, and at intervals he makes herculean efforts to help others who are in like condition. He will leave his business and family and follow the poor victim with an intensity that is unexplainable, to bring him back to sobriety again.

A noted business man, after the arduous work of the day, spends his evenings in conducting temperance revivals in the slum districts until after midnight. When not holding such meetings, he is visiting the homes of drinking men and begging them to abstain.

A young lawyer of great promise suddenly stops all business and becomes a reformer. Years afterwards he explains his motive by saying that if he had not gone into the work of helping others he would have died a drunkard. The obsession to drink was so powerful that the only way he could control it was by striving to help others.

These causes are so complex that it is impossible to give more than an outline of them. Cases like the following are met. Drinking men who develop neuritis and palsy, stop the use of spirits and become demented or maniacal; or inebriates, who have cerebral hemorrhage

and stop using spirits show a degree of mental vigor never noticed before.

Persons who abstain after years of continuous drinking become paranoics and wild reformers. In another chapter we shall mention tuberculosis as a very common sequel of excessive inebriety. Why alcohol develops neuritis in one man, dementia and profound mental weakness in another, gastro-intestinal disease and organic degeneration in a third, and in the fourth presents little or no evidence of disease, except general debility, is yet to be studied.

Why total abstainers, or men and women who have lived practically temperate lives, should suddenly develop inebriety without any active or exciting causes, is equally mysterious.

There are evidently laws of degeneration which control the cases, and there are clearly effects from the action of alcohol that are acute and accumulative that will be discovered in the future.

CHAPTER XII.

SPECIAL CAUSES OF INEBRIETY.

Synopsis.—Occupations among the special causes. Alcoholism caused by inhalation. Some examples. Great susceptibilities in certain surroundings. Barometrical conditions are often predisposing causes. Saloons made attractive to stimulate thirst. Travel and excitement dangerous causes. Moderate use of beers and other beverages lead up to this condition. Neglect of physical care. Imperfect diet. Tea, coffee and tobacco often influential. In the treatment they should be studied carefully. Cigarette smoking dangerous. Meat eaters more liable to drink. Depressed conditions encourage the use of spirits and beers. Children imperfectly nourished find great relief in spirits. Some interesting statistics. Examples and bad training frequent causes.

It seems best to try and group the great variety of causes which are active in inebriety under different headings, so as to give the reader a better conception of their complexity and afford an opportunity to discriminate in future studies.

While there are evidently exciting and predisposing causes, there are other conditions which contribute, give shape and form to the degenerate influences. One of these is the question of occupation.

Some studies recently made have shown that persons engaged in the manufacture and distribution of spirits furnish a large number of inebriates. Various explanations have been given, but beyond the fact that drinking persons are more or less attracted by such employment, the causes are not clear.

The better class of manufacturers and dealers discourage and try to prevent, if possible, the use of spirits among persons engaged in the traffic. This is no doubt a matter of business, for the reason that the users of spirits are found most incompetent and unreliable, and, therefore, give poor service.

There can be no question that persons working in the manufacture of spirits, and its sale and distribution, necessarily inhale a certain amount of spirit ethers which, after a time, impress them and produce toxic states of exhaustion for which spirits are craved as a relief and as a medicine. Instances are mentioned of persons working in distilleries suffering from continued impulses to take spirits.

On going out into the open air they recover, and the impulse dies out. The same is noted in breweries where persons drink beer, but do not drink elsewhere. Often retail dealers and workers manifest intense disgust while handling spirits, and have no desire to use it in any way, but later, when away and not engaged in the work, have pleasure in it and desire to drink.

Both of these conditions are very marked. One, of a distaste while working in contact with it, and the other, a fascination for it and a desire to use it, which are not present later. Probably a majority of persons working in the spirit business use it as a beverage or as a medicine, without regard to the external circumstances.

Formerly, in the retail business, the efficiency of the bar-keeper was determined by his ability to drink in moderation, and encourage others about him to do the same.

Latterly, the value of a bar-keeper turns on his total abstinence, and his ability to remain sober and take advantage of the weakness of others. It is a boast of many men in the business that they are able to drink in moderation and never to excess, but experience shows that such men are the most degenerate of all classes of drinking men.

Experience also shows that the dealers in spirits suffer from rheumatism, gout, dyspepsia and organic inflam-

mations of the stomach and kidneys, and are health-seekers to a larger degree than persons in other occupations.

Some very interesting cases have been published in *The Journal of Inebriety* of "Alcoholism from Inhalation of Spirit Odors," in persons who have been total abstainers. One instance was that of a clerk with a wife and family of four children who lived in an apartment over a room where spirits were mixed for sale.

His wife and family suffered from headaches, stupor, insomnia, faulty nutrition and general invalidism. All treatment was ineffectual. Finally they moved to another apartment and recovered. It was clear that the odors from the spirits below penetrated through the ceiling and became a constant source of poisoning.

This was confirmed by the fact that the wife and children suffered more than the husband, who was out during the day, and during the winter, when the doors were closed, they were worse than at other times. Examples of persons who were strong and healthy, doing business in warehouses where spirits were stored, suffering first from headache, derangement of the stomach, nervous depression and a great variety of complex symptoms, which gradually led up to the use of spirits, have been noted in many journals.

Some of the palatial bar-rooms, where there are fountains of perfumed water and spirit odors pervade the air, it is noticed that they create the sensation of thirst and desire to drink in those in whom it did not exist before. The retailer has studied this art of appealing to the sense of smell by filling the air with spirit odors, and sometimes scattering it on the street in front of the saloon to arouse a desire in the minds of the persons who are passing by.

There is no doubt a hypersensitiveness to spirit odors in many persons, particularly in those who have used

spirits formerly. Thus the smell of wine at the communion table, or its taste, has often been followed by an intolerable desire to drink.

Instances are noted where persons, previously temperate, have been attracted by the highly-flavored odors of wine, and have drunk, ending in intoxication. It is not clear that appeals to the sense of smell in this way have caused inebriety in a previously temperate man, but there are innumerable instances where these conditions have preceded the use of spirits, and it is very certain that the odors of spirits to men who have previously used them to great excess is a special exciting cause.

The art of selling spirits has been developed to a very high degree in the luxury and artistic attractiveness of saloons. Appeals to the senses, particularly to the sight, smell and hearing, in warm, attractive surroundings, may be made to increase the thirst and provoke a desire to drink.

Some very curious facts have been worked out, showing that the traffic in spirits, both wholesale and retail, has some peculiar psychical degenerative influences; and that men engaged in the business, not total abstainers and called temperate, always suffer in the end from disease, both mental and physical, that in some way seems to date from the business.

Examples are cited of persons of good average mental and moral vigor, conducting the business along rational, common-sense lines, who not only become diseased in most unexpected ways but suffer in some degree not common to other occupations.

It is very evident from statistics that persons engaged in the traffic have greater mortality and are more liable to disease and inebriety than others. The commercial traveler of former times suffered very largely from in-

ebriety, and ranked next to the spirit dealer in liability to this disease.

The causes, irregularity of work and rest, with continuous change, mental strain and habits of treating after each sale, were very prominent.

There were always starvation and imperfect nutrition from the irregular life of this work that found in alcohol a most grateful relief. Fortunately, these conditions are passing away, and the old-time, convivial commercial traveler is disappearing, and the total abstainer is taking his place. Still the business is marked by special exciting and contributing causes, favorable to the growth and production of inebriety.

Brokers and speculators belong to a class where continuous strain and irregularity of living, with forms of mental shock and excitement, very naturally are followed by depression and exhaustion, for which spirits are found to be most grateful.

It is a fact of some interest that pneumonia, Bright's Disease, and cerebral hemorrhage are very common in persons of this occupation, particularly those who have used spirits to excess.

Manias for wealth are always associated with sudden and intense fears and hope, strains on the vitality and shocks, breaking up the normal physiological equilibrium of life. For the exhaustion which follows from this, spirits are frequently used.

The same thing is seen in political circles, where ambitious men make great struggles for position and power, and suffer from a constant drain on the emotions and reasoning to attain some particular point.

Life with them becomes a mania. Here the same conditions exist. Many examples are noted where previously temperate men have entered into the political field, and

after a while became inebriates and died from acute disease.

The general fact may be stated that all occupations, associated with great irregularity and sudden strains and drains, are active and contributing causes to the use of alcohol, and only the most rugged, healthy brain power can endure work of this kind.

We have elsewhere mentioned the fatal advice given persons who show signs of exhaustion from these peculiar occupations mentioned—to travel abroad. The result is always increased degenerations, particularly if wines and spirits are used.

A very prominent writer declared that no neurotics or exhausted professional men, suffering from overwork or undue care, should ever go abroad for health.

The risk of contracting wine and beer-drinking addictions is so great that no possible good could overbalance it. Another fact has been stated by several authors, and is evidently based on a very large observation, that many young men, who go abroad to perfect their professional studies, return with an alcoholic addiction which follows them through later life.

The common use of beer and wine in the universities of Europe furnishes a very dangerous soil for the growth of drink and drug disease, especially in neurotics and persons with a predisposition to exhaustion and debility.

One cause has been the subject of considerable literature, not at all conclusive, viz.: that the excessive use of tea and coffee provokes spirit and drug taking.

It is a frequent observation that both tea and coffee are used to great excess during the free intervals between the impulses to drink, and they evidently supply some need. There is considerable literature showing that the excessive use of tea and coffee has been a premonitory symptom of inebriety.

Many authors are confident that the excessive use of these beverages provoke toxic effects and degenerations that favor the use of spirits. There is evidently a neurotic basis and favorable soil for inebriety in persons who use excessive quantities of tea and coffee, and very often a craving for these is a pathological symptom of great significance.

A study of many cases show that the free use of tea and coffee has preceded the drink craze. Persons give histories of having been great coffee drinkers, and from the derangements following, found relief in the use of spirits; then gave up the former and used the latter.

Undoubtedly there are distinct physiological effects from coffee, and also from tea, that produce favorable soils for the growth of inebriety; and it may be safely said that the excessive user of these is in danger of contracting the addiction of spirits.

Tobacco is to be regarded very much in the same way. Its effects are more pronouncedly narcotic and sedative, and its excessive use favors exhaustion and depression, for which spirits are a most grateful remedy.

An extensive literature on this subject has been published, mostly addressed to popular readers, the central facts of which are well attested, showing that the narcotism from tobacco is particularly dangerous to neurotics and active brain workers, not only from its direct poisonous action, but from its potent influence in increasing the craving for spirits.

Studies of hypertension show that alcohol increases this condition and tobacco diminishes it. Hence the grateful feeling produced by smoking, in lowering the tension coming from the use of alcohol.

The alternate raising the tension by spirits and lowering it by tobacco is physiological but very quickly be-

comes pathological. The excessive use of tobacco is followed by depression for which alcohol brings relief.

It is noted that cigarette smoking is the most dangerous form of all the methods in which tobacco is used. The poisonous effects in excessive depression are more pronounced than in any other use of tobacco. The evidence from the history of many cases shows that excessive cigarette smoking is followed by inebriety.

In the remedial treatment of inebriety cigarette smoking is a very pronounced retarding influence, and experience shows that unless the use of the cigarette is abandoned, restoration is very slow and often impossible.*

Gormandizing and hypernutrition appear to be special exciting causes, or conditions which have preceded the use of spirits. In the history of many cases there is evidence of excessive use of food, particularly meats and proteids, and the deranged metabolism which follows from this finds relief in spirits, which practically cover up the disorder. In this way, proprietary drugs are responsible for the development of spirit drinking, particularly in persons who suffer from deranged digestion and forms of dyspepsia that are not influenced by the ordinary medicinal measures.

It has been stated on good authority that any form of spirits, in proprietary drugs or otherwise, is exceedingly dangerous in persons who are dyspeptic, and who have been gormands and excessive meat eaters. Records of cases show that these conditions have so often preceded inebriety as to be recognized among the causes.

A large number of persons, particularly brain workers, and also manual laborers, suffer from a great variety of

*These subjects are presented in my work on *Morphinism and Other Narcomanias*, published by Wm. B. Saunders & Co., Philadelphia, Pa.

depressed mental and physical states, which seem to call for stimulants or remedies to relieve them. Such persons, acting on the theory that there are in nature drugs and remedies, which, if known, would prevent disorders of this kind, very quickly develop the craze for drink.

Their credulity in testing every new remedy offered, prepares the way for the narcotism from alcohol. A delusive faith in drugs and drug effects is always a precursor of degenerations and a distinct intimation of serious psychosis and the borderline of pronounced inebriety. Elsewhere these facts are described at some length.

Dr. MacNichol, of New York, in some studies on school children whose retarded growths and faulty developments, apparent in early life, were traced to the use of wine and beer given by their parents, showed that starvation and derangement was a very prominent factor in the etiology of inebriety.

He indicated farther that these children, who were practically starved and poisoned, would inevitably become spirit takers in later life; and that this same condition would occur in the families of wealthy people, where children are overfed and deprived of fresh air and brought up under unfavorable unhygienic conditions, and that these cases would end in the same way.

At the recent Anti-Alcoholic Congress in London, Dr. Doczi, in a paper on "Alcoholism Among Children in Hungary," brought out the same fact and showed that all forms of spirits in early life were special exciting causes of inebriety later.

Instances like the following are frequently seen.

A child was given beer and wine freely, as a medicine, in infancy; grew up healthy and was a total abstainer

until after fifty years of age. Then after a visit to Europe for rest, he suddenly drank wine to great excess and died an inebriate a few years later.

The facts which these and many other examples bring into prominence are that the early use of spirits leave an entailment and predisposition which are likely to break out in later life from the slightest exciting causes; also that children given spirits in early life suffer in much the same way.

A noted writer made a study of persons who are distinctly careless of the ordinary hygienic care of the body, neglecting baths and proper exercise. This he concluded to be an exciting cause of inebriety. He showed from very well marked examples that defective elimination was followed by toxæmias which provoked the use of spirits.

There are many reasons for believing that this is true, and the confirmation comes often from the active treatment of inebriates where elimination is made the principle object. Many chronic cases of inebriates are practically cured by measures that produce drastic elimination, showing that toxæmia is an exciting as well as predisposing cause. This will be presented under another topic.

There are many persons who are very susceptible to the surroundings. They are generally neurotics, and while in fair health are very largely influenced by those they come in contact with. This class of persons are very strongly influenced by drinking men and follow their example, simply from suggestion, and show feeble power of resistance.

This is called contagion from example and contact, and may be considered a distinct, exciting cause, and should be considered in a study of individual cases. Numerous

examples will occur to the reader in which a powerful personality controls others and forces them to follow his example and literally spreads inebriety broadcast. This subject will also be treated in another chapter.

There are other causes, many of them prominent, which are physiological and psychological forces that may practically be said to culminate in this disease.

CHAPTER XIII.

INJURIES AND PSYCHOSES WHICH FOLLOW FROM THE TOXIC USE OF SPIRITS.

Synopsis.—Toxic states from alcohol, very serious. Two classes, one direct injuries following intoxication, the other obscure injuries, from the same cause, breaking out later. Examples. All types of neuropsychoses, and psychopathies. Early profound intoxication, and subsequent degeneration, not uncommon. Examples given. Intoxication, a concussion of the brain. Imbecility and dementia. Common sequela. Phenomena of intoxication. That of irritation and paralysis. Symptoms following. Recovery slow. Time of life makes a difference. Summary of the important facts.

The history of many inebriates dates back to very serious organic changes arising from concussions, blows on the head, shocks from injuries, falls, heat and sun-strokes, and syphilis.

Often the connection between these causes and the inebriety which follows is very clear, and can be traced with great distinctness. In other cases it is obscure, with long intervals of sobriety, and apparent health. Then, unexpectedly, very serious changes follow, in which inebriety is a very prominent symptom.

Alcoholic intoxication, meaning the delirium or stupor from the poison of excessive use of spirits, is the first cause of an obscure neuropsychosis, and the future continuous use of spirits, although not often recognized, dates from this event.

Familiarity with states of intoxication and the delusive theories of moral causes have prevented any general study of the first effects of the poisoning, and the relation between them and the subsequent toxic states which may go on for years at long intervals; hence, the etiology of the delirious and stupid inebriates seen on the streets or in

the station-house is practically unknown, each case being treated simply as a moral lapse.

There is a distinct psychosis of inebriety which may be divided into various classes. First, persons with a history of injury, followed by debility, degeneration and alcoholic poisoning; second, where some acute degeneration followed from the first use of spirits.

As an example of the latter the following may be mentioned. A physician became intoxicated and his condition was so alarming that many medical men were called in. He was found to have drunk different kinds of wine at a banquet, and immediately became convulsive and passed into a stupor.

In his previous life he had been strong and healthy, and a total abstainer, and expressed great dislike for the taste and odor of spirits. This was his first intoxication. He recovered in the course of a few days and complained of great exhaustion and debility. Shortly after he began to suffer extremely from dyspepsia, was anæmic and depressed, ate to great excess, was frequently exhausted, had attacks of insomnia and headaches, and his ordinary practice was a great burden.

He was filled with morbid fears of mistakes and loss of reputation. His condition was diagnosed as neurasthenia, and possible brain exhaustion and dementia, and advised to take a change and rest.

He went abroad and came back with the wine-drinking habit. He was morbidly introspective, and alarmed at the possibility of a malignant disease of the stomach. His anæmia increased. He ate to great excess for a time and then abstained.

His wine drinking was of the same erratic character. Various functional disorders frightened him so seriously that he would go to bed and drink wine for days at a time. He had a morbid fear of being intoxicated, and

whenever wine affected him in a very marked way, he would abstain. This complex condition grew until finally one day he drank large quantities of spirits and was found dead.

Another example was also of a physician, who passed a rigid examination for life insurance and who was considered a very healthy man, of good heredity, with no history of using spirits or tobacco. He had never been sick in his life, and was supposed to have taken unusual care of himself.

On returning from a consultation he was caught in a snow drift, and with great difficulty made his way to a farmhouse, thoroughly chilled and exhausted. His condition was so serious that he was given large quantities of cider brandy. To the astonishment of everyone he became delirious, and remained in this condition for two days. He then recovered and went about his usual work.

From this time his manner changed. His former cheerfulness merged into silence and reserve. He seldom laughed, and seemed absorbed in some mental preoccupation. He complained of insomnia, seemed very anxious about foods and had a horror of baths.

Six months later his condition was much worse. He walked as if partially paralyzed. Both digestion and sleep were greatly impaired. He made no complaint, but went about as usual. When asked to explain his condition, spoke of it as obscure nerve exhaustion.

Later night-sweats and chills were considered malaria, and large quantities of quinine and tinctures of drugs were given him. The diagnosis was brain exhaustion, and the next two years of his life were an aimless struggle passed at several different sanitoriums, during which he drank some, but never to stupor. He steadily declined in health and vigor until finally he died in some convulsive condition.

The post-mortem revealed nothing unusual, and there were no apparent conditions that would explain the cause of death.

A third example was a clergyman thirty years of age, in active charge of a large church. He was a strong, temperate, athletic man, never using spirits or tobacco, and with no history of heredity in his family. He became chilled during a funeral service in a country cemetery in the winter, and was taken into a neighboring house and given quantities of brandy and milk.

The effects of this produced paralysis of the lower extremities. He remained in bed for two days, in a semi-stupid state and was unable to walk. He then recovered. Soon after nutrition was disturbed, foods distressed him, tea and coffee unduly stimulated him; then followed insomnia and palpitation of the heart. Influenza, malaria, rheumatism and various forms of nervous exhaustion were diagnosed. His mind became feeble, and he was emotional and unable to do much work.

He gave up his charge and went to a sanatorium, where his condition gradually grew worse until his death from pneumonia, two years after the intoxication.

A fourth example was a farmer who was also a temperate man, living in good surroundings, working regularly every day, and apparently in very good health. For reasons unknown at the time he drank champagne and became stupidly intoxicated. A high fever followed, and he was treated for incipient typhoid for several months, making a very slow recovery. From this time on he was an invalid, suffering from swelling of the joints, acute and chronic pains in the extremities. Two years later his condition was more serious, principally neuritis and general exhaustion.

These examples are very marked types of injuries and neuropsychoses, undoubtedly due to the toxic action from

spirits. In all probability many cases less prominent occur in which the first use of spirits is not regarded as an exciting cause, and is not recognized in the diagnosis.

Some of these cases use spirits afterwards as a medicine, either as a proprietary drug or as some form of wine or beer. In all there is no indication of how far the first paralysis from spirits broke up the normal equilibrium of nutrition and nerve force.

Persons who become invalids, exhibiting complex symptoms that are diagnosed by general vague terms, not unfrequently give a history of intoxication and recovery, and soon after these changes appear.

The first class, where a history of some injury preceded the use of spirits, is more prominent and traceable, but even here the theories of the causes of the use of alcohol, so widely believed, cover up the real causes and give entirely different impressions of the nature and character of the events which follow.

Many persons begin to use spirits suddenly as a medicine or for some frivolous reasons, and later become intoxicated, and then justify their use of spirits from equally marked inefficient causes. A noted writer said that every man has in himself the history of his family, or rather of their entailments for many generations, and the causes of moderate breakdowns in the use of alcohol, may be referred to some remote ancestors, or to some insignificant injury, either in his life or his parents', which from the application of some exciting causes break out suddenly.

A very prominent example occurred recently of a previously healthy man, whose eccentricities and genius attracted great attention. Suddenly he became profoundly intoxicated, and, on recovery, his condition was diagnosed as locomotor ataxia. He remained in bed for a year,

drinking continuously until death. The diagnosis of palsy was obscure.

In the clinical study syphilis seems to be a very common early history preceding the use of drink. Thus, a man previously temperate began to use alcohol to cover up the depression and debility following an attack of syphilis. Then its use became steady and regular. Later he died from dementia.

Young men in college, who contract syphilis, very often begin the use of alcohol as a medicine to cover up psychopathic symptoms, and afterwards become chronic inebriates.

In the practical treatment of inebriates, where there is suspicion of syphilis, specific treatment very often clears up prominent symptoms and hastens recovery.

There can be no doubt that a certain number of cases of inebriety date directly from the injury from lues, and that the use of spirits afterwards is very largely symptomatic, indicating exhaustion and deranged conditions from this infection.

Inebriety dating from heat and sun-strokes appears in a certain number of cases. In former times, when persons were found unconscious on the streets suffering from heat or sun-strokes, spirits were given as a tonic, and the delirium which followed was exceedingly difficult and complex to determine.

How much of it was due to alcohol or to the profound changes in the brain circulation from the heat rays could never be determined. In much the same way any state of unconsciousness may be intensified and increased by the use of alcohol to an extent not realized.

A prominent example was of two men walking on the street, both became unconscious from the intense heat of the sun's rays. Both were taken to the hospital. One

was given quantities of brandy to sustain the heart. The other received no treatment other than cold water. The first was delirious, and after a long serious convalescence recovered. He continued the use of alcohol the rest of his lifetime.

The second one recovered and was temperate. The inference is that the effect of alcohol increased the injury and fixed a distinct propensity for spirits which followed him the rest of his life. The other escaped. This is confirmed by the study of other cases, one of which is the following:

Two firemen, both abstainers, were struck on the head by a piece of falling timber. One became an inebriate soon after, using alcohol as a medicine at first and then to great excess at every opportunity. The other was an invalid for the rest of his life, but did not drink.

Blows on the head, either from falls, direct or indirect injuries, very often result in extreme psychic exhaustion and crave for spirits. Sometimes this is seen very soon after the injury. In others it appears at a later period. It is considered dangerous at present to use spirits in cases of this kind, for the reason that they are often hypersensitive and show the toxic effects from a very small dose.

In others little more than heart stimulation follows, but with it more intense nutrient disturbance, which after a while develops the same spirit thirst. There is a wide field of psychic injuries and shocks to the brain which end in inebriety, that have not been studied. Instances like the following are not unusual:

Three men, all abstainers, in middle life, were profoundly shocked by the sudden fear of death while on a train which jumped the tracks and ran over the ties for some distance. The windows were broken, the lights went

out and the passengers were thrown about, and there was much confusion, although no one was seriously hurt.

One of these men was paralyzed from fear and had to be carried out of the car. The other two walked with great difficulty, and after taking their friend to a hotel, all drank spirits. Two became stupid at once from a single glass of spirits, and both of these men continued to use spirits the rest of their lifetime. The third one is now, years after, an invalid and drugtaker from the exhaustion following this shock. Here the fear broke up the brain equilibrium and the use of spirits provoked a distinct drink neurosis.

Other examples are those of persons who are shocked by electricity or a stroke of lightning, prostrated and made unconscious, recovering afterwards and complaining of excessive prostration and debility. Later they begin to drink spirits, become intoxicated, and from that time on they are powerless to restrain themselves and abstain. Several very marked cases of dipsomania have a history of similar causes.

It is also noted that persons working with electrical appliances and in electrical business, who receive shocks frequently, and later complain of profound exhaustion, are very susceptible to the use of alcohol and likely to continue its use, both as a medicine and beverage.

Another class of causes seems to precede inebriety with great frequency, such as direct injuries from blows, resulting in broken bones, strains, lacerated wounds with a long, slow convalescence. In many of these cases there is a history of moderate or occasional use of spirits preceding the injury.

In others the persons are perfectly temperate, and have never used alcohol before the injury, and after the injury they are possessed with a morbid impulse for its

use on all occasions. Undoubtedly all injuries that profoundly affect the nervous system are more dangerous to one accustomed to the use of spirits in moderation or at long intervals.

In such persons there are physically greater feebleness of reparative power, and greater resistance to means of restoration. Psychically, there is an impression of the possible relief which comes from the use of alcohol, based on experience, and this greatly increases the difficulty of recovery. Thus a moderate or excessive user of spirits, when exhausted or depressed, turns to alcohol for relief with a confidence based on experience which is very misleading.

When a person who has no experimental knowledge of the effects of spirits suddenly becomes possessed with the idea of their great value, there must be some defect or change in the brain to account for it. This impression may be formed from observation on others, or suggestion, and when it occurs in persons who have previously expressed great disgust and aversion for spirits it is significant.

Some form of injury is undoubtedly the exciting cause, provoking a new condition of functional activity or developing some old inherited predisposition. Thus, a total abstainer and previously temperate man, who suddenly begins to use spirits, with a history of injury or some form of shock preceding it, is suffering from a distinct neurosis; whether the connection can be traced or not, it exists.

Where profound exhaustion follows from injury the most natural suggestion would be some means or stimulants to overcome this condition. It has not been recognized to any great extent that the toxic action of spirits used for this condition is far more severe than at any other time.

When the person is exhausted the increased narcotic action is very prominent. In surgical operations on intoxicated persons, anesthesia can be dispensed with in many cases. Many of the older surgeons considered alcohol of equal anesthetic value to chloroform, and operations were performed long ago with no other narcotic than spirits.

Careful study shows that while the effect of alcohol inhibits the sensory centers, there is an increased depression following, noted in the greater mortality. Hence alcohol is not considered a safe narcotic. It has also been noted that in many of the modern surgical operations where spirits were given for various causes there has been slow repair of the wounds, and not unfrequently alcohol has been used afterwards up to the point of inebriety.

Practical men of large observation realize that alcohol in any form, given for any purpose to persons who are injured, is dangerous; not only in lengthening out the convalescence, but in producing an addiction afterwards.

Many cases have been reported of alcohol being used as a medicine at first and finally becoming an addiction, following a surgical operation. Evidently there is some connection between the effect of the operation and the drinking which followed.

Beer drinkers are particularly noted for their impulsive use of strong spirits, following any shock or peculiar stress or strain to the body. This is evidently due to the anæmia and toxæmic conditions following the use of beer, furnishing a very fertile soil for the craving of strong spirits; and to greater susceptibility to pain, and inability to disregard the discomfort and pain incident to this condition.

We have noted elsewhere the frequency of the history of concussions, shocks and general disturbance of the system preceding the use of spirits, making it evident

that there are cumulative effects of injuries and poisons, preparing the way for this condition.

It is also clear that every attack of intoxication, or acute poisoning from spirits, increases the susceptibility, and leaves a marked psychosis, from which recovery is more difficult.

Some very interesting examples have been published of moderate or excessive users of spirits, who, from injury or disease, have suddenly developed an intense disgust and repugnance to the taste and smell of spirits, and have been total abstainers the remainder of their lives.

The drink craze and symptoms seem to have died out at once. In one instance a moderate drinking man, after becoming unconscious from sun-stroke, suffered intense nausea, and vomited at both the sight and smell of spirits.

In another instance a man intoxicated was thrown out of a wagon and badly injured. He became delirious, was given spirits. The delirium was increased, and with it came the delusion that the spirits had been poisoned. He recovered, but had a profound impression that spirits were poisonous, and exhibited the utmost horror and excitement when invited to drink.

This aversion continued until his death. It frequently happens that persons recovering from severe attacks of alcoholic delirium or delirium tremens, manifest disgust and repugnance for spirits for a long time, but this wears away in most instances.

Empirics attempt to take advantage of this fact by increasing the disgust and nausea from the effects of spirits to secure an aversion and mental effect. In this they are sometimes successful. The aversion to alcohol, from injury or disease, is a pathological condition with a tremendous mental effect that is yet to be studied.

Many cases appear where acute gastritis is followed by an intense desire for spirits and their effects. Catarrhal

and bronchial troubles are frequently followed by the same conditions. Diseases of the upper air passages which are treated surgically very quickly develop spirit thirst.

Railroad men in the transportation service, after years of sobriety, suddenly use alcohol to great excess. The explanation would be that the train service has produced a constant, steady succession of physical and psychical shocks and strains, and this has brought on exhaustion, derangement, and the use of alcohol.

The late Dr. Wright reported many cases of serious exhaustion and diseases which profoundly affected the organism in early life, and later in middle life inebriety appeared without any special exciting causes. In these instances there seemed to be an intense susceptibility to the narcotism of alcohol which evidently had its basis in early injuries.

Dr. Parish noted in the history of many cases two distinct conditions following traumata, both physical and psychical. One, mental degeneration, shown in inebriety, drug-taking and various forms of psychosis; the other, a change in the habits, mentality and conduct of the patient.

The influences following injury are always very potent and to be considered in all studies of inebriety. While not possible to point out the distinct connections and causes, it is always wise to recognize them in the diagnosis and treatment.

CHAPTER XIV.

HEREDITY AND ITS INFLUENCE IN THE CAUSATION OF INEBRIETY.

Synopsis.—Inherited alcoholic defects a fact. Developing different conditions. Certain number of children apparently seem to be immune from the effects of spirits, yet many of these from special exciting causes develop the taste for drink. A psychological susceptibility may be inherited and remain latent. The fact of inheritance of inebriety was mentioned in an early age of the world. Examples. Two forms of heredity. Direct and indirect. Descriptions of cases which illustrate these forms. Wealthy and very poor. Both furnish examples. Retarded development. Feeble vitality. Great irritability, and mental instability are symptoms. Instances illustrating the facts.

Notwithstanding the doubts and denials of the influence of heredity in inebriety, clinical evidence shows that intemperate parents are almost absolutely certain to be followed by descendants who have a predisposition and are far more likely to become inebriates than others.

This does not prove that all descendants of inebriates will use alcohol, but that in certain circumstances they are more liable to find relief in spirits, and continue their use ever afterwards. While it is true that a certain number of children of drinking parents seem to possess a profound disgust for both the taste and smell of spirits, experience shows that this is often overcome, and whether they are more susceptible to change in this respect is not clear.

This aversion for drink and its effects takes on many different forms and phases. In one instance nausea and excitement follow the sight of a drinking man, or the odor of spirits. In another, indignation, anger and desire to force the drinking man out of his condition. Many of the most intolerant and extreme dogmatic reformers and critics of inebriates come from alcoholic ancestry.

To many men there is great confusion in the effort to explain the repulsion for spirits and drinkers. In some there is great toleration, up to the verge of fascination; in others, there are wide variations in the effects of alcohol; in the children of drinking parents there are distinct degrees of susceptibility and immunity that often follow uniform lines of progress.

In certain cases there is a peculiar physiological susceptibility, which may be developed or remain latent until brought into activity by special causes. There is a great deal of historic evidence, showing the hereditary impulses to alcohol. In the early ages of the world the drunkenness of children of drinking parents was ascribed to inheritance by a great variety of philosophers, physicians and writers.

Vulcan's lameness was said to be the direct result of Jupiter's intoxication. Diogenes declared that stupidity in children was the direct result of the drunkenness of the parents. Aristotle presented a great variety of evidence, showing that drinking women always bore children who were feeble and drank. The legislation of Lycurgus urged that drunkenness should be promoted and encouraged in vanquished nations, so that their patriotism could be extinguished and longevity lessened, and in this way their race would become degenerate. The Greek literature is full of references to the direct result of wine drinking as sources of degeneration, damage and destruction to the offspring.

These statements were based on observation and were not theories, but were confirmed by experience of that and later times. There appear to be two forms of heredity more marked than others in the children of alcoholics.

The first may be called direct heredity, in which the same form of drinking appears in the next generation.

The conduct and acts of children are practically the same as their parents. The same diseases occur and the same manner and method of using spirits follow.

The second is called indirect heredity, in which alcoholic defects of the parents appear in various widely differing brain and nerve disorders. The following table gives in an outline way the conditions which are very commonly seen in the descendants of inebriates:

Heredity	}	Predisposition	{ Special
			{ General
		Defects	{ Physiological.
			{ Psychological.
		Retarded Development.	{ Physical Weakness.
			{ Mental Weakness.

It is a general observation, noted in every study, that where one or both parents use spirits to excess, the offspring show marked predisposition to exhaustion and degeneration, and give evidence of general defective and retarded growth.

Often this predisposition occurs in one of two forms called general or special. In the first the children will be weakly, have feeble power of endurance of pain and discomfort and seek relief from any source. Spirits prescribed, either openly or concealed, seem very grateful in the rapid relief of the conditions present.

Thus irritable, peevish children from drinking parents are easily quieted by medicines of this character. Hence patent drugs or any substance containing spirits, are popular remedies in such families. Thoughtful parents often notice this fascination for the effects of medicine containing alcohol, and make strenuous efforts to teach the horrors of its use.

Children brought up and trained to abhor alcohol, not unfrequently discover, in early manhood or womanhood, drugs containing spirits, which have a pronounced soothing effect, and from this they sooner or later become addicted to its use.

The following is an example: John Smith was an inebriate, although the fact was concealed from his family. His wife was a strong temperate woman, and each of the five children born to her were feeble in early life, and suffered severely from children's diseases.

They all manifested an intense satisfaction from any form of alcohol given as a medicine. The mother recognized this inherited taste, and sought every means to overcome it. Two of the boys drank during their college life, but later became devoted temperance men and strong total abstainers. The third, a girl, became a drug-taker, after the disappointment of an unfortunate marriage.

The fourth was an erratic, feeble-minded child, that died early. The fifth was an erratic preacher, whose eccentricities were the subject of much comment. He finally died a concealed inebriate. This example is quite a common one, and can be duplicated from the experience of nearly every medical man.

It often happens that most unexpected results follow the use of medicines containing spirits. In one instance the effects are very obscure. In another, practically the same case, they are very pronounced, and the quieting action from it is marked. Unreasoning physicians ascribe this to different causes, but in many instances it is found to depend entirely upon the alcohol and the latent heredity of the patient.

Many persons are aware of the effect of a small quantity of spirits given either concealed or openly. The pleasing results following it show a special predisposi-

tion which, if cultivated, would make them inebriates in a very short time. Such persons with ordinary caution assert that they cannot take spirits, the real reason being that its effects are so pleasing that it would lead up to very serious results.

In others this predisposition is not recognized, and the remedy is sought for and continued until finally it dawns on them that it is the alcohol in it that is most agreeable. Then they begin using it directly. This predisposition to use alcohol for its grateful effects seems to follow some general law which some authors have studied.

Thus, if the father is a drinking man, using spirits to excess, the daughter will inherit this predisposition more prominently than the son, and while the daughter may not use spirits, there will be apparent some particular neurosis and psychosis due to alcoholic defects in parents.

If the mother drinks, the predisposition breaks out in the son, in more decided form than in the daughter, and with little or no exciting cause. In the study of a large number of persons, the inebriety of the grandfather on the mother's side, appears very often in the boys. The mother may have been a total abstainer, but failed to live hygienically, hence the son manifests both the grandfather's weakness and his mother's defects.

Women of the wealthy classes who use wine on the table are very often followed by boys who drink to great excess, while the daughters remain practically temperate. Where both parents drink, this special heredity is intensified in complex forms of neurosis and psychosis, in which some of the children will show immunity and deterring horror of the use of spirits, and be strictly temperate, and others will be fascinated by the effects of spirits, and have no power to refrain from its excessive use.

In both there is always present what may be termed a general diathesis, or tendency to exhaustion, with inability to bear discomfort and constant efforts to seek relief. Tuberculosis is a very marked form of defect following in the children of alcoholic ancestors. The same low vitality and feeble resisting power, which provoke the use of spirits, manifest themselves in the early breaking down of the lungs from acute inflammatory trouble or bacterial invasion, and this is overcome with great difficulty.

It is stated as a rule, observed by many authors, that the descendants of alcoholic ancestors usually die of tuberculosis or pneumonia. Of course, acute disorders of nutrition and inflammations of the kidneys and other organs are also prominent.

It is along the line of other observation that these children show feebleness, general defects and entailments from the parents, which manifest themselves in the constant desire for relief and help. There is a great wealth of clinical facts to be studied in this direction, and the terms general and special heredity give some idea of the outline forms of the laws that govern these conditions.

Why aversion and immunity, fascination and predisposition to spirits and its effects should exist in one family; and in another extreme exhaustion, neurosis with nutritive and organic feebleness; and in a third circulatory diseases, or brain weakness, extending all the way from genius to idiocy; must be answered by further studies.

The physical and mental defects seen in children of inebriates are unmistakable signs of the decline of race stock and vigor, even to extinction and death. This is noted in the faulty, imperfect development of heads and bodies of such children, together with other abnormalities, both physiological and psychological.

The instability of mental activities and functional control is also marked. In the examinations for the army and navy, and in life insurance work, these abnormalities are very prominent, and are studied by insurance men to determine their relations to longevity. One author believes that the inherited degenerations from alcohol are noted in the eyes, which are defective, and require glasses in early life; stigmatic heads and faces, ears, arms and legs are marked defects. Psychologically, this is seen in the credulity, skepticism, impulsiveness, selfishness and ungoverned instincts; also in the erotic, paranoic men and women, whose extreme defects of judgment, reason and conduct are traceable to alcoholic ancestry.

An army of such people live on the border lines, where sanity and insanity unite, and they furnish at least twenty per cent. of all the insane or persons pronouncedly diseased mentally. In this same class can often be traced geniuses, reformers, and sometimes great pioneers in the world's work. Many of them are abstainers. Others are periodics and impulsive users of spirits.

Elsewhere more extended reference is made to these classes. As examples of retarded development, due to heredity, the following may be presented:

John Doe, a highly-trained lawyer, whose father was a moderate drinker, and mother a neurotic society woman, suffered from early life from extreme physical exhaustion, particularly from any overwork or strain. He would work for days with the greatest intensity, and then have periods of depression in which he claimed to be sick.

He passed through college and the university, working in this irregular, convulsive way, and as a lawyer attained reputation for the great and spasmodic inten-

sity of his mental activity. He was a total abstainer, had a horror of spirits, but in middle life began to use drugs for exhaustion, and then spirits. He died an inebriate.

James Brown, from a similar ancestry, exhibited great weakness at times, and while a man of ordinary judgment, was very easily distressed and disturbed by the smallest events in life. When excited he was almost an imbecile in his conduct and talk, and after a rest would fully recover.

He remained temperate all his life, but was feeble-minded and melancholic during the last years. Both of these cases had stigmata in face and ears, and were abnormally developed in many ways. Instances will occur to the reader of persons abnormal in appearance, whose ancestors have been moderate or excessive users of spirits, and whose lives and conduct have been irregular and unusual.

Criminals furnish marked examples of this class, and drug-takers are very common. The recurrence of similar conduct and acts at certain periods of life in several generations point to laws of heredity that have not been studied very well.

Thus, in one instance, the male members of the family for three generations all drank spirits to excess between forty-five and fifty years of age. Many of them were total abstainers up to that time. Others had been moderate drinkers. Their previous life gave no indications of this outbreak which, in most cases, came on suddenly. In this particular family, two persons, both exemplary clergymen and active reformers, began to use spirits at this critical age, and died in insane asylums.

In the next generation, both a man and woman, one forty-eight and the other fifty-one, began to use spirits suddenly, and died within a couple of years. In the

third generation, three women and one man all drank and took drugs at this time. Two lived many years. The others died early.

In another family, the grandfather, father and two sons of three generations were all strictly abstinent up to thirty-five years of age; then all began to use spirits for various superficial reasons, and all died soon after.

In another instance, a man of fifty years of age, a successful, temperate business man, began to drink to great excess for no other reason than that he could not help it. It was ascertained, although the patient did not know it, that his father had been a total abstainer up to that age. Then, after an alcoholic excess for a period of a few months, he became insane.

CHAPTER XV.

SOME OF THE NEUROSES FOLLOWING INEBRIETY IN PARENTS.

Synopsis.—The periodicity of the drink impulse. Very significant symptoms. Its possibilities in other neuroses. Difficult to explain it. Its appearance at certain stages of life and resemblance to epilepsy. Dipsomania a particular phase of degeneration not common. Always dependent on hereditary defects. Genius associated with it. Declining families. Efforts of nature to check extinction. Borderline palsies. People who live on the borderlands of insanity. Their strange conduct and acts. The effects of marriage in changing the race march. Illustrated cases. The Chinese law on heredity. A recognition of the uncertainty of inheritance. Opinion of Morell. Opinions of Maudsley. Lunier's studies. Other studies of heredity. Influence of education, training and marriage. Possibilities of checking the transmission of defects. Folly of theories. Appeal to facts. Illustrations.

The periodicity or recurrence of the drink impulse in early life points clearly to some inherited defect which gathers and explodes after a fixed cycle of years.

It is very difficult to explain the conditions which provoke this desire and make it ungovernable at this time. It is possible that it may have existed before, but has been controlled and overcome, until finally it broke all barriers and developed.

Illustrations of the duration and limitation of the vital forces to certain distinct periods are seen in certain families where death occurs about the same time of life. Often the causes of death are similar, and break out with or without any particular exciting causes.

Many instances are noted in which diseases of nutrition appear at a certain fixed time of life in several generations. The excessive use of alcohol, terminating fatally, has been noted in many such cases. The same fact has been noted in families in which respiratory diseases appeared after thirty, principally pneumonia and tuber-

culosis. Instead of these family diseases, inebriety would apparently take their place, only it would progress with great intensity to a more rapid termination.

Epilepsy is another form of convulsive degeneration that frequently precedes and follows the use of alcohol. This is a direct result from alcoholic ancestors. In a number of cases there was distinct evidence that children of alcoholic parents, who drank freely, developed delirium more quickly than others without this heredity.

The term dipsomania describes a particular form of mania for the use of spirits, which, in intensity, exceeds all other impulses. This is frequently seen as a hereditary entailment. Where the degenerative effects of the continuous use of spirits manifest themselves in convulsions, which are called epileptoid, the same heredity will be found in most instances.

Children of inebriates often exhibit a special neurotic temperament in irritability, hypersensitiveness and unusual prostration from any particular exertion. Not infrequently such children exhibit precocity and unusual mental development, which, after a time, declines and leaves physical and mental feebleness.

The fact is established beyond all question that alcoholic parents cannot transmit normal vigor and health to their children.

All such descendants exhibit feebleness in resisting disease, less strength, lower vitality and greater difficulty in adapting themselves to the exacting conditions of life. In epidemics and infectious diseases such children have greater mortality.

It is also noted that families with this heritage are on the road to extinction, and that nature wisely hurries on these defectives to death. Extinction can only be prevented by union with a healthier race, in which the tendency is checked.

Often a great effort is made to stop this downward tendency by remarkable fecundity. Thus, in degenerate families, a large number of children are born, exhibiting all the defects of the parents, and usually dying early. This is considered a hint that nature is making a great effort to check this downward career.

It not unfrequently happens that some genius appears among these descendants, who starts far above the level of his ancestors, and does some great work, as an inventor, reformer or orator. Then, after a short, brilliant career, disappears.

He is the last member of a family that has been on the descending path, and, like the flicker of a lamp, bursts into full blaze before extinction. Where this alcoholic heredity and degeneration is retarded or accelerated by the union with different families of varied heredity, very strange products are the result.

While alcoholic defects may not appear in the next generation, various grades of idiocy, criminality, pauperism, tramps, and the most complex degenerations of mind and body are traceable in the children.

Many of these degenerative descendants show defects of consciousness and conception of duty, for which the term moral paralysis is strikingly descriptive. Many of them live on the very borders of insanity, and their abnormalities are concealed until some occasion occurs in which they break out with great distinctiveness.

Others seem to be hopelessly stranded in this border region, between sanity and insanity, and their conduct is puzzling. They are rated as great geniuses, orators, reformers, and strange, erratic people, called by the modern term *paranoics*, or persons with a mental twist.

Such persons are always enigmas, and their thoughts and conduct are never along normal, rational lines.

One great fact, not often recognized, is that such descendants have a lower moral sense and feebler conceptions of right and wrong. The fact mentioned before is sustained by a great variety of evidence, that the use of spirits has a particular paralyzing action on what may be called the ethical brain, or moral consciousness of right and wrong, this faculty being lowered and paralyzed in different degrees in all persons who use spirits to excess.

The additional fact, confirmed by strong evidence, is that children of these alcoholic ancestors in a special degree seem to inherit this particular moral defect, and from the use of spirits this is greatly intensified until a decided paralysis of the highest brain centers appear.

Many of the most dangerous criminals and persons, whose lives are a continuous antagonism to law and order, duty and obligation, are children of alcoholic ancestors.

This fact is illustrated, when persons with this heredity occupy places of prominence in public opinion, become possessors of wealth, often exhibiting unusual intelligence and capacity, and then suddenly become defaulters or criminals in most unexpected ways.

A study of the character and conduct of such persons not unfrequently brings out depraved motives and purposes, with skillful efforts to conceal and cover up their real purposes. Very interesting studies along this line have pointed out some very startling theories of degeneration that are practically unknown at present.

Another fact has been made prominent in some startling examples where children from alcoholic ancestors are given the highest possible culture and training along unphysiological lines and without reference to their hereditary defects. The results have been great abnormalities, extraordinary paranoics, egotists, with extravagant exceptions of duties and relations of life, with a

feeble common sense and strange, unreasonable credulities. These persons are called by many authors mental dyspeptics.

Such persons are seen in the professions, in business circles and among the idle classes, and their erratic conduct and inconsistencies are the cause of continuous wonderment. The Chinese law, enacted many thousands of years ago, forcibly brings out some of the great truths of heredity. Thus, when a criminal came before the courts, they first asked, who and what his parents were. If they were found to have had any of the traits, manners or habits of conduct corresponding to the crime of the prisoner, he was killed at once, and they were severely punished.

His death ended all possibility of any transmitted defects and criminal instincts, and their punishment was supposed to stop all further propagation of the evils. Parents who do not recognize the facts of heredity, particularly the possible damage from the use of alcohol, that may be transmitted, are committing unpardonable sins in rearing descendants who are crippled, and must of necessity be unable to attain healthy growth and development.

There are some very startling laws which govern the degenerations of the race, particularly those starting from spirit-drinking ancestors. These laws are often intimately associated with other forms of disease, so that it is difficult in the present state of study to indicate their exact place.

Morell, a French alienist, has given the following table of the lines of degeneration, which he has observed in his study of inebriety from alcoholic ancestors: First generation, alcoholic excess and general physical depravity, with immorality, terminating in sudden death from acute disease or violence.

Second generation, a craze for alcohol, either early or late in life, or at the advent of some crisis. Spirit-drinking is often maniacal, both in its use and the results following, and associated with nerve and brain debility, disease, paralysis, and a great variety of degenerations, ending in death.

The third generation is marked by idiocy, imbecility, delusional homicidal tendencies. The excessive use of spirits is followed by most erratic conduct. Often extreme horror of alcohol and great remorse are followed by sudden death and extinction of the race.

Maudsley, a distinguished alienist, classifies heredity in three distinct forms—first, the appearance of the same form of disease, particularly in children of drinking parents; second, that of allied forms of disease; third, into some form of neurosis and psychosis, in which the ancestral defect is the evident cause.

He asserts that the parents transmit to their children not only the family traits, but the individual character and degree of health, and while these may be modified by losses, sufferings, errors, achievements, degradations and degenerations, they follow a uniform line, which is traceable in most cases.

From studies covering a very large number of cases, the following general lines of descent seem to be most prominent. The first generation from alcoholic ancestors will exhibit low vitality from infancy, with great feebleness or precocity of mental activity, associated with defects of control. Such persons may often be total abstainers of a very pronounced type, or moderate and excessive users of spirits. They appear to be particularly prone to acute diseases. Convulsive and nutritive disturbances appear in middle life. In the next generation, where spirits are used, very marked psychosis and neurosis become prominent, and the mortality is increased.

In the third generation, criminality, pauperism, idiocy and low grades of insanity end in extinction of the race.

Often the race ends in the second generation, but where marriage is contracted with vigorous stocks, the tendency is checked, and degeneration may be neutralized. Where marriage is contracted with equally defective races, the alcoholic psychosis becomes fixed, and the descendants die early, and are largely spirit and drug neurotics.

The only hope for children of alcoholic ancestors, who wish to continue the line of descent and prevent its extinction, is to marry into strong families. Many interesting studies have been made to determine how far alcoholic heredity is a factor in mental disease.

Lunier, in a study of many thousand cases in asylums for idiots and the insane, in France, decided that over 50 per cent of all cases were directly traceable to alcoholic ancestors. Legraine, a noted specialist, made an exhaustive study two years ago in France, and concluded that 60 per cent. of all mental diseases were due to this cause. The late Dr. Wright made extensive studies of the heredity in a large number of cases in this country, and decided that at least 70 per cent. was traceable to alcoholic degenerations of both patients and parents.

He confirmed Lunier's statements that more than half of the mental diseases were traceable to alcohol. His studies showed the following line of descent: Mental instability, want of self-control, hypersensitiveness to pain, low vitality, feeble resisting power, constant desire for relief, defective nutrition, irritability, want of ambition, selfishness, restlessness, perversions of reason, credulities and egotism.

In the next generation, stigmata of the head, face, ears, eyes and teeth appeared. Irregularities of the body

and external indications of retarded and defective developments. With this, pauperism, criminality, insanity were common conditions, and, finally, the race was extinguished.

The late Dr. Kerr concluded, from a large number of cases, that complex forms of insanity, as well as inebriety, were almost certain to appear in the second generation of inebriates. He claimed that insane parents were followed by inebriate children, and inebriate parents by insane children, using the term insanity in the broadest sense as describing all complex forms of neuro-psychosis, and general defects and abnormalities of the brain.

He said, "Any transmitted disease which increases nerve susceptibility and exhausts nerve strength and power of control, will positively appear in some form of defect and degeneration in the next generation." Inebriety is one of these diseases which will develop the same or an allied disease in a large proportion of cases.

Dr. L. D. Mason, in an exhaustive study of 7,000 inebriates, concluded that fully 60 per cent had alcoholic ancestors, either parents or grandparents. In a later study, he found that 50 per cent. of all mental and nervous diseases were referable to this cause.

The late Dr. Day found that in 5,000 cases 70 per cent. were traceable to alcoholic ancestors. The late Dr. Parish, from a very large experience, urged that at least 50 per cent. of all inebriates were hereditary cases. He claimed that 70 per cent. of all idiots came from this cause, and that alcohol was either an active or predisposing cause in nearly all the degenerations that were marked by criminality, pauperism and allied defects.

In a personal study of over 4,000 cases, over 60 per cent. were traceable to this cause; 20 per cent. were practically children of insane persons, or persons who were

mental defectives, as well as inebriates. The parents of the others were more markedly inebriates, but presented a great variety of neuro-psycho-pathic disturbances and paranoic tendencies.

These are some of the conclusions reached by persons of large experience and ample opportunities for study. A very interesting question has been the subject of considerable literature, namely, how far education, training or marriage prevents or neutralizes the inherited defects and tendencies to inebriety.

The answer opens a very wide field, with possibilities that are startling. It is very evident that defective education, bad training, as well as unwise marriages, may intensify and develop the inheritance and destroy every possible hope of recovery or normal life.

In some studies, recently made, the question is asked in what direction do these transmitted defects appear to be most prominent? The answer to this would often suggest methods of treatment and forms of training that would overcome this condition. The subject is practically a great, dark continent, awaiting exploration, and the few landmarks pointed out by many observers only show how much there is yet to be studied. Practical men, working in institutions, have no patience with theorists who deny the transmission of inherited defects. They look forward with eagerness to advanced educational studies that will teach how to overcome and neutralize these tendencies, and to parental training and culture that will save the race from this downward march.

CHAPTER XVI.

PSYCHIC PHENOMENA OF INEBRIETY TRACEABLE TO HEREDITY.

Synopsis.—Prominent defects noted in asylums. Traceable to persons in whom symptoms of intoxication are present. To a second class in which these symptoms only appear from special exciting causes. In the first class the intoxication of parents is prominent. Deformities of body and face appear. The mind shows similar defects. In the second class mental symptoms appear when the person is excited. These symptoms are repetitions of toxic states of parents. Illustrations. Morbid fears. Imbecile conditions. Persons who when excited show symptoms of intoxication. Parents often periodic or moderate drinkers. Illustrative cases. Instances of persons who when excited act as if intoxicated. Pathological states probably present. These conditions seen in other persons without inherited predispositions. The fascination of some men to hear of the sufferings of others. Failures of temperance orators who use these methods. The toxic states positive inheritances which take on different forms. A condition not studied, but explaining many of the remarkable conditions seen in this class. It may be concealed, and only appear from the presence of certain exciting causes.

The special purposes of this chapter is to group certain facts and study their relation to causes which are obscure; also to present additional evidence of the tremendous influence of heredity and its most intimate associations in cases of inebriety which have never been thoroughly studied.

Elsewhere it has been stated that the evidence from a clinical study of these persons indicates a uniformity in development, progress and termination, and laws of dissolution that are fixed and certain.

Two inmates of a deaf and dumb asylum exhibited such distinct symptoms of acute intoxication as to become the subject of special study. Both were boys, ages nine and thirteen, and both walked with a staggering gait and a peculiar muscular tremor. One had a demented grin, and nodded continuously when he observed anyone looking at him.

The other had a congested, bleary-eyed appearance, with a dull, vacant stare and expression of stupor. The latter was very irritable and sensitive to observation, and trembled with anger from any slight cause. The other, after excitement, grew stupid and helpless. These and other very distinct symptoms of alcoholic intoxication had been noted from early life.

The parents of both of these boys were inebriates, and the evidence showed that both were profoundly intoxicated at the time of conception. Further inquiry indicated that these particular symptoms were traceable back to inebriate parents, which was by no means uncommon, especially in hospitals for idiots and feeble-minded.

It was also evident that many of these persons did not show such pronounced toxic symptoms continuously, but only when excited and subject to some peculiar stimulating influences. A number of these cases were grouped, and seemed to divide into two classes—one, in which the symptoms of intoxication were present all the time; the other, in which these symptoms only appeared from some special, external causes.

In the first class, idiocy, imbecility and congenital deformity were present, and the toxic symptoms seemed to be special manifestations of this condition. The special symptoms of drunkenness varied in many particulars. Thus, in one examination at a private school for the feeble-minded, four children in fourteen had the palsied walk, red eyes, leering expression, with a suspicious hesitancy of manner, and other signs almost pathognomonic of intoxication. In the home of a former patient was an idiotic girl, whose manner, walking, voice and rambling utterances were a perfect picture of toxic states from alcohol.

Other defects and deformities may predominate and conceal some of these special signs of intoxication. In

the cases examined, most of the defects appeared soon after birth. Others were slowly evolved with the growth of the child, coming into prominence at or before puberty.

The distinctness of the symptoms and their very close resemblance to that of intoxication seen in the parents suggest a direct causation. This was brought out in the case of a lawyer, who was a periodic drinker, and while under the influence of alcohol suffered from intense delusions of fear and suspicion of injury from every one with whom he came in contact.

When the paroxysm was over, this passed away. His idiot son exhibited these precise symptoms, with or without any exciting causes, so prominently as to indicate the distinct inheritance.

In the second class these special alcoholic symptoms appeared only from the action of some particular, peculiar exciting causes, such as anger, excitement or sudden changes of condition or environment. In two instances this was an exact duplication of the character of his mother.

In another instance, these alcoholic symptoms were only present when the child was taken away from the home; when quiet and still they did not appear. Persons who have control of idiots and imbeciles realize the danger of excitement, or anything startling, because it develops all the weakness, delusions and delirium.

Hence the effort to avoid anything that will excite or disturb the mentality of the child. Thus an imbecile boy, if watched sharply, becomes confused, and acts and appears as if intoxicated. When he becomes used to the observation, these symptoms pass off, and he recovers.

The particular toxic condition due to alcohol is transmitted to the children and develops into a like condition. This is supported by the history of the parents and the

special appearance of the children. Thus, in one instance, a father when intoxicated had intense muscular delirium, in which he moved about incessantly, not being able to remain quiet for a moment. His two children, who were idiots, exhibited the same delirium and muscular agitation from any sort of excitement. A woman, when intoxicated, had hysterical fear of dogs. At other times she was fond of them, and always had them about the house as pets. She had two imbecile children, whose fear of dogs was convulsive, and resembled the condition of the mother when intoxicated.

Antenatal impressions made on the mother's mind, which appear in the children, are well-attested facts, and have been the subject of considerable literature. Two instances bring out this fact in a different light. Thus, an exceedingly nervous woman, who was a moderate user of alcohol, was profoundly frightened by an intoxicated soldier. A boy born soon after had all the symptoms of intoxication, both muscular and mental, whenever excited.

In the second instance a mother saw her husband wildly intoxicated, and was very much alarmed. A boy born soon after exhibited the same identical symptoms of delirium, stupidity and convulsive toxic states. Fortunately, there are other causes which neutralize and prevent the special development of alcoholic delirium and paralysis.

It is not clear why these conditions are not apparent in all children whose parents were intoxicated at the time of conception. It may be said that while this particular phase is not always present, there are other conditions of defects and abnormalities which are traceable in many ways.

There is another group of persons who grow up and are recognized as average people with uniform health

and capacity, but who from particular, exciting causes of exhaustion, debility and sudden shock or strain, exhibit marks of alcoholic intoxication.

Many of these persons are total abstainers, reformers and excellent men and women, who give no evidence of using spirits in any form, and yet from some unexplainable shocks or disease, appear to be under the influence of spirits. A careful study brings out the fact of alcoholic ancestors, and, of course, an inherited, neurotic weakness.

In one instance a man had extreme aversion for the taste and smell of spirits, which produced nausea and vomiting if forced to be in the company of drinking men any length of time, or to breathe air filled with spirit odors. On several occasions, when suddenly excited, this man became confused, staggered, talked in an imbecile, boastful way, and gave all the signs of profound intoxication. When taken to a room and allowed to become quiet, he recovered and appeared normal and sane.

Another example was that of a temperate man with alcoholic ancestors, who showed great fear of intoxicated men, and sought every possible means to keep away from them, claiming that if he could not do so he would be like them. In this instance he was nauseated and vomited, showing signs of extreme depression.

A group of cases, bringing out some very remarkable facts, is presented, to show the mysterious laws and forces which are potent in reproducing toxic states in children of inebriates. Many of these cases were very prominent at the time, and excited a great deal of attention. One J. B., a man of character and wealth, who had never used any kind of spirits, was greatly excited and shocked by a runaway, in which he was precipitated from the wagon and slightly bruised.

He could not walk. His face became red, his voice jerking and husky, and his language impulsive and silly. He was thought to be intoxicated, and after being taken home recovered. Later, at a funeral of his child, he displayed these and other symptoms of intoxication, to the great mortification of his friends and family.

A year later another similar attack, only more pronounced, occurred at the burning of some outbuildings on his farm. A careful inquiry showed that he had not used spirits in any way, although every symptom indicated a toxic state.

His father was an excessive user of spirits, and his mother died of consumption. He never could bear the smell or taste of alcohol, and was greatly depressed from being accused of drinking.

A second case was of a treasurer of a large manufacturing concern. He was strictly temperate, but a very nervous, hard-working man. He suddenly appeared to be intoxicated when accused of falsifying the books. He was irrational, delirious and stupid. Was taken home, and two days after recovered, and explained his affairs to the satisfaction of all. After a period of invalidism for several weeks, he seemed to recover.

During the next two years he had two similar attacks, coming on from excitement and unusual strain. A physician called it congestion of the brain. In each instance there was no evidence of any spirits having been used. His father was a sailor, and died from the excessive use of spirits.

A third case is of a merchant who had lost all his property in a series of unfortunate speculations. He was much depressed, and went to live with his brother-in-law, a physician. He was a total abstainer and a healthy, temperate man up to the time of his failure.

One day, on the receipt of a letter containing bad news, he had, to all appearance, an attack of acute intoxication. A careful examination showed that alcohol was not used, and the physician called it mind-intoxication. From this he recovered in a short time.

A few weeks later a similar attack followed, and during the next five years he had many distinct periods of stupor and delirium, each one lasting from two to four hours. His ancestors were excessive drinkers of spirits. He died from acute pneumonia.

A fourth case was that of a banker, an abstainer and in good health. One day he received a dispatch, telling of the sudden death of his daughter. In a very short time he appeared like one wildly intoxicated. The physician declared that it was caused from alcohol. He was taken home, and was an invalid for two weeks.

An opinion prevailed that he had drunk to stupor at the news of the death of his daughter. There were no spirits in his office, and no evidence that he sent out for it, and while he denied having used spirits, he seemed greatly confused and excited at his condition and the accusations that were made. Both of his parents drank excessively, but there was no evidence of his having used spirits.

An incident occurred during the late war, and was the subject of much comment and speculation. A prominent officer appeared intoxicated, riding up and down the firing line, shouting parts of songs and orders with wild exclamations. His conduct was so strange and unusual that he was ordered back, but not until he had two horses shot under him, and was slightly wounded himself.

In reality he was a total abstainer, and had not drunk any spirits. The excitement of the occasion seemed to have brought on a species of frenzy which resembled

acute intoxication. Surgeons have noted this strange delirium and peculiar excitement in men under fire, so exactly like intoxication, although it was impossible to discover where the men had obtained spirits.

Several authors have mentioned similar incidents of soldiers previously temperate who suddenly appeared deliriously intoxicated, and after the battle was over became stupid and bewildered, and showed irritability and other symptoms so common from the toxic action of alcohol.

Instances are mentioned after periods of prolonged strain and excitement, where large quantities of coffee were given out. Many men showed unmistakable symptoms of drunkenness, which was termed "coffee drunks." This was marked by excitement and frenzy, or stupidity and unconsciousness of danger, which was not bravado, but a sort of a delirious recklessness that frequently ended in capture and death.

An author, in writing of a particular battle, mentioned that after giving out large quantities of coffee to a certain division on an exposed position, the men showed a recklessness and frenzy that was very marked. The same facts have been observed in the navy where men, subjected to protracted excitement, have become wild and stupid, and the term "battle drunks" was used to describe this condition.

Upon the advent of great disasters many persons are shocked, greatly excited, act irrationally, do extraordinary things, and seem to be practically drunk and idiotic.

In a railroad accident the conductor of the train appeared and acted like one intoxicated, although he had never used any spirits. Two men, riding on a train, talking quietly, were suddenly precipitated down an embankment. The cars were crushed and many were

killed. These two men were only slightly bruised. One of them became stupid, excited and apparently intoxicated, and his condition was the subject of a good deal of comment afterwards.

These cases occur not unfrequently, but for want of accurate observation and difficulty of obtaining the facts, are seldom studied, but rather concealed, on the supposition that they would reflect on the character of the person. The histories of all the cases which have so far been studied indicate inebriate ancestors and a pronounced entailment of heredity, which some special, exciting causes have materialized into a form of apparent alcoholic intoxication.

It is a reasonable inference where symptoms of intoxication in the general sense appear, and no active, exciting causes can be found, to expect a similar condition in ancestors. It is a fact based on a large experience that inherited defects may pass down several generations and be dormant, only appearing from the action of some peculiar, exciting causes.

Another group of cases have come under observation, in which persons who have previously been inebriates, or who have drunk to intoxication, and then become total abstainers, develop suddenly all the signs of intoxication without having used any form of spirits.

Most of these cases show heredity and alcoholic ancestors one or two generations back. The following cases seem to sustain this conclusion: A man of some prominence, who drank during his college life, then became a total abstainer, and for fifteen years afterwards lived a temperate, healthy life, above all suspicion, became engaged in marriage under circumstances of great promise.

The day of the wedding the bride received a letter of warning, saying that he was a secret drinker and a

bad man otherwise. This letter was sent to him. After reading it he showed all the signs of intoxication and went to bed, and for two days was under the care of the physician. He asserted so positively his innocence that medical examination of the facts was called for. This showed no signs of the use of spirits, and confirmed his assertion of not having used any alcohol or any similar drugs. A history of moderate and excessive drinking was noted in his parents.

A second case in which a clergyman had a marked history of heredity was taken to a hospital for inebriates. A few months later, while still under treatment, he was visited by a brother clergyman, who no doubt talked very severely to him about the sin of drinking. He was found a short time after apparently intoxicated, and for two days he had all the appearances of one who had been profoundly poisoned by alcohol. This case was also the subject of very careful study, and his assertions of not having had any spirits were sustained, and the conclusion that the excitement precipitated a pathological state resembling intoxication, was conclusive.

A third case was the subject of a great deal of controversy. The facts were these:

A temperance lecturer in early life had drunk to excess, but for over twenty years had been a total abstainer and reformer. One evening while lecturing he was handed a dispatch, announcing the fatal illness of his only child. He drank a glass of water, attempted an explanation, became confused, staggered and acted like a man becoming intoxicated. He was led from the stage, and laughed and shouted in a maudlin way.

The audience supposed that he was drunk. He was put to bed and several hours later recovered. All circumstances showed that he had used no spirits, but was

suffering from some sort of a brain disturbance which took on this peculiar form.

In another instance, an eloquent lecturer, who portrayed with great dramatic skill the conduct and manner of an inebriate, and the terrible losses which follow from his conduct, would be practically intoxicated at the conclusion of his lecture, and be taken away to some quiet hotel room and kept from observation for several hours.

This man came from alcoholic ancestors, and drank early in life, then abstained, and for many years has been recognized as a very unusual speaker in the temperance field, and is employed constantly.

The necessity of having him go to a room immediately after the lecture has been more and more prominent the last few years. Phases of exhaustion, called queer spells by his friends, and by others called intoxication, are very significant, and indicate a degenerative neurosis that is increasing.

Another example was that of a clergyman of much talent and genius, who drank during college life, then abstained. At about forty-five years of age he became subject to impulses to drink, which could be overcome or restrained by preaching temperance sermons and seeking opportunities to talk and plead with persons to become total abstainers.

He finally gave up the pulpit and became a temperance lecturer, exhibiting great power, enthusiasm and dramatic skill in persuading people to abstain from spirits. After giving a lecture his condition resembled closely one who had been profoundly intoxicated. He had to be put to bed and cared for as one who was utterly incompetent to know and reason what he should do.

These were likewise called "queer spells." After the meeting he was irritable and harsh, and wanted to be taken away, and said in an undertone to his friends

that he wanted to get drunk, and must have some spirits, unless they could take him away where it was quiet.

These examples indicate a wide range of facts which may be studied in the temperance meetings of to-day, particularly where conducted by reformed inebriates and persons who have had serious experiences.

There is another series of pathological conditions noted in what may be called unconscious, imitative inebriety, in which persons appear intoxicated from the influence of contagion in the surroundings and from personal contact with drinking men.

These cases have all a strong substratum of heredity. That is, they come from inebriate ancestors, and have a peculiar neuropathic diathesis. The following is an example:

A lawyer, a delicate, nervous man, was employed in the State Department at Washington, where a monotonous, exact range of duties was performed for years. He lived a temperate life, never having used spirits, although his father was an inebriate. His evenings were spent at the club, where he read a great deal, played cards and appeared the same as others.

Suddenly it was noticed that he appeared like a drinking man, particularly when in the company of those who used spirits. If any of them became hilarious or stupid, he would appear the same, although he did not drink anything but water, and refused with firmness all invitations to drink.

Sometimes he drank coffee or a mild cup of tea. As the company grew intoxicated he appeared like them, and sometimes would have to have a carriage to take him home. The next morning he would complain of a headache. These occasions increased in frequency, until finally it was impossible for him to be in the company of drinking men without appearing and acting like them.

His friends called him a "coffee drunkard." He could give no explanation of his condition, and it was noticed that he was not affected by the contagion of drinking men who were strangers, but those whom he knew influenced him very markedly.

He affirmed that the sensation from the company of drinking men was very pleasant, and that he followed them, apparently enjoying their excitement and stupor without realizing what it was until the party broke up and he started for home. Then the palsy and stiffness of the joints and general disgust appeared. This would last until the next day, although he was not aware of using any spirits himself.

He was the subject of a very careful study by two medical men, who concluded that it was a pure case of hypnotic influence and suggestion, and that he was a perfect barometer of the surroundings and influences of others, and that after a certain time he lost all memory of what he was doing, or consciousness of the conditions.

This man left the club and recovered, but he was very careful to keep away from all drinking men, because of the certainty of taking on their exact conditions.

A second example was a farmer. He was a strong temperance man, and was elected to Congress. He formed a strong attachment for an impulsive, drinking man in the same body, and associated with him freely, although never using spirits of any kind.

It was noticed that he would stagger, talk wildly, laugh and tell stories, and exactly reproduce many of the manners of this man. Later he imitated conditions of intoxication, and was hilarious and stupid. The only thing that fixed itself on his mind was that he could not use spirits. He was reported as intoxicated, and had difficulty in making a reasonable defense.

Whenever in company with this man, where wine was used, and the party was hilarious, he was considered intoxicated with the others. He was re-elected and his companion died. After this his manner changed, and he avoided the society of drinking men and dinners where wines were served.

Both of these persons had an alcoholic ancestry, and both were temperate men. Another group of examples were reformed men, or persons who had previously drunk and become abstainers, who showed the same signs of intoxication from contagion.

The following is an instance: A military man had drunk moderately during the war, but had been a total abstainer for many years. While attending a dinner with his old comrades, where most of them were intoxicated, he suddenly became hilarious, made a wild, foolish speech, settled back in his chair, evidently as drunk as the others.

In reality he had not used any spirits, but simply coffee and water, and yet he had all the symptoms of intoxication, due to the contagion of the surroundings.

Another example was of a man who had been a total abstainer for more than twenty years. He was elected to office and gave a dinner in honor of this event. Many of the company at the dinner became intoxicated, and the host who drank nothing but water became boisterous with the others, then stupid, and had every sign of intoxication. He was carried home in a semi-paralyzed condition, and the next morning had only a confused notion of what had occurred.

A physician who was present was able to make a study of his condition, and declared that he had a mental intoxication, and that his condition was one of pure hypnotic contagion from the surroundings.

A third case was of a reformed man who had been a total abstainer for twelve years. He went on a military excursion, and most of the company became more or less intoxicated. He appeared like the others—maudlin, wild and delirious—although he drank nothing but lemonade.

The event was the subject of comment and an occasion of loss, socially and otherwise. A careful examination of all the facts showed that he did not drink any spirits, and that his condition was simply one of mental contagion.

These three examples were studied by most competent authorities, and the conditions were beyond all question and doubt. The previous examples were persons who had never drunk, but exhibited a distinct pathological inheritance. The latter cases show a materialization of some previous pathological state. What form of brain and nerve defects, either acquired or inherited, could be made prominent by contagion or suggestion, is a question for future studies.

In a less prominent way, similar conditions have been noticed in club rooms and at banquets and dinners where wines were very freely used. Men and women who are not drinking spirits, not unfrequently show, with others, very unusual symptoms of weakness and childishness, resembling persons under the influence of spirits; and afterwards express regret and inability to account for their acts or conduct.

There are some very striking psychological facts along this line that explain many of the phenomena of abnormal or unusual mental states. It is said in theatrical circles that actors who make the best representations of insanity or inebriety have inherited some nervous organization or peculiarities predisposing them to enter into the spirit and condition of the character they portray.

A single glass of spirits may awaken some latent nerve defect which very quickly leads up to inebriety. So the effort to imitate the manner and conduct of an intoxicated person gives a certain impress and direction to the functional activities of the body that sooner or later become permanent. Actors who have been intoxicated and who are moderate drinkers give a certain realism to their representations of drunken men that cannot be mistaken.

It has been said that persons of this class who represent intoxicated states are intensely depressed afterwards, and claim that they feel worse than they do from the real condition. In an instance where an actor daily represented an intoxicated man for a season, he had to give it up, because of its tremendous influence on his character and conduct. He could not use spirits in the play, for the reason that his memory would be disturbed and his artistic sense impaired.

A temperance writer of great power and vividness of detail said that in describing the effects of drink and drinking men, he entered so deeply into the conditions of exhaustion, pain, agony and joyousness, which he described, that he had to go to bed, as he was practically intoxicated.

This man was strictly temperate. He had an inebriate father, from whom he inherited a peculiar nervous organization, which enabled him to realize the toxic states from alcohol and describe them with vividness. He gave up writing on this theme because it was so intimately associated with his mental health.

Descriptions of drunken men in novels bring out this fact very clearly. Either the writer has had some personal experience or his ancestors before him have impressed on his organism a vivid and intense concep-

tion of the toxic states, or else their pictures are unreal and mechanical word-settings.

Those who study inebriates carefully are continually astonished at the reproduction of ancestral traits and peculiarities, dating back two or three generations sometimes. One is also astonished at the psychological manifestations and reproductions of previous mental conditions in persons who are total abstainers.

For instance, reformed men, or those who have stopped all use of spirits, are often very sensitive to the recital of the struggles of others under the influence of drink. Such narratives often take on the form of a mental shock that have much to do in diminishing their strength and vigor.

Temperance lecturers who expect, by drawing vivid pictures of the horrors of alcoholic excess, to create a similar sentiment in the minds of the hearers, often produce the very opposite effect, particularly in persons who have inherited a defective nervous organization from alcoholic ancestors. In much the same way, the sight of intoxicated persons produces a dangerous sort of excitement in the minds of defects and a species of contagion, or rather fascination to imitate them.

The conclusion must be recognized that a pronounced toxic condition from alcohol leaves a permanent impression on the organism which may be concealed for a time, but is very likely to appear again on the application of some special exciting causes.

There are evidently conditions of heredity, unknown at present, which will be studied in the future. Two facts seem to be clear. First, that symptoms of alcoholic poisoning may occur when no alcohol has been used.

Second, that the excessive use of alcohol leaves a permanent impression on the brain, both physiological and

psychological. This impression may go on down to the next generation, and in some unforeseen way appear in conduct and actions, and can be traced back to the original cause.

The impression made of every event on the mind and experience is exact and indelible, and when any sufficient suggestion is made out of the unknown changes of the past life, the old emotion, conduct and mental states will appear, and their return is full of peril to the enfeebled and weak ones.

CHAPTER XVII.

PATHOLOGY OF INEBRIETY.

Synopsis.—Exact changes difficult to determine. Under the microscope confused wreckage of cells and nerves apparent. First changes in the blood vessels. Many persons die of acute inflammatory diseases. The pathology varies widely in these cases. Vaso-motor paralysis a very common condition. Defective nutrition with diminution of powers of elimination and accumulation of toxins are common. Conclusions of the London Pathological Society. Dr. Andriesen's opinions. Studies of Dr. Berkeley and Dr. Van Gieson. Derangement of circulation of the brain an early symptom. Destruction of the protoplasm common. Dr. Sims Woodhead's opinion. Thinks liver and other organs suffer uniformly. Nutrition of the heart impaired. Every intoxication a paralysis. Post-mortems show ruptures and occlusions. Dr. Bevan Lewis points out congestion and shrinking of cells and blood vessels as common. Psychic palsies leave marked effects. Heredity, susceptibility and immunity conditions to be considered. The modern pathologist finds a great variety of degenerative changes. Other experts point out changes of functional activity, sensory actions, structural pathology often mistaken in their conclusions. Functional pathologists determine causes very distinct. Conclusions. Much to be learned. Great problems to be settled.

The pathology of inebriety is an obscure record of a long series of shocks, injuries, degenerative changes and explosive liberations of nerve energy, often beginning with defective cells and growths, and going on for years.

Of necessity there must be great complexities of results from the innumerable causes and varied influences which register themselves on the cells and tissue of the body.

The brain and body of the inebriate under the microscope often exhibit at the post-mortem a confused wreckage of cells and nerves and walls of blood vessels, thickening and thinning of tissues, so that the pathologist is unable to trace the exact causes which have produced this or that result.

Usually degenerations most prominent are sclerosis and calcification of the coats of the arteries, with atrophic

and hyperatrophic states of the organs, and other defects. These are so common in inebriates that they are regarded as pathologic and traceable to the excessive use of alcohol.

In reality, a large number of inebriates die from acute diseases which are local in their action. The post-mortem reveals many organic changes which are commonly traceable to alcohol; yet there are many cases of pronounced inebriates dying from acute inflammatory diseases where the pathological changes are very indistinct, and might be referable to other causes.

The more modern views of the action of alcohol indicate that the first pathological changes are recorded in the walls of the blood vessels, particularly in the capillaries of the brain and surface of the body. The well-known action of alcohol on the vaso-motor centers, paralyzing and diminishing the muscular contractivity of the arteries and capillaries obstruct and change the action and uniformity of the blood current. This is followed by defective nutrition, with accumulation of toxins and a diminution of the power of elimination.

The conclusions of the London Pathological Society have been sustained by all modern studies, and agree that the first action of alcohol in the body is to check oxidization by diminishing the oxygen-carrying properties of the hemoglobin and retarding the elimination of carbon-dioxide.

Another action is that of a corroding tissue poisoning by the absorption of water at every point of contact with the cells and tissues.

A third action is marked functional derangement, noted in the depression, checking and retarding the natural activities of the organism. The corroding effects on the cells and nerves provokes inflammatory action with fibrinous deposits, and these are very common.

Dr. Andriesen, the pathologist of the West Riding Asylum, in England, concludes an exhausting study of the injuries following the use of alcohol, as follows:

“There can be no doubt that alcohol taken into the body has a specific influence over the nutrition of the nerve cells, impoverishing and starving them, cutting off and diverting the dynamic forces. This is followed by shrinking and atrophy of both cell and nerve.”

Dr. Berkley, of Johns Hopkins Hospital, has added new studies of his own to these conclusions, proving that alcohol has a special, corroding action on the cells, not only paralyzing them, but abstracting the water from them, and thus destroying their activity. This may be confined to certain local centers, which later increases until large areas of the brain become affected.

Dr. Van Gieson, late of the New York Pathologic Institute, has described the altered conditions of the blood cells and fibers following the use of spirits, reaching the same conclusions that the corroding action of spirits is apparent on the protoplasm and the nutritive activities of the cells.

In support of these general statements a great variety of studies have been made, not only confirming them, but adding many new facts. One author believes that the paralyzing action of alcohol on the capillaries breaks up the uniform flow of the blood current, producing convulsive, irregular activities, which is the first and most pronounced pathologic change.

The very apparent action of alcohol in increasing the heart's action and flow of blood, is always followed by a diminution of both the heart force and circulatory power after a time. This may be so pronounced as to cause great alternations of exhilaration and activity, followed by depression and stupor.

It is from these conditions that nutrition is disturbed and irritation encouraged, apparent in certain brain tracts and in certain persons who are susceptible to these influences.

The spasmodic activity of the heart from the use of spirits varies widely in different persons. In one person the beats will increase ten or fifteen a minute. In another, after a brief time, the number will decrease, and a decidedly sedative action will appear. In all cases there is a lowering of the functional activity, and with it increase of toxins and diminished nutrition. These conditions may be caused by toxæmias of a gastro-intestinal origin, and may be very active in producing similar results in susceptible persons.

The corroding action of alcohol may be intensified by toxic products from various sources. Syphilis is a degenerative poison, diminishing the resistive power of the brain and stimulating acute organic degenerations. All writers agree that the specific vaso-motor paralysis, due to alcohol, is the beginning of organic changes in the capillaries, and this is felt in the nerve cells.

The power of contraction and dilation, so prominent in the heart, extends to the minutest blood vessels, and is literally a force that controls the blood pressure, regulating the rhythmic flow of the current, governed by the influence of heat and cold, irritation, rest, nutrition and other causes.

Hence, the disturbance of the heart is registered as an impairment of the circulatory movement of the blood in all parts of the body. This process impairs oxidation, nutrition and elimination, and this finally is registered in fibrinous deposits and changes in the large and small vessels.

Arterial sclerosis is a condition very common in inebriates, and is a very natural result of diminished elimination, defective nutrient plasma and deposits of waste matters. The congested appearance of the face in persons using spirits is a good index of the derangement of circulation.

Both the vaso-dilators and the vaso-constrictors suffer, and the blood current is interfered with, and finally permanent paralysis follows. The nutrition of the arteries is changed, and the muscle cells are replaced by fibrinous deposits, the channel is interfered with, and the supply of nutrients deranged.

Dr. Sims Woodhead, the noted Cambridge pathologist of England, says:

“I have been able to demonstrate that the walls of the blood vessels are the first to suffer organic change from the action of alcohol. Such changes occur, first, by a thickening of the inner coat, followed by proliferation of the endothelial cells. Then a thickening of the media and the adventitia, also wasting of the muscular fibers. This cellular increase is a veritable connective tissue group of degenerations. First, it is a proliferation of the endothelial and connective tissue cells, around the connective tissue spaces, and, secondly, it is an accumulation of waste products.

“This may go on slowly or rapidly. Often it attacks the liver or the kidneys, always affecting the parenchymatous tissues. These changes also affect the capillaries of the brain, in the chronic form, the muscular coats of the walls disappear, and fibrinous tissue take their place.

“The liver cells become atrophied, and fatty infiltration with degenerations follow. This formation of fibrinous tissues is particularly uniform in the heart, kidney, liver, blood vessels and sheaths of the nerves. The lymphatics are also affected.”

The spasmodic and convulsive activity of the heart always deranges the nutrition of that organ. The coronary artery is diminished in caliber and capacity to transmit the blood current. Hence the increase action of the heart is followed by exhaustion. This is registered in the atrophic and hypertrophic conditions of the heart.

Dilation of the heart results simply from deposits of fatty cells in the place of the muscular fiber, whereby its action and power of contraction is diminished. Both the liver and kidneys suffer in the same way from increased work and diminished nutrition.

The arteries and capillaries suffer in the same way, by both thinning and thickening of the walls. In post-mortems of drinking men the brain often shows occlusions, ruptures and collateral circulation. These are the direct result of spirits and the organic changes in the walls of the arteries.

Every intoxication from alcohol is a paralysis, usually spasmodic, or otherwise, of the arteries, with a diminution of nutrition and other disturbances. This may be both local and general. The stupor and coma, and the excitement, delirium and delusions indicate physical derangement.

It is also due to the irritant action of the toxins or pressure of congested blood on certain centers. Other poisons circulating in the blood may have a similar action, producing contraction and tumefaction of the cells and followed by increasing fibrinous growths.

Dr. Bevan Lewis has described this condition at length, showing how toxins produce congestion and contraction, and thus causing a shrinking of the cells in the blood vessels. The serum infiltrations commonly found in the brain of persons who use alcohol, together with the

fibrous arteries and sclerosis of the nerves and capillaries, also of the liver and kidneys, constitute a distinct pathology, which is more or less common to all inebriates.

The older pathologists, whose experience was gained from the cadaver, pointed out the uniformity of the fibrinous deposits, serum infiltrations and calcification of the arteries with foci of old hemorrhages as an unmistakable indication of alcoholic excesses.

Why one organ should suffer more seriously from organic changes than any other, and why the heart should become hypertrophied and the liver and kidneys show little change, except in their functional activities, and *vice versa*, must be answered in the future.

Why inebriates show very little organic change with great functional debility is another problem for the future. There is evidently a pathology beyond the microscopic power to determine; that it is organic there can be no question.

Another pathological view of what is termed psychic causes, is far more common and uniform than specific gross organic changes. It is uncertain whether these psychic palsies follow or precede the organic changes in the circulation and nutrition.

A very interesting chapter is yet to be written on the palsies noted in inebriates, particularly of organic and functional activities of the body. In many instances psychic changes of character and conduct are traceable to faulty nutrition and shocks, following sudden accumulation, liberation and change of nerve energy.

The uniform paralysis and depression of the sensory activities following the use of small quantities of alcohol opens up a new field of psychological study. A study of the normal man shows great variations of a similar character, due to causes that may or may not be traced.

In the pathological study there is always a condition of heredity and favorable organic states to be considered. Degenerations from the slightest exciting causes are more likely to occur in some organs than in others.

Certain surroundings and environments and conditions of nutrition have distinct pathological effects that are to be recognized. It is an established fact that alcohol has a specific depressing action on the psychic brain, or that part which is termed character or consciousness of right and wrong, duty and obligation. The explanation is that this being the last formed in the growth of the brain is the first to suffer and deteriorate. The modern pathologist, with the new methods of staining and high power microscopes, finds a great variety, but general uniformity of degenerative changes.

The psychopathologist, with instruments of precision, measuring the functional and organic activities of the body finds a similar uniform palsy and depression.

The chemicopathologist concludes that the complexity of the toxins of alcohol and other toxins growing out of it produce a distinct change, which is traceable, and that may be general or local in different parts of the body.

The anæsthesias following the action of various ethers of alcohol on different parts of the body show very remarkable changes that are scarcely yet known.

An attempt to mark out an exact pathology common to all persons who use spirits, presents many difficulties. One author of large experience asserts that sclerosis is not a common sequela from drinking spirits; another that heart changes do not follow uniformly.

Their observations, of course, are limited, not in the number of persons examined, but the narrowness of the view taken. They fail to realize that alcohol, like syphilis, has a peculiar variable virulent action on different

parts of the body, leaving other parts more or less intact; also, they fail to recognize the vast field of susceptibility and immunity to these various poisons, and the resisting powers of the body.

One fact is also not recognized, that the use of alcohol, either in large or small doses, has a peculiar cumulative action, both general and local, and this may be overlooked and ascribed to other causes. It is evident from the various studies that alcohol in the body is a tissue in poison, both eroding and corroding, and that its effects are ordinarily uniform and discernible.

The structural pathologist who decides on the absence of any observable lesion that no disease is present, is greatly mistaken. To assume that no disease exists, that cannot be discovered by the present methods, is equally faulty.

Many writers have concluded from this point of view that inebriety has no pathology, but is a condition of morals and weakness. Functional pathology is as evident and clearly defined as that of structural, and must be recognized in all studies of pathology.

The disorders preceding, and associated with, periodic paroxysms for drink and drugs, must of necessity date from some specific change. The development of an alcoholic craze or obsession must have a pathological cause or causes, and it is evident that to this are added the additional corroding influences of alcohol.

The later researches on arterial tension and obscure exaltations and depressions show the same fact. A great variety of very startling questions, yet to be answered, suggest themselves. One, why alcohol should be used for a long period of time without producing more serious and decided pathological changes. Why persons who use alcohol should suffer and die from germs or other diseases

in which peculiar symptoms appear; why the brain and nervous system retains most of its vigor, while the body would suffer acutely, and why the brain and nervous system should succumb at the slightest exposure.

These and many other problems make the pathology of inebriety a great dark continent in which only a little exploration has been made.

CHAPTER XVIII.

DIAGNOSIS OF INEBRIETY.

Synopsis.—Diagnosis not a simple matter. Inebriates have a mania to conceal and cover up the causes. They rarely realize their real condition, but judge from their feelings. Symptoms of neuritis are overlooked and the alcoholic cause unrecognized. Moderate drinkers of wine and beer, ascribe these symptoms to other causes. Midnight drinkers difficult to determine. Persons who claim to be overworked are likely to be spirit drinkers. Opinions of authorities. Diagnosis of persons found on the street, supposed to be intoxicated. Illustrative examples. Common errors. Diagnosis of women more difficult. Examples. Delirium following trauma. Often misjudged. Delirium from fever may come from alcohol. Psychic phase of intoxication very confusing. Complications with syphilis.

It would appear to many that the diagnosis of inebriety was a very simple matter. The common symptoms of flushed face, alcoholic breath and changed manner, together with other symptoms, can hardly be mistaken for another disease, and yet there are stages and states of inebriety which require most careful study to discriminate.

In a certain number of inebriates there is present a literal mania to conceal and cover up the real causes of their condition. This is manifest sometimes in unusual skill and cunning, which baffles the most expert diagnostician. Elsewhere we have described the midnight drinkers, or those who only drink in conditions of great seclusion away from home, while to their friends and associates they appear as total abstainers.

Such persons frequently appeal to medical men for aid, and appear to be suffering from obscure conditions of debility, mal-nutrition and exhaustion. Often business men with obscure symptoms supposed to come from overwork are treated with great minuteness, when in reality the real cause is some form of spirits.

Examples showing this difficulty are as follows: A clergyman apparently anæmic suffered from insomnia, and with so-called rheumatic pains in the lower extremities made the rounds of eminent physicians, and was treated for neuritis, disorder of the liver and other ailments.

All means seemed to fail until through an accident of a broken leg he was obliged to remain two months in a mountain village. His improvement was astonishing. On resuming his regular work he became ill again, went abroad and consulted eminent physicians. Finally he died suddenly in a country village, where he had gone for his health.

Then it was ascertained that his illness was due to his secret use of spirits and the slow profound poisoning, which was covered up by most unusual efforts.

Active business men frequently come under medical care complaining of stiffness and wandering pains in the feet and legs, with disturbed digestion, and many most complex symptoms, which are diagnosed as rheumatism, malaria or influenza.

These symptoms increase and are accompanied with mental irritation, fatigue, general debility. Often medical men prescribe alcohol in some form as a tonic, or the patient uses proprietary drugs containing spirits. This may go on a long time before the first cause, spirits, is recognized. Opium may be given, and the patient will apparently become addicted and the real cause never be recognized.

Men and women living in centers of excitement and subjected to great emotional strains, who complain of exhaustion and exhibit a variety of obscure symptoms that seem unlike any known disease, should be regarded with suspicion and an alcoholic origin of their difficulties sought for.

Persons who use wine at meals and insist that they are temperate should be suspected of spirit poisoning when they complain of neurotic and obscure nutritive disturbances.

An accurate diagnosis is often a matter of considerable importance, and is determined by inference in a large measure, particularly in college graduates and young men about to enter business or professional life, who complain of rheumatic pains, general obscure exhausted states, with a feeble, irritable heart and symptoms that are not clear or defined.

Anxious parents and friends, who are about to assist them to become settled, call in the medical man, and the diagnosis is exhaustion from overstudy and some very vague causes.

The advice is travel and rest. If the travel is in Europe, the symptoms increase, and the case becomes more puzzling. Then it appears that spirits in some form have been used and their condition is one of alcoholic toxæmia.

Invalid college graduates who have used a great deal of money during their college life and whose conduct and habits have been bordering on the realm of extravagance, are always to be regarded with suspicion, and their symptoms of disease as possible indications of toxic poisonings.

Many men in early life have drunk to excess and then became abstainers and entered upon the active duties of business or professional life, and after a long period of temperate living suddenly become invalids. The obscure symptoms and the absence of any special cause should suggest the use of spirits and proprietary drugs containing spirits as the active, exciting cause.

A noted man committed suicide and his friends believed it to be the result of overwork and excessive study. In

reality he was a spirit drinker in early college life, and later this was concealed, but it continued with increasing intensity until his final collapse. His family physician had failed to discover the real causes. Many persons are sent to private sanitoriums for complex forms of mental and nervous diseases that are specifically due to spirit-taking.

This fact is discovered in their rapid improvement when placed in surroundings where the opportunities for securing spirits are difficult. Persons are often sent to insane asylums suffering from mania, insomnia and delirium that have never been traced to any particular causes.

The confinement and change of surroundings in the hospital is followed by a rapid improvement. Sometimes the real cause of spirits is determined, in others it is concealed, and the hospital authorities consider recovery due to the hygienic conditions and change, and not to the removal of alcohol.

In criminal investigations, sudden impulses to commit crime or do overt acts, foreign to all previous conduct, have been traced to the secret use of spirits. Often traveling men, speculators and active brain workers exhibit startling symptoms of mental derangement, developing either criminal tendencies or displaying credulous stupidity, and the causes are unknown and untraceable. They are not known as drinking men, and often claim to be total abstainers, yet after a time the use of some form of alcohol appears to be the source of their trouble.

The late Dr. Kerr affirmed, as the result of a long experience, that obscure and unusual neurotic and nutritive troubles, marked by unusual conduct, should always suggest an alcoholic origin; and if syphilis could be eliminated, the use of alcohol in some form would be found as an active cause.

Many very prominent neurologists of this country have asserted that quite a large proportion of neurotic and psychopathic troubles were traceable to injuries from spirits, and that no diagnosis was of any value that did not consider the possibility of alcoholic poisoning as a factor in the production of such diseases.

There is a prevalent theory among many classes that alcohol in moderation or in small quantities can be taken indefinitely without any harmful effects. This is not sustained by scientific investigation, which shows that alcohol is cumulative in its degenerative influences, and in some persons this cumulative action is very pronounced, although not always traceable, except by very accurate studies.

Instances like the following are common. Persons pursuing a healthy, uniform, regular course of life, who use beer or wine at meals, and on no other occasions, suddenly become invalids, and there is no ostensible cause for it. Not unfrequently such persons apparently break down and develop very unusual conduct and changes, apparently resulting from business or social losses. Their use of beer and spirits continues at the table, and no one suggests the cumulative action of alcohol in producing toxic poisonings.

Examples are common of men who suddenly contract pneumonia that is fatal, or suffer from cerebral hemorrhage, or develop some acute organic trouble of the liver. Their previous life has been comparatively healthy, only wine and beer has been taken at the table in moderation.

The physician recognizes the unusual intensity of the degenerations and the very feeble resisting power of nature and the remarkable weakness and protracted convalescence. The cumulative action of alcohol is manifest in this. Very interesting cases are constantly coming into prominence, bringing out this fact.

Not unfrequently patients are found to be using proprietary drugs, tincture of ginger, cinchona and other medicines, both regular and irregular. The spirits contained in them are the active causes, but do not attract attention. The diagnosis at home by the family physician can often be made with great certainty where all the habits and conditions of daily life can be studied.

The diagnosis of persons found stupid on the streets with or without an alcoholic breath, often present most obscure questions. Many instances of persons becoming suddenly dizzy and faint on the street who have taken a glass of spirits for relief and later fallen down unconscious, have been diagnosed by policemen as intoxicated, simply from an alcohol odor.

Such persons taken to the station-house have died, and serious questions have arisen in which the officiousness of the policeman in deciding on the nature of the case has been condemned.

Heat or sun-stroke of persons on the street has produced conditions for which spirits were given as a stimulant, and the same error of diagnosis has been made. Dr. Mason has studied this question and presented in some recent papers, many very startling examples of error of diagnosis, resulting in death.*

The one fact should always be considered, viz.: that the man found unconscious on the street may be suffering from a hemorrhage, and a glass of spirits as a stimulant to rouse him up is a most fatal remedy. The increased heart's action widens the rupture and intensifies the hemorrhage, making it fatal. A physician called suddenly to treat a case found unconscious should never permit spirits to be used.

No diagnosis of the conditions can be accurate which is based on the odor of spirits, or even on the dilated or

* See paper in Virginia Medical Monthly, December 22, 1910, by Dr. Mason on Diagnosis of Alcoholic Coma.

contracted pupils. Persons previously temperate, for some sudden emergency, may be given spirits and the effects may be so unusual and peculiar as to suggest inebriety and alcoholism, which is an error.

Psychical changes of character and conduct that are sudden, pronounced and prominent should suggest an alcoholic origin, no matter what the previous character of the patient may be. A remarkable case was of a physician, for twenty years occupying a very responsible position and having an unblemished reputation in his community, who suddenly developed criminal practices that sent him to prison under most distressing circumstances.

Then it finally became known that he had used spirits in small quantities daily, and that their cumulative action suddenly developed into palsy of the higher brain centers. This is a confirmation of the fact presented in another chapter, namely, that the use of alcohol, either in excess or moderation, seems to fall most heavily on the ethical brain, destroying the consciousness of right and wrong, and the conception of duty and obligation.

The diagnosis of inebriety in women is more difficult because of the greater complexity of causes, and their ability to conceal them. The use of spirits at the menstrual period or at the menopause is more or less common, and may become the starting-point of very complex neuroses and disorders that will baffle the skill of specialists.

Many very striking cases occur which are subjects of great controversy and confusion of opinion. It may be stated that the sudden appearance of unusual neurotic symptoms should suggest a toxic poisoning. Slight traumata, shocks and common social reverses and troubles, followed by unusually severe nervous symptoms, may have the same origin. Delirium from fever, of unusual proportion and intensity, has been traced in many instances to the alcohol given as a remedy.

The subsidence of the delirium on the removal of the alcohol shows the connection between the two. A man of wealth suffered from intense fatigue and depression following a mild sun-stroke. His physician gave him a preparation of brandy and milk.

The weakness of the heart seemed to call for increased doses, and the delirium which followed was diagnosed as meningitis. A number of physicians were called in consultation, and very active measures were ordered, the spirits being continued to sustain the heart.

The delirium grew more intense and also the exhaustion. The patient was taken to his country home, and by some accident the supply of spirits was cut off for twenty-four hours. The improvement was so marked that the nurse continued the withdrawal, and the recovery was very prompt. No one had diagnosed the influence of alcohol in the production of the delirium.

In old men the possibility of spirits in some form increasing and complicating the conditions should always come into the problem. The idiosyncrasies of persons, either in great susceptibility to the toxic action of alcohol, or in its local effect on particular organs, should always be considered in the diagnosis. Elsewhere we have referred to symptoms of intoxication which are largely mental, and are not due to any form of alcohol but to some defective condition produced by alcohol in the past.

The nervous system seems to reproduce the toxic condition which was impressed upon it from alcohol by the application of some unknown exciting causes. In making a diagnosis of the presence of alcohol, this condition should be considered as possible.

Where syphilis has existed greater complexities of symptoms may obscure the real causes, but an active mercurial treatment will frequently clear up this obscurity. In the ordinary diagnosis of inebriety a careful study of

the previous conduct and habits of the patient, and a comparison of that and the present, will furnish unmistakable signs.

It is safe to assume that any use of spirits may produce results entirely unexpected, and out of all proportion to the supposed causes. It also should be remembered that alcohol is cumulative in its action, and that some persons are peculiarly sensitive to its degenerative action.

A study of heredity, occupation and surroundings will often suggest possibilities of the use of alcohol which can be asserted with as much certainty as practical knowledge. The fact that alcohol deranges the senses and diminishes the reasoning power and lowers the capacity to recognize duty and relation to others, is always to be considered where these facts are prominent. In all the varied neuroses and psychoses occurring after middle life this factor should be recognized as possible, and one that must be eliminated in an accurate diagnosis.

Delirium and delusional conditions often present problems that suggest alcohol as an exciting cause, thus the delusion of infidelity on the part of the wife or husband is so commonly noted in secret and open drinkers as to be recognized as a diagnostic symptom.

Delirium of grandeur and strength and extraordinary confidence in ability to accomplish the impossible is another symptom with the same significance. As stated in previous chapters, the sudden use of alcohol often covers up the symptoms and draws attention to this alone, and this may obscure the real conditions as in paresis, where alcoholic and sexual excess are only symptoms.

Thus the problem of diagnosis widens and becomes more complex, and often can be only approximately made from a very careful study of all the symptoms.

CHAPTER XIX.

PROGNOSIS OF INEBRIETY.

Synopsis.—Differences of opinion about curability. Confusion of opinions. Great variety of means used. The general principles of treatment. Questions of prognosis. Compared to that of other diseases, depends on heredity and predisposition. Exhaustion and debility govern the prognosis. The prognosis bad when spirits are used in infancy. Also bad in beer drinkers. The periodic drinker most hopeful. The nerve storms point to some active causes. Delusions of exaltation of doubtful prognosis. Prognosis bad when other drugs follow the use of spirits. Persons may relapse and drink again after years of abstinence. Condition of the arteries important guide in the prognosis. Reasons for this. Changes in the circulation of the brain create desire for drink. Syphilis a complicating cause. About one-third of all cases are curable. The prognosis in these cases is fair. It depends largely on the conditions of the person and his surroundings.

Curiously enough inebriates are very emphatic and prominent in determining the prognosis of their individual cases, and physicians are often influenced by their positive statements of ability to recover.

This side of the subject makes prominent the moral side, and a voluminous literature has appeared, giving reasons and explanations why the victim does not fulfill his asserted predictions of ability to stop, and why he does not recover from the use of spirits. The hopefulness of the inebriate is characteristic, and becomes an optimistic delusion that often increases with the degeneration of the person. The more pronounced his faith in his ability to stop and confidence in his power of control, the weaker he is.

Often this delusional exaltation is an indication of parietic changes that develop after a time. The continued failure to abstain, extending over years, makes no impression on his judgment. The same assertions of his ability to stop are made with the same confidence as before.

Notwithstanding these delusions, the general prognosis of inebriety is very hopeful. Many persons, with or without any special treatment, recover. It is asserted that the disease marked by drink excesses is limited to a period of not more than fifteen years. Thus, a person who begins to drink to intoxication will die within fifteen years.

Of course, it is difficult to place any limit to the organic duration, because the causes are so complex and varied. One fact is established from a great variety of studies, viz.: that the craze for alcohol at times dies out of itself from causes unknown.

Observation shows that a certain number of patients who are confirmed inebriates, using spirits to excess, either continuously or at long intervals, suddenly abstain and remain temperate ever after. The explanation of this sudden giving up of the use of spirits is usually ascribed to the last means used.

This may have been a pledge, a prayer or conversion, or a mere assertion of the will, not to drink any more. These means were used many times before, and failed, but now they succeed. Some religious men assert that the former failures of inebriates to give up the addiction of spirits was due to errors in their conversion; that only at the last moment, when the conversion was real and true, did restoration follow.

Other persons sign the pledge under precisely the same circumstances which they have done many times before and keep it. The question is asked why this did not happen before, and a great variety of explanations are offered.

Thus, one man has signed the pledge ninety-nine times, or professed conversion ninety-nine times, and failed on every occasion. Then finally he stopped and the last

conversion and signing of the pledge was considered the real cause of his success.

Many curious incidents and most unusual events, or the use of drugs are given as reasons for the final cure and restoration. Tansy tea and other bitter, nauseating drugs, followed by a disgust for spirits, is supposed to have caused it. The fact is overlooked that many of these agents have been used before without any particular effect.

Patent medicines that are supposed to have some marvellous action refer back to such instances, and the fact that they were followed by total abstinence is considered evidence of their power.

The real fact is not often recognized, that in a large number of cases there is a tendency of the drink craze to die out or disappear with or without any special causes. The craving for relief, for which alcohol is used, passes away, and is followed by great disgust and aversion to spirits.

The question whether this will return again is unknown, but it is evident that medicinal means and restorative measures may so far build up the organism that the drink impulse will never return. Observations of the temperance reform movements and studies of the so-called cure cases, show that the very means used preceding the final cure were not new, but had been tried many times before.

Of the five million persons who signed the pledge of total abstinence in the Washingtonian Movement from 1840 to 1845 a certain unknown number remained total abstainers the remainder of their lives. In the same way every great religious and temperance revival work is marked by the restoration of an uncertain number of inebriates, who never relapse again.

It is very evident that the same general causes do not

produce the same effects in all persons, and that restoration and breaking up of the drink craze depends on some unknown condition or change in the brain centers. Acting on this general fact, it is clear that remedies addressed to the physical and psychical, and to the development of a more perfect organic functional activity will predispose to this revolution or dying out of the drink craze and favor it more positively than any other means.

The prognosis, therefore, is far more hopeful where the best physical and medical appliances known are used, and where every psychical and physical remedy can be applied to build up and restore the disordered conditions. Unexpected recoveries are constantly taking place in conditions that are unfavorable, and certainly can not be explained from any present knowledge.

Thus a person who has used spirits for over half a lifetime and has become pronouncedly chronic, suddenly stops and becomes an abstainer under the most adverse conditions and from causes entirely unexplainable.

Another class of cases seems to date recovery from some accident or injury or shock, or powerful mental emotion. Cases are noted where a blow on the head, profound shocks from disappointment, fright, or any powerful emotions is followed by a disappearance of the drink craze for ever after.

The following are illustrative instances. An army officer who had drunk to excess for over thirty years was reprimanded for some failure of duty. He stopped drinking at once, and continued until death a sober, temperate man.

A man with the history of a police court repeater, who had been arrested several hundred times for drunkenness, suddenly begged for permission to sign the pledge, and for many years afterwards remained thoroughly temperate.

Another man, with a similar history, after being treated for jaundice in the hospital became a total abstainer. A quarrelsome inebriate, who was known to have a great fear of drowning, while stupid was tied by a rope and thrown into a river. The excitement and shock of rescuing him was followed by perfect immunity from all use of spirits for the rest of his life.

An incident worth recording, because the parties occupied prominent places in society, was of a physician who, while visiting a patient found her half-intoxicated husband abusing her for the purpose of getting some money. The physician gave the drunken man a severe pounding, breaking his leg and making him unconscious. The man recovered and never drank again.

These are only a few of examples that are more or less common, showing the effects of violent emotion, impressing the organism and producing some changes that culminate in the disappearance of the drink craze and aversion for alcohol ever after.

The inference must not be made that recovery always follows from these traumata and shocks, but, on the contrary, similar injuries have been followed by a great increase in the drink craze, and often such injuries have been exciting causes.

Inebriety, associated with trauma, is a mysterious field of cause and effect, with a very uncertain prognosis. In a general way, where the causes of the drink craze are distinct and readily explained, the prognosis is fair, because the remedies can be addressed more or less directly to the removal of the causes.

The prognosis in inherited cases is uncertain, unless the surroundings and conditions can be controlled, and where mal-nutrition and mental contagion are present, the application of remedies give great promise of relief. Where the drink craze develops a distinct psychosis, with

well marked symptoms of insanity, great uncertainty exists.

The most hopeful cases are those where inebriety appears to be the direct result of overwork, mental strain, nerve exhaustion and neglect of the surroundings. Quacks assert dogmatically that all persons are curable if they use the proper remedies, which they, only, possess.

The moralists are equally certain that they possess absolute curative measures to overcome the drink impulse. The general practitioner notes that many chronic cases recover both by quack methods, the appeal of moralists and without any special means or remedies. He also observes examples of cases whose cures are attributed to a great variety of the most diverse means and measures.

It is very evident from this conflicting clinical experience that most profound ignorance exists of the real causes, as well as the nature and progress of the disease. The specialist, who makes a more exact study, finds more examples of curability from the removal of the exciting causes, and is able to make a prognosis based on certain conditions that are more or less exact.

There are a certain number of persons in which spirits are the pronounced exciting causes more so than any other factors. When these are removed the future is good. In other cases, where the constitutional defects and inherited weaknesses are manifest in the symptom of alcohol used for relief, the prognosis will be less favorable.

If the early life of the patient has been one of good physical and mental training, there is a basis for development and future restoration that is very favorable. Where precocity and over-development have marked the first part of life, the probability that the drink craze is only a symptom of the profound changes and exhaustion, makes the prognosis doubtful. Where wine and spirits

are used in early childhood, either as a beverage or medicine, there would naturally be a very low resisting power, and predisposition to seek relief from this source in later life.

The early use of beer also makes the prognosis uncertain. In periodic drinkers where after distinct free intervals the drink impulse breaks out like a nerve storm and is limited to a certain fixed period, the prognosis is better, because it is always possible to discover the active and predisposing causes and neutralize or prevent them.

Temperance reformers who are periodic drinkers, showing extraordinary activity and interest to help others, belong to this same convulsive class, and should be helped with the application of exact means. The constant, steady drinker has less favorable prognosis than the periodic.

The man with hyperconfidence in his ability to stop is always prominent, and, on general principles, should be a very hopeful case if this delusion is not of a paretic character. The patient who uses narcotics, smokes tobacco, drinks tea and coffee and eats inordinately has not a good prognosis.

The prospects of taking up spirits again are evident. The toxæmic conditions from which he is suffering predisposes to this.

Among the great variety of conditions controlling the prognosis, are unhealthy living, bad habits, bad surroundings and general unhygienic lives. Unless these are corrected, there is little hope for future change.

Physiologically, the patient with high arterial tension and derangement of the nutrition has a doubtful future, unless alcohol is withdrawn immediately. Specific poisoning is another complication making the neurosis more or less uncertain. Slight cerebral hemorrhages are sometimes followed by a complete cessation of the drink craze,

and local palsies, showing organic changes, increase the future uncertainty of the case.

The sudden disappearance of the drink craze if followed by a radical change and removal of the general and local exciting causes is very hopeful, but unless there is a decided change in the habits of life, surroundings and conditions of living there is less hope of the permanent disappearance of the drink craze. Long continued confinement, as in a hospital or jail, unless associated with pronounced physical restoration and mental growth is not hopeful.

Many persons believe that the inebriate is hopeless and his final cure is doubtful, but this is contradicted by experience. The drink craze or drink symptom is almost certain to disappear from the application of exact means and measures. While the organic degenerations, of which this is a symptom, may remain, this particular phase passes away.

The prognosis may, therefore, be considered as promising as that of many other diseases, and it may be said that there is a tendency to recover, particularly upon the removal of the exciting causes.

This gives the greatest encouragement for increased scientific care and study. The fact should not be overlooked that a large proportion of all inebriates reach chronic stages before they come under treatment. Hence the difficulties are increased. When the disease is recognized to the extent that the patient will seek medical care from the family physician in the early stages, recovery will be the rule, and not the exception, and the prognosis should be very hopeful and promising.

CHAPTER XX.

DELIRIUM TREMENS.

Synopsis.— A distressing condition. Not well known, or carefully studied. A new type or form noted. Several distinct stages. All leading up to profound delusions. Many of the cases aborted. The withdrawal of spirits not followed by increase in the delirium. A large mental element to be considered. Spirits to be withdrawn according to this condition. A study of the physical conditions explains many of the delusions. Often the delusions are concealed. One a delusion of violent language in which the patient does not utter audible sounds. Disorientation a common symptom. Delusions having reference to events of the past equally common. These are preceded by nutrient disturbances and toxic states. Often the delusions are contagious and imitative. The symptomology very complex and diversified. Elimination is the most essential in the treatment. Baths of all sorts called for. Narcotics dangerous. Mortality is high when patients are treated with narcotics. Restraint and liberty alternately valuable. Quietness and rest. Nutrition should be limited, except in special cases. No danger of collapse from want of food. Excitement to be prevented. Instances of psychical treatment, by fear and shock. Opium contra-indicated. Wide variations in the mortality. Illustrative instances. Life insurance statistics. Diseases that follow. After effects on the brain. The central facts to be observed in the treatment.

Delirium tremens is one of the prominent and distressing conditions which follow from the excessive use of spirits. The text-books contain various descriptions of what is called alcoholic delirium, *mania a potu*, and other terms, signifying distinct forms of insanity, which are due to the excessive use of spirits.

The old term delirium tremens was marked by excessive muscular agitation and delirium, which after a few days subsided with or without any special treatment. The modern type of this form of degeneration from spirits is marked by greater mental symptoms and less disturbance of the motor activities.

In certain cases of inebriety there can often be traced many distinct stages which precede the outbreak of the delirium. First is a period of undue excitement and

anxiety concerning his own conduct and his relations to his friends and surroundings.

Hysterical fears, alternating with unusual buoyancy and confidence in his ability to understand and regulate his conduct and control events about him. This may last or three days.

A second stage begins with gastric disturbances, insomnia and periods of mental exaltation or depression. The desire for spirits disappears for a time and then returns with greater intensity than before.

Defects of sight and hearing appear with muscular agitation and inability to remain quiet, and a continuous use of spirits for the purpose of overcoming this condition. This is generally a short stage.

Then a third period begins in which insomnia is intensified and general muscular excitement with sense deceptions fixed, and hallucinations concerning himself and surroundings.

In this period there is a half-conscious recognition of his condition and a struggle to overcome it. Finally a fourth stage or period comes on, marked by great fear and suspicion, with delusional reasoning, sometimes marked muscular trembling; in others, very little muscular agitation, except in attempting to overcome some particular evil that is threatening.

Spirits are taken as a medicine and there seems to be no craving for them, but only for their possible sedative effects. Delusions of sight and hearing with insomnia are common symptoms, and point at once to the inability to co-ordinate the sense impressions.

Frequently they are confined to the night, and pass away in the daytime. The withdrawal of spirits and a sharp elimination is often followed by the disappearance of the delusions, but where spirits are used for fear of

them, they may be controlled temporarily, but always return with great intensity.

Muscular trembling in these cases is due to fear in many instances and not to central irritation. At times only delirium is present. At others, it is confined entirely to sense delusions. When both delirium and delusions are present, a careful study of the physical condition of the patient should be made. Thus gastritis, neuritis and any particular local inflammation will be very influential in the mental conditions.

A history of malaria or trauma from injury, shocks or the sequela of fever or neglect of the ordinary hygienic conditions, all have a very important significance in the treatment.

When muscular trembling is pronounced from the beginning, local irritations of the cords are present. Persons who, after excessive use of spirits, develop sense deceptions and hallucinations are often suffering from toxæmic poisonings. Persons who have used spirits continuously for a long time, then develop deliriums and delusions, are not only poisoned but suffering from some organic change and irritation. Persons who drink periodically and at the close of a drink paroxysm become delusional, are no doubt suffering from both cell and nerve poisoning.

Very curious studies have been made of the exact form of delusions, tracing them to distinct local organic derangements. Thus, delusions of small animals such as frogs, snakes and insects crawling over the face and body, are often due to congestion of the retina, and disordered conditions of the peripheral nerves.

When large animals assume a threatening attitude, and when persons with weapons try to do him injury, there is no doubt both local irritation and congestion of

the nerve centers, and an almost infinite variety of delirium and delusions appear in different persons, some of them grotesque and humorous, others dangerous and appalling.

All hallucinations in which the person hears insulting words and holds conversations with imaginary persons are dangerous, because concealed, and likely any moment to materialize into violent acts. Delusions of persecution and fear of injury or sudden assaults are also dangerous.

The profound pallor and profuse perspiration point to concealed alarm and fear, and a state of tension that may any moment concentrate into violent acts. It is practically impossible to tabulate, in any uniform groups, these various delusional states and mental obsessions, but their physical nature and causation should always be studied and recognized in the treatment.

One of these curious conditions is the delusion that the patient is uttering the most violent language, and from word deafness and other causes he utters no audible sounds. Such patients look about in astonishment that the violent thoughts passing through their mind, supposed to be spoken, do not seem to attract any attention.

In one instance, a man in a delirious state apologized continuously for the wild, abusive talk, and expressed great sorrow, saying that he could not help it and was obliged to do this. He asserted positively that he was using the most profane language and condemning all the Saints and the Virgin, and cursing everything that was good and true. While lying in bed or sitting quietly in a chair he was profoundly impressed that he was expressing in audible tones these terrible thoughts.

In another instance, a lawyer in the delirious stage posed and jesticulated with great energy many times during the day. His lips moved, but there was no audible

sound. Then he would sit down exhausted. Then a period of remorse and regret would come over him, and apologies for his violent words.

In another case the patient was astonished that his violent language made no impression on others, and when told that his thoughts were not vocalized, was skeptical.

Disorientation is a very common symptom, particularly at night. The surroundings are all confused and changed, and the patient is unable to recognize anything but his delusional conceptions. On the advent of day this condition disappears.

In a certain number of cases the delusions have some reference to some event of the past and its distressing influence at the present. Delusions of burglars and persons who seek to injure them are very common, also of the infidelity of others and their efforts to take advantage of him. This, in many instances, is a very significant symptom.

Changed personality is not uncommon. The persons, acting as if they were in other surroundings and situations and reasoning with some sanity, often committing acts that are rational in their new positions. Thus persons believe themselves in danger of fire or drowning in a building or boat, and will show discretion and judgment in their conduct to prevent this.

In many instances a man using spirits to excess will suddenly decide to stop, and give the most frivolous reasons for this radical change. For a short time he will be serene and hopeful, and express himself in the most rational way. Then all at once develop delusions and hallucinations.

Sometimes these are preceded by acute indigestion and insomnia. The delusions at first will be transient. Then they become fixed. The common opinion is that this con-

dition is due to the sudden withdrawal of spirits, but the return again to spirits makes little or no impression. The delusive condition goes on just the same, only a little more intense.

It is altogether probable that some pathological impression suddenly materializes into repugnance for spirits and desire to abstain; later the toxæmic state centered in delusions and delirium, which was but a continuation of his former condition.

Practically such persons should receive very active treatment for a time until the possibility of an explosion in the form of a delirium has passed away. Persons who come for consultation and give a history of sense deceptions and mild delusions, when told that these are symptoms of delirium tremens are not unfrequently precipitated into the very conditions they seek to avoid.

Thus, an inebriate who consulted a physician was told that his symptoms meant an attack of delirium tremens. His mind at once recurred to all that he had ever seen or heard concerning this condition, particularly in the symptoms and the conduct. Delirium tremens developed, following exact lines and symptoms which he had observed in others.

An instance in one family where a father, son-in-law, and two intimate friends suffered from delirium tremens at different times, the symptoms were identical, particularly in hallucinations of monkeys coming through the windows, climbing over the beds and threatening them at all times of the night. They had never seen or heard of any other form of delirium associated with the use of spirits. Hence this symptom was classical to them.

In another instance, where a patient suffered from hallucinations of elephants walking on tight ropes, crossing back and forth over the bed, and threatening to fall

on him at any moment, these were reproduced in several of his friends who had similar attacks.

In a certain hospital the particular delusions are those of rats crawling over the beds and biting the extremities of the body. In another hospital all the patients had delusions of persons trying to shoot them through the windows.

In the ward of another hospital, where a trolley car passed close to the windows, the noise was interpreted as gun shots, thunder bolts, and all the alcoholics made tremendous efforts to secrete themselves.

Since the advent of the telephone, new forms of delusions are coming into prominence. An active business man who drank steadily was seen to have his telephone covered up in the most careful manner. His explanation of threatening voices indicated clearly the beginning of a very serious delusion.

Thus, the symptomology of delirium tremens practically covers almost every form of mania, delirium and obsession. The first effort of the medical man should be to determine the physical causes and how far they are influential in the promotion of these mental states. A toxæmia from alcohol is to be recognized as the most active exciting cause, and its removal is the most important step in the treatment.

If the patient has delusions of fear that its sudden removal will precipitate a more dangerous condition, this must be recognized, and the spirits withdrawn gradually.

Elimination through the skin by means of baths, and by the bowels with salines, is the most prominent preventive means. A warm bath, or reclining in warm water in a tub for two or three hours every day is invaluable.

The shocks of cold water on the surface, as in a cold pack, followed by vigorous rubbing and general re-

laxation, is a very excellent measure. Where baths and showers can not be used with advantage, sponge baths and frequent bathing of the body will accomplish the same purpose.

The persistent insomnia is always self-limited, and the attempt to control it by narcotics is full of danger. A forced sleep by chemical measures still further deranges the metabolism and lowers the vitality. The high mortality following the use of narcotic drugs is the best evidence of the danger of this method. In institutions where hydropathic measures can be used, together with electric light and the static breeze, this symptom is easily controlled. In private homes tub baths, hot and cold packs, warm showers and reclining, under the care of a special nurse will accomplish the same purpose.

The diet should be restricted according to the patient. Meat should be practically contra-indicated and used only in small quantities and at long intervals. Nourishing soups and foods easily assimilable are most valuable. Milk and salines are to be given according to the conditions present, and to meet the particular wants of the case.

Very little food should be given the first two days, because of the toxæmic conditions of the body and the impaired digestion. After that solid foods may be gradually given at short intervals through the day, supplemented by fruits and acids, according to the conditions present.

Localized pains over the liver and abdominal organs can best be treated by local applications of hot or cold water.

The special treatment of delirium and delirious states will vary largely according to the man and the direction of the symptoms. If the delirium is destructive, during which the patient tears and breaks everything around him,

it is best to have him placed under a sheet and strapped down on a cot in the middle of a floor, particularly at night.

In the daytime this can be removed, and the patient allowed to walk about with an attendant, and if in the country, it is well to go in the open air. Where the patient is a strong, muscular man, it is found practical to allow him to exercise in the open air for an hour at a time, until signs of exhaustion appear, or if the surroundings excite him, this exercise should be in a room.

Warm showers, sponging or lying in a warm water bath should follow this. If the delusions and delirium are of a harmless character, having reference to grotesque objects, or voices and conversations with friends, it is well to allow the patient to have a good deal of liberty.

At night he should be put under a restraint sheet. An improvised restraint can be made with sheets, passing over the shoulders and arms, forcing him to recline. The light should be turned down and the utmost quietness prevail. Sometimes the person is more quiet where the room is well lighted.

He should have no visitors and see only his nurse and physician. The irregular heart's action should not excite any apprehension, and no remedy should be given for this purpose. The chief medication should be elimination through the bowels, kidneys and skin.

The patient should be encouraged to drink water. If he is fond of mineral waters, so much the better. Meat juices and milk are in most cases disturbing. Digestion should be allowed to rest, and no fears of exhaustion in a person well nourished should be considered. No attempts should be made to force sleep by narcotics.

The delirium and delusions are self-limited, and in most cases disappear suddenly. After two or three days

of insomnia and restless activity the patient suddenly sleeps, and recovery follows at once. After free movement of the bowels, or after a prolonged hot water bath the same results follow.

Placing patients in a padded room, unless such rooms are well-ventilated, are open to many objections. If the patient can afford to have the services of two or more nurses, the duration of the disease may be greatly shortened.

In some of the charity hospitals well-ventilated strong rooms are used, in which the patient, after a bath, is placed. If his delusions are of a quiet form he is allowed to remain on a cot in a ward, but when he becomes boisterous he is taken to the strong room.

It is noted that many patients after being placed in the strong room exhibit a degree of restraint to keep from being returned, showing a consciousness of their abnormal acts.

The fear of collapse and an effort to overcome this by excessive nutrition and drug stimulation is not only dangerous, but literally increases the mortality.

The general principle in the treatment should be to remove the toxæmic conditions and the local irritations, and restore the mechanical obstruction of the circulation. In many cases there is effusion in the brain and tissues. Metabolism is deranged, digestion is impaired, and actual states of starvation and toxic irritation are present. It will be evident that elimination and rest comprise the best medical measures for restoration. During the delirious period pneumonia and hemorrhage are the most common dangers.

The excitement of the patient may produce rupture of the arteries which may be fatal, particularly if the patient is given heart stimulants at this time. When this occurs the patient should be forcibly restrained in a re-

clining position, and cold water applications to the base of the brain be made.

Pneumonia, the result of paresis of the pneumogastric nerve can not be anticipated, but can undoubtedly be precipitated by reckless and excessive diet. When it occurs, hot applications over the surface by spraying with a lucescant light constitutes the very best treatment, in addition to the usual salines and eliminative measures.

After the delirium has subsided, the treatment should be tonics with strychnine, iron, phosphorous and such other remedies that have proven to be of value, each case being very largely a law to itself.

The prognosis of delirium tremens is always good, and institutional treatment, where it is practical, is the best. In private homes, trained nurses are necessary, and should be strangers to the patient. Members of the family are not good nurses.

The very complex character of this poisoned state indicates the very wide use of physical and psychical measures and is illustrated in the following instances: A strong, vigorous man was attacked with wild delirium on his yacht, and all efforts to restrain him were very difficult. A friend of his attached a rope to his body, and by diverting his attention threw him overboard. The shock of the cold water broke up the delusions, and the fear of death dominated every other thought. He was pulled in, vigorously rubbed and fell into a sound sleep. A few hours later the delirium returned, and the same remedy was applied. He recovered.

In another instance a fire broke out in the room of a patient and the excitement of removing him broke up his delusion, and he too recovered.

As a rule, fear has very little influence in such cases, and unless it is associated with pronounced eliminative measures, it is worse than useless.

Opium is contra-indicated. The wide variation in the mortality, ranging from two to fifty per cent., indicates the necessity for new and more exact studies and the application of safe means and remedies.

A fact of considerable interest is, that, in many sections of the country, delirium tremens is not regarded as a grave affection.

A certain life insurance company found a large mortality among the insured in a certain section. A special agent found that these fatal cases had repeated attacks of delirium tremens, and the local authorities and examiners had regarded this affection as a temporary derangement, and not at all impairing the longevity risk.

A very important question has been raised, whether an attack of delirium tremens left a permanent impairment on the brain and nervous system, and whether the person should be considered strong and well after. This is answered variously, according to the estimate of the physician.

It may be stated as a general fact that after such an attack there is always feebleness, mental instability and susceptibility to toxic states with lowered vitality. The fact of having had delirium tremens is an important factor in the history of the patient in disputed cases of mental soundness.

A number of very interesting cases have been reported of persons who, after an attack of delirium, entered upon a career of crime, and showed a great moral weakness and disregard of their ethical relations to the community. Using alcohol again after such an attack is followed by a more pronounced mental disturbance and graver symptoms of disability.

Many instances are noted of tuberculosis following an attack of delirium tremens. Pneumonia, without any special exciting cause, is also frequently noted. Bright's

Disease is another common sequela. In the two latter the acute symptoms seem to be very rapid, terminating fatally.

In tuberculosis a slower progress is common. Recovery from the effects of delirium may be followed by extreme susceptibility to the use of spirits, and an intense craze for their use when debilitated and exhausted.

Often associated with this is a mental repulsion, which is emotional in its manifestations, but is easily overcome by fatigue and weariness. The fact that the man has had one attack of delirium tremens is always to be regarded in the consideration of other diseases, and other mental conditions.

He is far more likely to have a second attack from the use of a smaller quantity of spirits than before, and the second attack will be more intense in both the depression of his vital forces and the irritation of his brain and nervous system.

There is an instability of brain co-ordination that did not exist before, and a distinct tendency to take on delirious and delusional states from the slightest exciting causes. Delusions of persecution and injury by others never disappear entirely in some cases.

The later life of such persons is marred by want of confidence and undue suspicion, no matter how temperate they may live. There is lowered mentality and defective sense impressions, with faulty reasoning of the motives and purposes of others.

Many of these cases are undoubtedly seriously injured by drug-taking, particularly narcotics, and forced nutrition. Efforts to control the delirium and produce chemical sleep are dangerous. The great central fact to be made prominent is that these cases are self-limited, and the best efforts of medical science are to eliminate the toxæmic conditions and prevent the patient from injur-

ing himself, and keep him in the very best conditions and surroundings.

Beyond this there must be treatment of local conditions, dependent on the states present of the mind and body, and the available surroundings.

CHAPTER XXI.

FIRST CLINICAL EXAMINATION AND STUDY OF THE PATIENT.

Synopsis.—Condition of the patient on admission. What to observe. Distinct classes of symptoms. The paralysis and its significance. Its disappearance after a short time. Physical symptoms which remain. Mental symptoms of delirium and mania also of delusions. Character of the delusions. Symptoms of the voice and the use of language. First effects of the use of alcohol. The conditions when first used. Diseases which have preceded it. Heredity and its effects. Patients who have no fixed convictions. Patients filled with delusions. Patients who are dependent and who are called contagious cases. Patients without any psychic conception of life. Patients who are introspective. Patients who have concealed delusions and motives. Statements of patients Paroxysmal drinkers. Steady users of spirits. Irregular and accidental drinkers. Significance of the various early symptoms.

As a rule, patients coming under observation are either intoxicated or in the period of remorse after the acute symptoms have subsided. If in the state of intoxication, either of stupor or delirium, a careful study of the symptoms should be made. The degree of stupor, and how far it is associated with muscular paralysis, particularly in walking. Observe whether the body sways from side to side, or is projected forward, in irregular angles. Observe the position of the head, the laxity or rigidity of the muscles of the neck, arms and legs, and also the fingers, and the spasmodic conditions.

Note the pallor or congestion of the face, the dryness or perspiration, the warmth or chilliness of the hands and feet, the eyes and the position of the mouth, and the manner of expression; also the tongue, and the ability to protrude it. Inquire about the condition of the kidneys and bowels, if the latter are relaxed or costive, the incoordination and the changes of the heart's action on lying down or sitting up.

The sound of the voice, when of strident character or higher in tone, indicates defective hearing, and irritation of the mucus membrane. A physical examination at this time frequently reveals many very significant symptoms, particularly enlargement of the liver, heart and perhaps dilation of the stomach.

The urine may be loaded with albumen and phosphates, as well as casts. The reflexes may be exaggerated or diminished; sensitive areas may be noticed in the spine. Congestion of the retina may be present, and very high-tensioned arteries. These symptoms disappear after a time and are not to be regarded as of value except for the purpose of comparison.

After three or four weeks' treatment nothing remains but an enlarged liver, high-tensioned arteries and perhaps an irritable heart. If the patient is delirious, the form and direction of the delirium should attract attention. The character of the delusions, whether concerning himself or others, particularly his conception of his present condition, and how much of it is due to the spirits taken, and how much in his opinion is the result of mistakes of his associates and surroundings, also his use of language in describing this condition. His power of discrimination in the use of words, and the use of violent expletives and oaths; also whether words flow in a continuous stream, without much reference to the thought they express. Is he voluble and garrulous in his statements, or reserved and emphatic in the use of expletives?

Is the mania one of egotism, in which his conception of power is exaggerated, and has he confidence in his ability to do as much as other persons, or more; or, is his mania, while egotistical, fixed on delusions of persecution and revenge, for real or imaginary acts of others?

Is it concentrated on his stomach and dietetic wants, or on his ability to discern the motives and purposes of others?

Three conditions must be considered. One, the stuporous, paralyzed inebriate, who is entering upon the stages of dementia; another, the wild, delirious egotism which is a symptom of general paralysis, and the third, a maniacal conception of his ability to overcome opposition, which indicates mania.

These three conditions are significant. Where the use of spirits is paroxysmal, with distinct free intervals, neurotic and psychopathic symptoms are to be expected, particularly in the free intervals, and their unexpected manifestation in some strange symptom before the spirits were taken.

If a long period of the so-called moderate use of spirits has preceded the present condition, degrees of mental and physical degeneration, evident in reasoning, conduct, acts and irregularities of health, are to be expected. If the use of spirits has followed injury, disease or some special shock, either mental or physical, organic changes are to be expected, and both local and constitutional defects will be found.

A careful study of the effects of alcohol, with the first glass or first intoxication, will point out a susceptibility, immunity or some idiosyncrasy that will be very significant in future studies. If the history shows that alcohol exalted the sensory activities, and the depression only followed as a second stage, this fact is to be noted.

If the first use of alcohol produced narcotism, general stupor and profound derangement afterwards, this is equally significant. Heredity is a very powerful factor, and where it is possible, should be studied with care. The children of alcoholic parents have always lowered vitality and feeble resisting power, and are very liable to profound and continuous exhaustion and hypersensitiveness to the effects of spirits.

In many instances spirits are repellant and painful at the start, but this may be overcome. Often the heredity from grandparents develops in an unexpected use of spirits and a fascination for its effects, with or without any tangible causes. Where they are neurotics, and psychasthenics, a study of the early life of the children will indicate very clearly much of the future.

The physical defects in growth of the body and the history of precocity or stupidity in early life, also the hygienic training, dietetic and mental care are to be studied. Often diseases of childhood, and their severity and entailments, give unmistakable indications of the inebriety in later life.

When the patient is in a remorseful stage, a careful study of his own conceptions about his present and future give very prominent signs of the injuries from alcohol, and its neurotic basis. Oftentimes the exaggerated conceptions of his present condition and his reasoning of their causes point out changes in the organism.

In this stage his credulity and anxiety to secure help and to recover, his reluctance and skepticism of the various means, and his hesitation about following advice, are all most significant symptoms. When the egotism of the patient, after recovery from acute symptoms, insists on freedom from all restraint and the gratification of every appetite, the condition is dangerous, and suggests paresis.

When patients have no fixed convictions, and minimize their present conditions, and enjoy the fact of having used spirits, and talk of the possibility of moderate drinking, the paralysis is profound. The delusion of infidelity of relatives and friends and of the dishonesty and intrigue of others, signify the same condition. Concealed delusions are to be looked for in a study of the

disappointments, and diseases and strains which have followed, also states of exhaustion and derangement, which have accompanied and probably preceded the excessive use of spirits, are also to be studied.

After the acute symptoms have passed away the psychic conditions, both present and past, should be studied. In many cases the patient is born without ability to act alone, and without distinct personality to regulate his life and conduct; he is dependent on the surroundings, society and friends, and follows the personality of others.

Many patients, through overcare of their parents, have never developed an initiative dependence on themselves in the common every-day matters. They have been dependent on others, and have grown up trusting to external conditions, circumstances and surroundings. These are very significant questions in the study of the case. A study of diet, sleep, and exercise will point out many conditions which explain the present state.

While the patient's conception of his own condition should always be sought, it should never be followed, except as a mere indication of the real facts; which must be gathered from all sources and inferred as natural consequences. The idea of the uniform action of laws of dissolution and disease will become more and more prominent from exhaustive studies.

The form in which alcohol is taken and the time and the particular effects are by no means chance or accidental, and are not dependent on the capricious will of the patient. Often the appearance of the parents or the relatives of the patient furnishes confirmatory facts of the race degeneracy, or the peculiarities. Patients who dwell on the minute causes and conditions which provoke the drink craze and the result of it are suspicious and should be studied with great care.

Frequent examinations have a mental effect and often disclose facts concealed before. The first effort should be to secure the confidence of the patient, and have him talk freely of his entire life, then take his statements under consideration, recognizing them as biased and uncertain, to be studied for confirmation and support by other facts.

On matters pertaining to themselves, the reasoning of the patients may be very acute, or it may be misleading, and the first examination will bring out this fact and indicate what general line of causes have been influential in producing the condition present, and the possible trend and direction of these states.

CHAPTER XXII.

GENERAL PRINCIPLES OF TREATMENT.

Synopsis.—Certain general principles to be recognized in every case. Particularly after the subsidence of the acute stages. Patients unconscious of their conditions. A suspicious egotism very prominent. A delusional confidence in the will-power. The periodic drinker recognizes the need of help. The moderate drinker never. Theories of the causes are always misleading. The patient's estimation of his condition should not be followed. The diagnosis and prognosis always uncertain unless studied exhaustively. Questions of rapid or slow withdrawal are misleading. Treatment for insomnia, gastritis. Common early symptoms are important. Studies to ascertain the exact causes both physical and psychical essential. Studies to determine the acute exciting causes very important. The removal of these is followed by restoration. Examples of the acute causes. General treatment necessary, particularly on the subsidence of the active causes. Certain general principles always to be recognized. Not theories, but prominent facts supported by evidence.

In a study of the principles of treatment there are some general facts which appear in nearly all cases which furnish the groundwork or basis from which further study and treatment must begin. One fact stands out prominently, that the patients coming under treatment are never in what is called the early stages of the disease, but, on the contrary, they have reached a degree of chronicity which has produced alarm and anxiety among their friends and in themselves.

Commonly such treatment is for cases of acute intoxication. When this condition subsides the patient may be convinced that he needs further help, particularly when pressed by his friends, and may consent to receive medical care and treatment.

In such cases he is very largely unconscious of his true condition. He will reason that his danger is very slight and insignificant and the symptoms which his friends are anxious about are of little account, and that he has

full power to care for himself, if he should choose to exercise it.

This strange unconsciousness of the meaning of the phenomena, direct or indirect, from the use of spirits is common to nearly all cases. He may have drunk to excess in the past, acted strangely, done many insane things, yet the passing off of these conditions brings with it a delusional confidence that he will never drink again, and that all these symptoms are transient.

The periodic drinker rarely acknowledges the need of medical help, except at some particular period of his drink paroxysm. Even then his confidence is only slightly shaken in his ability to stop at will.

The steady drinker is more positive and continues to believe that he has free will to stop at any time. When asked to explain why he does not, refers to some slight temporary external or internal causes, which seem to him a sufficient reason.

In appearance the continuous drinker has more prominent marks of alcoholic degeneration than the periodic drinker. These are often seen in the eyes, face, walk, abrupt manners and language.

There is a wide variation in the mental and physical symptoms of inebriety ranging all the way from the man with the slight alcoholic breath, up to the delirium of intoxication and the stage of stupor.

One of the most prominent mental symptoms is a paretic exaltation and egotistical confidence in his strength and vigor. He will deny that he has ever taken any spirits when the exhalations from his breath disprove it. He will give the most absurd reasons in explanation of unusual symptoms and believe that he has convinced his hearers.

A careful scrutiny will reveal muscular palsy, local ticks and twitching of the nerves with a confused sensory activity. These are in the early stages. Later, when

positive delirium and stupor comes on, they are recognized.

Another symptom is very common to all persons who use spirits, namely, inaccuracy of statement, faulty use of words that have double meanings. This, with irritability and disposition to be critical, minimizing their own conditions and magnifying the opinions and judgment of others.

Often a drinking man reveals his condition by his delusional reasoning, concerning himself and others. This is seen particularly in efforts to explain his condition and the cause of his drinking. To persons not familiar with this class, the excessive minute and dogmatic explanations are very convincing and even his physicians accept his statements of his own case without making special confirmatory studies.

Thus the diagnosis and prognosis of patients not delirious and stupid are always misleading when based on the statements of the patients and their friends. When the toxic symptoms are prominent the inferences are more positive and clear.

The intensely red or blanched face points to disorders of circulation. The dilated or contracted pupils indicate pressure and change in the central organ. The acute inflammatory conditions and nutritional disturbances are most significant of toxic and general derangement.

In most cases there is an intense demand for help, in others great indifference and reluctance to receive any assistance. Most patients seek relief when the drink craze has subsided and a stage of remorse and depression brings out an increased consciousness of the gravity of their condition.

At this time there is mental feebleness and delusional conceptions expressed in extravagant language concerning themselves and their danger. This has great therapeutic

significance to the physician, suggesting localized depressions and toxic poisonings which may deepen into serious organic changes or pass away by the efforts of nature.

It is at this time that the specific treatment with its credulities and its extravagant expectations appeal most vividly to the reason of the patient.

Physical and mental measures which attempt to increase this sense of danger and the physical depression often have the very opposite effects. Narcotics, emetics, and other drugs act in this way and psychological measures to deepen the mental impression are exceedingly uncertain.

Efforts to shock the patient by exaggerating his fears and increasing the magnitude of his danger are exceedingly unsafe. This topic is referred to in another chapter.

The appeal of the patient for relief should be followed by pronounced eliminative measures, removing the active and predisposing causes and placing the patient in the very best conditions for restoration.

Then the questions of nutrition, elimination, environment and mental impressions become the subject of more exhaustive studies. Where persons have used spirits for a very long time, there is a delusion that unless its removal is gradual, there is fear of collapse and heart failure.

Oftentimes the patient is so impressed with this idea that the sudden removal of spirits must be considered in the treatment. Where spirits are removed gradually, the continuation of the poisonous effects must be recognized. The mental impression that collapse will follow the withdrawal of spirits must be met and neutralized according to the conditions present.

A common custom of giving nitrate of strychnine with every dose of spirits until the latter is painful has many

advocates. The freedom from danger of collapse is illustrated in the number of intoxicated persons confined to the station houses who are seldom given any spirits after being locked up, and mortality is rarely traced to this cause.

It must be remembered that there is greater peril and danger in the slow withdrawal of spirits, states of congestion, sudden palsies as of pneumonia, nephritis and other local inflammations, suddenly starting up, are very common.

Changing the form of spirits and combining them with eggs or foods bring additional perils from autotoxic causes, and rather protracts the trouble and increases the fatality.

Extensive experience shows that the gradual withdrawal of spirits in the treatment is followed by great complexities of symptoms, prolonged convalescence with great exhaustion and slower recovery.

A study of many thousands of persons in whom spirits were withdrawn at once has never indicated any deaths from collapse that could be attributed to this cause.

Often sharp eliminative measures through the skin and bowels with warm baths and rest in dark rooms bring out a repugnance for both the smell and taste of spirits. Acute gastritis and general hyperæmia, calling for relief, suggesting spirits as the only possible remedy, is very easily overcome by hydropathic measures, together with appropriate mineral waters.

All the specific cures depend on the combined action of atrophina and hyoscine to diminish the craving for spirits. This is more or less perilous when applied without due discrimination. Many of the vegetable bitters, particularly in the form of infusions, have a revulsive effect in breaking up the desire for drink. Elsewhere we have noted this fact.

When the desire for drink has passed away, the conditions due to the poisonous action of alcohol come into prominence. Thus the faults of circulation and elimination, the local palsies, the unstable nerve centers with explosive tendencies, also the nutritional disturbances and morbid impulses for foods and drinks are the conditions which require recognition and therapeutic measures for relief.

Insomnia is a very common condition. When treated by narcotics, is often made worse. The forced sleep is at the expense of vitality and nutrition with greater intensity of the toxæmic states which may have been an active cause in producing it.

The treatment of gastritis and insomnia by narcotics has often ended fatally and the death certificate was heart disease, when it should have been heart failure from drugs. The remedies advised in the text books for these conditions resulting from toxic poisonings are not to be relied upon. In reality there is a very wide difference between theory and practice here.

Authors are not familiar with the condition and write from a theoretical point of view, giving very dangerous advice. It is always a question in the treatment of acute cases of inebriety and the acute inflammations which follow, of avoiding the use of drugs which complicate and increase the danger.

The subsidence of the active symptoms brings out new questions of causes and conditions and suggests new measures of treatment which were not practical before. Thus in some instances a most efficient remedy is a change of environment and occupation.

In another it is a change of nutrition and exercise, sleep and rest. In another it is nerve rest and quietness in a sanatorium, or a home in the country. A long list of very active and contributing causes should be studied and

removed. Then the progress towards recovery will be rapid and positive.

Not unfrequently climatic conditions produce depression and irritation, which provokes the drink craze. When these are changed restoration is rapid. Innumerable examples appear of apparently insignificant causes, which when removed result in the restoration of the patient.

Such causes are generally toxæmic or have reference to the toxæmic condition of the body. Thus, in one instance, a chronic case was required to walk twice a day to a spring for certain mineral waters, two miles away, and drink certain quantities of the water. He recovered. The muscular exercise in the open air was of more value than the waters he drank.

In another example the treatment for hyperacidity of the stomach with regulation of the diet and prolonged rest in bed was followed by permanent restoration. These cases indicate the possibilities of exciting causes, that are unknown to the person, and only recognized by careful study.

It is also evident that many complex psychoneuroses exist which are not overcome by specifics or drug cures. When they are removed, the progress towards recovery is rapid. In every case there should be a general study of the most prominent causes, or conditions that favor and encourage the use of spirits.

At one time it may be contagion from example of others, or it may be the contagion of surroundings. In one instance a man never drank except at the club. In another he could not resist the invitations of certain men to join them in the social glass. To all others he could refuse. Having taken one glass it was impossible to stop until he had become thoroughly intoxicated.

Often conditions of starvation, both mental and physical, furnish very active predisposing causes for the drink

craze. Remove these and the person becomes an abstainer at once. Very important questions occur as to the value of drugs and chemical restraint, and how far it can be used with safety.

To depend upon drugs alone is certainly perilous, also to depend upon restraint. In much the same way mental impressions are transient and by themselves alone are followed by sad failure. It is only from an exhaustive study of the conditions, both inherited and acquired, that the therapeutic measures and remedies can be determined.

The fact should never be overlooked that the inebriate is a most complex neurotic and that the mere use of spirits is by no means the only cause. In reality it may be secondary and contributory, and these facts should be recognized in the question of treatment.

The general principles of treatment include every possible degenerative influence, both physical and psychical, and should not be based on any one set of facts to the exclusion of others. While one cause may be more prominent than another, their relations should be studied.

As an example, the subsidence of the acute symptoms of tuberculosis is marked by an intense desire for spirits. Traumata and shocks not unfrequently set up an alcoholic craze. Reflex irritations are not infrequently apparent in the same symptoms, and the treatment must necessarily vary when these causes are recognized.

Hence, the general principles for treatment must be understood at the beginning, and with this in view, rational means and measures can be applied.

CHAPTER XXIII.

HOME AND OFFICE TREATMENT OF INEBRIATES.

Synopsis.—The recent character of such treatment. Former theories of intoxication obscure the need for treatment. A distinct business in the hotels of the large cities, also by charlatans in certain centers. Question of how often one can be acutely intoxicated and recover. Acute intoxication very serious condition. Doubtful if full recovery ever takes place. The steady drinker is much weaker and requires more careful study. Remedies used to restore one who drinks steadily. Apomorphia has some value. Opium extracts should not be used. Danger in careless treatment of persons found intoxicated in the streets. Three classes of persons commonly call physicians for temporary relief. One in which intoxication is the direct result of spirit poisoning. The other, when the toxic conditions come on suddenly and without particular reasons. The third so-called temperate persons who become intoxicated from causes other than spirits. The general treatment of such cases. Danger in using the needle. Value of water treatment. Conditions to be sought for. Narcotics should not be used. Examples of cases restored by family physicians. Office patients. Failure to recognize their conditions. Disastrous results. Examples. Some remedies found valuable. Number of patients calling for medical treatment increasing. An unknown field of very great promise. Experience of empirics shows possibilities of means and measures.

Up to a very recent period medical men were seldom called to give assistance or prescribe for inebriates, except in cases of acute intoxication and chronic conditions.

The apparent self-limited and transient nature of ordinary intoxication seems to require little or no medical help, and the rapid recovery confirmed this impression.

The theory that inebriety is in its origin a moral disorder has discouraged the inclination to call for a physician, and with it an increased sense of humiliation after the act and desire to conceal it. Only when intoxicated persons become wildly delirious, or excessively stupid are the family and friends alarmed; the physician is then called.

The subsidence of these acute symptoms is not restoration or cure, and yet the impression is that the patient

has recovered. In reality the injury to the organism is very serious and complex, and far more dangerous because it is concealed.

During the last few years the medical treatment of the acute stages of intoxication have become quite a distinct and prominent business, especially by hotel physicians in large cities, and also by charlatans and quacks who make great pretensions of permanent cure.

Acute intoxication or alcoholism is marked by delirium, coma, and general paralysis, following profound toxæmias with marked symptoms of grave disturbance of both the motor and sensory centers. There are always functional changes and profound pathological disturbances in the organism, which by repetition would become permanent, and in all cases there are unknown degenerations that may or may not pass away.

The question has been raised how far the organism, particularly the brain and nervous system can endure these toxic states, and preserve their normal integrity; in other words, how many times may a person become delirious or stupid, and be intoxicated from the effects of spirits, and fully recover?

One observer thinks that few persons ever live to become intoxicated more than 400 or 500 times. Others estimate 300 as the extreme limit. The probabilities are that few persons ever become profoundly intoxicated more than 100 times and recover. General collapse, local inflammations and profound palsies and intercurrent diseases take place long before the limit of 100 or more intoxications is reached.

It is evident that the modern man, particularly in this country, is more sensitive to spirits and is less able to throw off the profound toxæmias manifest in stupor and delirium. It is also clear that other diseases spring up

more readily from this source and are more intense and profound.

The condition of intoxication resembles that of a shock and suspension of the normal activities, similar to that of heat or sun stroke, or hemorrhage, in which local congestion occurs. This, for the time being, is very intense, but later passes off and the functional activities become normal again.

Careful studies of brain disease show that traumata of all descriptions, both psychical and physical, produce a permanent derangement from which recovery is never certain. Many diseases occurring later are distinctly traceable to brain injuries which were considered insignificant at the time.

Intoxications from alcohol are both toxæmias and traumata, in which poisoning and congestion are the pathological conditions present. A study of many cases show distinct physical degenerations dating from the first intoxication. The inference is clear that this condition is by no means trivial or of minor importance, no matter what the appearance may be afterwards. The brain has suffered some deterioration from which it never recovered. Hence the medical care and treatment of states of intoxications are of very great significance and should require the most careful study and remedial measures.

One of the questions which present themselves is, what are the probable acute exciting causes, and how can they best be removed. If the person is a continuous drinker, and only occasionally poisoned to the extent of delirium and stupor, the case is one of accumulated toxæmia. Here the poisons are introduced from without and formed within the body, and their removal is the very first effort in the treatment.

If the person is a periodic drinker with distinct free intervals of abstinence, the causes which precipitate the

drink storm are to be studied, anticipated and prevented. Such studies indicate a great variety of conditions of which poisoning, congestion, irritation, general and local exhaustion are common.

This form of drinking is limited and controlled by conditions, not always recognized. Removal of the exciting causes will often be followed by a sudden cessation of the drink impulse.

In certain cases the approach of the drink paroxysm will be preceded by gormandizing and great irregularity of living. In others, stupor, depression and melancholia; in others, profound exhaustion. These and other conditions are to be recognized and treated by the remedies which seem most called for.

In the continuous drinker whose toxic conditions create alarm, profound elimination is essential. This can be accomplished by one-tenth grain doses of apomorphia, administered at intervals of one or two hours, until relaxation, profuse perspiration, emesis and catharsis follow.

Warm boths with vigorous rubbing and reclining in well ventilated rooms are essential to complete recovery. Apomorphia should be used with caution because of the depressant effect which follows. Sometimes this is so pronounced as to contra-indicate its use. Where emesis is called for, salt water and ipecac may be used in preference, as safer and less depressing.

In other cases, smaller doses of apomorphia, one-twentieth or one-thirtieth of a grain may be given for its relaxing and sedative effects. These suggestions for treatment have particular reference to cases cared for at home, or calling at the office.

In an institution where the surroundings are under the control of a physician, the medication may be practically the same, but the condition and methods of treatment will

vary. Morphia and chloral are unsafe narcotics to overcome the insomnia and the delirium which follow. Chloral should never be used because of its accumulative action, and its depressing effect on the vitality, increasing the delirium and prostration. Opium and its alkaloids, morphia and others check secretions, and favor the growth of toxins by increasing favorable conditions and soils.

Opium extract may be used after thorough elimination has taken place to lessen the nerve irritation, but it should be used with great care and discretion. Hydropathic means and measures are by far the most valuable and safe for the acute stages of intoxication and the conditions which follow.

Thus persons found on the street in a state of coma, exhaling a strong spirit odor, should never be given spirits, but should be treated with hot and cold water, both internally and externally. Water falling in a small stream on the back of the neck and spine is a powerful stimulant, starting up the heart and increasing the circulation.

A warm bath is the most valuable restorative to the circulation and the congestive conditions that are present. Most of the cases calling for active treatment may be divided into three classes, which require different measures, particularly in the after treatment.

First, one in which the intoxication has followed the drinking of large quantities of spirits in rapid succession, as in the return of a drink paroxysm, or sudden obsession with or without any particular motive.

Second, where spirits have been used in small quantities extending over a long time, as for instance, in the so-called moderate drinker, who suddenly becomes intoxicated, or a person at a banquet who drinks lightly, then suddenly becomes stupid and maniacal.

Third, persons who are called temperate, who from some unknown cause, suddenly become intoxicated, or from some known cause use spirits to great excess.

In the first class there is evidently some sudden depression and disturbance of the circulation, followed by intense irritation and demand for relief. The excessive use of spirits is simply to drive away psychical or physical pains.

There may be some motive or reckless abandon, but there is always a mental element which should be recognized. One of the most prominent remedies is apomorphia by the needle for its deterrent and eliminative actions. Then saline cathartics and baths and rest in the best possible surroundings.

After the acute effects are passed, a cautious use of sulphate of strychnine in small doses, one-sixtieth of a grain, and noting its effects and the toleration of the system, will be found valuable, for the nerve irritation. Lupulin in eight or ten grain doses is safe and has no depressing effect. This with other mild sedatives, if required, will answer the purpose.

In the second condition, where intoxication is the culmination of continuous use of spirits, apomorphia should be given. If its action is particularly depressing, it should be used only at long intervals, or not at all.

Cathartics, diuretics and sudarific may all be used at intervals with excellent results. The object to be secured is diversion and elimination. After the acute symptoms have passed, various tonics can be given; strychnine and atropia in combination are two of the best drugs most commonly used, one-sixtieth of the former and one-two-hundredth of the latter, given at intervals of four hours for two or three weeks.

If no toxic symptoms follow they should be withheld for a week or two and then resumed again. This alternation may be continued for several months. Other means

and measures having reference to local conditions, particularly of the hydropathic class should be used.

In the third condition where intoxication is sudden, unusual and not clearly the result of any particular conditions preceding it, hydropathic measures should precede all others. Elimination by cathartics, and possibly mild sedatives after the acute symptoms subside, may be found useful.

It is always a question to be considered whether drugs by the needle for these acute conditions are safe; also whether they should not be abandoned at a very early day for their mental effect. While the needle is a very valuable method by which drugs may be given, there is a psychical impression that should be recognized and considered in all cases.

Sedatives in these various conditions are only valuable for their immediate effects, and should be of the mildest class. They should be concealed from the patient largely, and varied, and never continued any length of time.

Gastritis is a very common condition in these acute affections, and can be most successfully treated by hydropathic measures. Packs and fomentations over the surface and small quantities of water given internally, combined with the lucodescant light are very effective remedies. A great variety of means and measures have been urged, among them narcotics which should be given with great caution.

The use of spirits and milk, while sometimes checking the irritation, is not safe, and should not be followed in any routine way. The absolute removal of spirits in any form is the safest and most certain measure of relief. The extreme thirst associated with gastritis, calling for water and cooling substances is another condition requiring good judgment, and adaptation to the conditions present.

Ice, lime, and bi-carbonated waters in small quantities given every hour are grateful. Sometimes cold tea has a sedative action. If to these various palliatives are added hot and cold fomentations over the stomach and along the spine, the acuteness of the symptoms subside.

The patient should be kept reclining in bed and given no food for some little time. It is a mistake to suppose that liquid foods, when retained, are healing in their effects. The stomach needs rest and lavation by water more than anything else.

The stomach symptoms are self-limited, and can be easily overcome by water and natural means. With the functional disturbances, there is high arterial tension, anæmia and nerve irritability. Strychnine has been used at this time with very good effects occasionally.

Small doses of codein given by the needle are also highly praised. Strychnine combined with small doses of atropia are also valuable for their sedative effects, but care should be exercised to discriminate any toxic action which it may have.

The question of nutrition and the various tonics indicated, of which forms of iron, phosphorus and soda are most commonly used, must be decided with the conditions of each case. Thus a patient who has been a gormand and eaten irregularly and excessively should be restricted to a very limited diet. One who has been abstemious and underfed should require very carefully arranged foods taken at short intervals, particularly foods that are easily assimilated.

The deranged metabolism, so common in these cases, must be recognized in the questions of diet, and not the patient's appetite for food. An abnormal appetite after the acute symptoms is very often the beginning of auto-intoxication which will end in relapse.

Equal care of the diet as of that of typhoid fever, should be given after the subsidence of the acute symptoms. No person should be considered cured on the subsidence of gastritis and other toxic symptoms. The fact that the patient is able to resume his customary work must not be considered evidence of cure, but rather an indication of the possibility of future restoration by the use of rational means and measures. The physician should be very emphatic in urging further care with medical means and measures.

Some examples will make these facts more clear. Thus a man with an alcoholic heredity who was an abstainer up to thirty years of age suddenly drank to great stupor and delirium. The active causes were disappointment in business, and shock at pecuniary losses. The physician, after giving thoroughly eliminative measures, began a course of restricted diet with active hydropathic measures, impressing the patient's mind with the extreme gravity of his condition.

Bitter tonics were given at first, particularly cinchona bark, for a few days, and then abandoned and taken up again. He was able to resume business, but followed the directions of the physician, who gave very active treatment for over a year.

The treatment consisted of regular baths, exercise, tonics, restricted diet and regulation of his work and sleep. The recovery was complete, and although the physician was retained for many years and consulted on every occasion, the patient continued temperate until his death from an accident many years after.

Had this first attack of intoxication been treated with the usual narcotics of which morphia, chloral and other similar remedies are most common, then dismissed with moral advice and warnings, relapse would certainly have followed, and he would have died an inebriate.

A similar instance was that of a teacher, who at a banquet was urged to drink various kinds of spirits and suddenly became acutely intoxicated. The physician was called, and among other things made a very strong impression on the patient's mind of the need of active treatment and unusual care both in diet and hygienic measures.

The patient recovered, although he remained under the care of the physician for a long time. In this case, had the physician given the usual drugs and considered the conditions very insignificant and transient the future would have been doubtful.

After the subsidence of the acute symptoms a degree of remorse may come, or the patient may have egotistical confidence that the toxic state was of minor importance, and was a mere accident from which recovery is absolutely certain, and relapse will never occur again.

If the physician who is called will recognize this mental attitude and impress on the patient's mind the seriousness of this event and the possible danger which may come from it in the future, and insist that he come under medical care and direction, the most gratifying results will follow.

Persons who have been intoxicated several times, and for some reasons unknown, call in the physician, should be subjects of very serious inquiry and study. The patient's judgment of his own case should not be accepted or recognized, but the fact of having drunk before up to intoxication should be given the greatest prominence.

The delusion that having once recovered, he can do so again, is a very serious bar to preventive measures. The patient's ego must be overcome, and his delusions destroyed, and in most cases this is very easily done. All of these cases present evidence of the derangement of the liver, kidneys, heart and arteries, and disturbances of the digestion, which may be organic, and are certainly functional.

A periodic drinker, during a paroxysm of intoxication suffered from pericardial pains which greatly alarmed him. The physician gave a very serious prognosis, and impressed upon him the necessity of remaining in bed and taking active treatment. After a time the restoration came on and with it delusions of strength.

The physician and friends impressed upon him the necessity of careful medication, hydropathic and nutrient, which was continued for over two years, and resulted in the complete subsidence of the drink paroxysm and his final recovery.

In another example a lawyer, who after intoxication sent for a physician, expecting temporary relief and restoration which had been received many times before. The physician recognized the chronicity of his case and impressed the idea that he was on the borders of a general paresis in which his recovery was doubtful.

After a time the patient grew skeptical and doubted the diagnosis. A consultation was called, and the first diagnosis was confirmed. Then he consented to follow the prescribed course of treatment. After a time it was found that he was using beer secretly. The physician gave him apomorphia, the effects of which alarmed him, and from this he continued for over two years, receiving medical care, and following implicitly the directions laid down. He recovered and was a total abstainer ever afterwards.

A very prominent congressman drank to great excess at intervals and called in eminent professional men for relief on every occasion. At one time he became intoxicated at a hotel and called upon an obscure physician who, after an elaborate examination, suggested the necessity of making a will at once, and urged that every preparation should be made in the possibility of sudden death.

The will was drawn and the patient was startled and impressed with fears which the physician fostered in every

way. Very close attention with elaborate medication, hydropathic and otherwise, with a careful study of every symptom, and this was kept up for a month or more, before the patient was allowed to go out and take up his duties.

The physician continued his treatment and the patient followed directions in the most conscientious way for two years or more. His recovery was complete. This man is now in the United States Senate, doing excellent work and thoroughly temperate. Other physicians had treated him for the drink paroxysms, probably with morphine, chloral and bromide, with warnings and counsels, and had recognized his own judgment concerning cure and **recovery.**

These examples indicate a very wide field in which the family physician can give most substantial and valuable help to a class of patients whose temporary toxic conditions are never treated in a systematic scientific way.

Numbers of active business men are driven to the charlatan and gold cure establishments with the hope of receiving some permanent help, where the family physician has failed.

Office patients who come to the physician for the relief of conditions following the toxic use of alcohol are turned off with a prescription, with or without advice, and are neglected, and in this way become incurable. They should be carefully examined, studied and treated both physically and psychically, and made to understand the gravity of their condition, and the statements of the patient and their friends should not be the basis of a superficial diagnosis preventing any further treatment.

All institutions for the treatment of inebriates present examples of the failure of the family physician to understand and give the first aid and assistance to these poor

wounded victims, who later become incurable, and then make most strenuous efforts to recover.

Often inebriates appeal to the physician for help in the remorseful stage, suffering from the depression which follows the drink paroxysm. Often they exaggerate their symptoms and give most gloomy prognosis in the future, and come to the physician's office, or send to him for help.

Frequently they are among his friends and patrons, and when not using spirits are most attractive, excellent citizens. The office treatment consists usually of narcotics, tonics and placebos with threats and warnings and appeals. Often the appeal is for medicine to neutralize or break up the drink craze which the physician is usually powerless, or fails to do in a practical way.

If the physician should make a careful study of these cases, and dismiss all thought of the moral theories and the patient's ability to control himself, a new and most fertile field of practice, and successful treatment would be found.

The appeals for help to break up the drink craze are very often touching. The coarse, crude efforts to break up the drink craze often intensify the debility and while stopping the craze for a time, cause it to return with greater urgency than before.

The first means should be to eliminate the toxins by catharsis with salines. Then insist that the patient shall take highly concentrated solutions of quassia, or cinchona bark. The former is preferable, because it can be concentrated by repeated boiling. Give two ounces of this every two hours. The patient may use spirits or not according to his inclination.

In a very short time the desire for spirits disappears, and a repugnance to its taste and smell comes on. There

seems in this drug to be an antagonism making the effects of the spirits painful, and later followed by extreme disgust.

If the patient will continue this quassia after the disgust has appeared at longer intervals, and finally whenever the desire for spirits comes back follow it by an ounce of quassia mixture, a temporary restoration is sure to follow. Cinchona bark produces nearly the same effect, but it must be given in larger doses and always in solutions.

Quinine can be used, but cinchonism comes on early and with it little or no revulsive feeling. Apomorphia may be used occasionally, but only in particular cases where a profound relaxing action is called for. These drugs, in most cases, will effectually break up the drink craze for the time being, and enable the physician to determine what further measures can be used to continue the good effects and overcome the abnormal conditions which demand the return of the use of spirits.

Examples of cases that have been permanently restored by temporary office treatment are as follows: A noted politician applied to a physician for help to prevent him from drinking during an exciting convention that was to occur the next day.

He was advised to take large quantities of concentrated quassia solution the day before the meeting, and drink freely of mineral water. He was surprised to find that all drink impulses were absent and in their place a strong repugnance for the odor of spirits.

He was able to do his work with great satisfaction, and later came under the care of a physician for treatment and became a total abstainer.

Another man equally noted applied for help to prevent intoxication at the annual banquet of his college society.

The same treatment was given with the addition of one-two-hundredth of a grain of sulphate of atropia every four hours for two days before the banquet.

His experience was so satisfactory that he placed himself under the charge of the physician and eventually became a total abstainer.

A third case was that of a lawyer, who at the close of a long exciting trial, when worn and exhausted, drank to excess. So frequently did this occur that he went off to a watering place and remained concealed until the drink storm went by.

He was placed on the quassia treatment and was able to overcome the impulse to drink. Then by baths and prolonged rest, recovered and was a total abstainer the rest of his life.

A very interesting case is reported by a physician, of a delusional inebriate who confided to the physician, that during the drink paroxysm he was sorely tempted to kill his wife, child and himself, and on several occasions was only deterred from committing the act by a slight circumstance.

Later he was horrified at this insane impulse and appealed to the physician for help. After a dose of apomorphia, followed by baths and active treatment, he was given strychnine and atropia, and urged to come to the physician when he began to feel the drink impulse coming on. He did so and was given large quantities of quassia, which quickly overcame the impulse. This was repeated several times during the course of the year and was followed by a complete recovery.

The possibilities of relief and assistance in these paroxysmal drink obsessions are almost unlimited, and open a new field of practice, that is at present practically unknown.

Examples of failures of physicians to give this first aid to the wounded or rather to assist the patient to overcome the drink obsession may be noted in the following, which are common in the practice of almost every physician.

A banker appealed to his physician for help to overcome the desire for spirits, which he feared was growing and destroying his physical and business interests. The physician gave bromides, chloral and various other sedative remedies, together with the tincture of cinchona.

He failed to realize that cinchona as a tincture containing a large quantity of alcohol was a very dangerous remedy. Finally, in despair, he sent the banker to a quack cure. A few weeks later he returned buoyed up with the faith that he was permanently cured. Later he relapsed and became a secret drinker.

A few years afterwards he was convicted of forgery and sent to prison for ten years.

A prominent clergyman who drank for exhaustion, realizing the danger, called in the family physician. A great variety of remedies were used. Little or no attention was paid to the real conditions. The patient failed to get permanent relief. Later became a drug taker and finally after a sensational exposure he committed suicide.

These cases might be multiplied to an almost indefinite extent. It may be said that there are an increasing number of persons in every town and city who are becoming alarmed at their inability to break up the drink impulse and stop the use of alcohol.

They go to the family physician for help, and failing to get any particular satisfaction or assistance, resort to patent drugs and gold cures, and later, in desperation, go to some hospital or sanatorium. They realize their danger and have a dim impression that something might be done to keep them from growing worse. The physician,

who of all others, should be their best guide and counsel, fails to realize the seriousness of their condition, and encourages the theory that it is a moral weakness which they should overcome, and thus unconsciously drives the patient away.

Office treatment of persons suffering from drink paroxysms, who are given morphia, chloral and other sedatives, has many perils. The physician recognizing the present symptoms without particular reference to their causes or conditions, may give morphia or some other narcotic. The patient goes home, uses more spirits and dies.

Should any question be raised, the prescription shows that the dose was correct as to size, and other conditions are supposed to account for the death. A number of cases have come into prominence in which a small dose of morphia or chloral has been fatal.

The depressed brain and nervous system were not recognized, and the narcotic given still further paralyzed the vital centers.

A case of some prominence in which a paroxysmal drinker was given a quarter of a grain of morphia, hypodermically, and fifteen grains of chloral to be taken on retiring. Death followed, and a legal contest grew out of this.

The physician was sustained by the courts, but in all probability a better acquaintance with the patient and the conditions from which he was suffering would have led him to give other drugs, and the patient would have lived.

Office prescriptions which are eliminative are safe, and solutions of bitters and salts can be used with great efficiency, but such patients should always be under the observation of physicians and never neglected, but seen often.

Office and home treatment can be most successfully carried on, if the physician can secure the hearty sym-

pathy and confidence of the patient and his family. Where the inebriety is continuous, the conditions are more complex and require more careful study.

If the patient is a periodic inebriate a great variety of conditions must be understood, before exact treatment can be made successful.

In the numerous classes of drinkers, dependent on the great variety of surroundings and active and remote causes, there are always certain indications which will show how far home and office treatment can be successful, and when and where home and institutional treatment should be substituted.

The empiric efforts to cure the chronic cases and those who have reached terminal stages by reason of protracted poisoning and degenerations extending over years, are very startling in their temporary successes, and occasional permanent restoration.

The methods used are exceedingly coarse and unscientific, and yet the effects and impressions produced are very marked. It is evident that there is a wide field of therapeutic possibilities that is unoccupied at present, in which both physical and psychical remedies can be concentrated to restore and permanently cure patients by both office and home treatment.

CHAPTER XXIV.

INSTITUTIONAL TREATMENT OF INEBRIATES.

Synopsis.—The hospital idea of treatment very old. The first care on the Nile. The first efforts to protect drinking men. The first hospital began in 1864, at Binghamton, N. Y. The advanced methods promoted there. Controversy over these plans. First inmates incurables. Mentally disturbed. Discussions over different methods. Four classes of hospital. One doing Government Work, taking care of the incurables, struggling with the same obstacles that confronted Binghamton Asylum. A second class, both corporate and private, treating patients according to the original plan of disease. A third class only recognize the moral side and treat that alone. A fourth class claim specific cures. The first class under the charge of the Government house patients of all grades. The second class study patients scientifically. The character of the patients which come to these hospitals. The necessity of hospital treatment. The possibility of recovery. This treatment precedes all others as a necessity in their care and control. The whole subject is yet in its infancy. It is impossible at present to do more than educate the public and patients to realize the necessity of such treatment.

The idea of gathering inebriates in a certain place for special treatment is a very old one. Ulpian, the Roman jurist, after affirming that inebriates were diseased, declared that they should be treated in special surroundings and buildings.

Later one of the kings of Spain announced that inebriates should be treated in special places as sick and diseased. In one of the tombs of Memphis there is a statement that the occupant had set apart a building for the care of persons overcome by wine and beers, and that he ministered to them such means as would relieve them from the effects of spirits. This was practically a hospital and was the first of which we have any record.

On another tomb is an inscription of a charitable man who provided a place where the temple worshipers under the influence of wine could be taken and protected until they were able to go home.

From other sources the fact is stated that the temple worshipers who became practically intoxicated, in partaking of the offerings given to the dead, were carried out on the banks of the river Nile to sleep off the fumes of the spirits.

This was found to be dangerous because of the crocodiles which came out of the river and devoured them. Laws were passed that persons who became stupid from drink were to be put into separate places where they could be protected.

Several references are made in those early records of the need of taking care of the persons who were overcome by spirits. In the early part of the eighteenth century hospitals and institutions were mentioned as giving the best means for their care and protection.

It was not until 1864 that a distinct hospital was opened for the medical treatment of inebriates at Binghamton, New York. Lodging houses for drinking men were opened in the early part of 1850. Many of them were rooms over saloons, and places in the neighborhood of hotels where persons could be protected and cared for.

In London proprietors of saloons advertised very cheap spirits and rooms with clean straw where persons overcome by spirits could recline. The early temperance societies, particularly after 1840, organized lodging houses which were practically institutions for protection, care and such treatment as was needed. There are several references in the early history of the temperance movement to the aid received from physicians in these places, which was literally the first hospital care, or first aid to the wounded.

Dr. J. E. Turner, the founder of the Binghamton asylum, gave the first clear conception of the hospital work and treatment of inebriates. He urged that inebriates were in the first stages of dementia and paresis and that

nothing less than one year of absolute restraint and careful medical observation and treatment would be of any value.

The hospital at Binghamton was founded on this idea. It required no pledges or promises, but simply insisted that the patient should come under absolute control and care, and all his surroundings be regulated on a fixed military plan.

Drugs, baths, exercise, together with lectures and every physical and psychical means known at that time were to be used in the treatment. Work in shops and light farm labor were given to all who accepted them as a means of treatment.

This was so far ahead of the public sentiment of that day that the protests of the patients against the restraint and the theory of disease were encouraged, and many means were sought to discredit and oppose in every way. From the very opening of the institution until it was changed to an insane asylum sixteen years later there was a constant conflict between the patients and the management, in which often the friends of the patients joined with bitterness.

The founder, Dr. Turner, insisted that the inebriate was diseased and needed long careful treatment with restraint and exercise to become permanently cured. On the other hand, the patients and friends urged that though disease might be present, it was transient and recovery depended largely upon freedom from restraint and every irritating cause, and appeals to the honor and promises of the patients.

Many papers were written at that time showing the disease was that of the will power in which manhood and pride were more largely concerned, and that all restraint was depressive and appeals to the honor were stimulating. The various superintendents of the Binghamton asylum

who followed Dr. Turner attempted to find a middle ground for treatment, in which the disease theory requiring restraint, and the failure of the will power needing freedom, and appeals to the honor and pride could be combined. They all failed. Attempts to make the hospital popular, not only increased the discontent, but brought with it an element of personality which was described as personal favors or persecution, and with this came the political element which increased the discontent and brought about a dismal failure of plan and purpose.

The principle upon which the hospital was founded was so combined with moral theories, and so impractically worked out, that the institution was finally declared a failure. The dogmatism and intense ignorance of many good men of that day illustrate clearly the obstacles which every new truth must pass through, and the controversy about the management of the hospital at Binghamton sounds like the quarrels of little children at this day.

Physicians, clergymen, politicians and editors wrote and talked about the treatment of inebriates with a familiarity and confidence that was startling. Notwithstanding the confusing efforts of the various managers to please the public and the inmates of the institution, they unconsciously exemplified and worked out many of the facts which are now being recognized as the most advanced principles of treatment.

It is evident that the early work of this institution and the theories of Dr. Turner will be studied with increasing interest in the future. A number of institutions were opened for the reception of patients in different parts of the country, during the first ten years of the existence of the asylum at Binghamton.

Nearly all of them grew out of the enthusiasm and possibilities which the institution at Binghamton promised, and failed for want of knowledge of the character of the patient and the correct principles of treatment. Other institutions, founded on some special view of what inebriety was and was not, were opened gradually changing and evolving or dying out.

At present there are four classes of institutions which may be said to represent the infancy of the work. First and most prominent are the state and county institutions, incorporated and receiving state aid, also fixed fees per week, for the patients treated. Laws, giving power of holding these persons, with efforts to furnish some occupation, are provided.

The general principle recognized is that the inebriate is diseased and to a degree irresponsible, and in that way he is a semi-insane man. These institutions are struggling with the same obstacles which the asylum at Binghamton encountered.

The managers and superintendents are constantly changing from political and other causes. Theories of all descriptions and plans of treatment are urged and dropped with startling frequency. There is no standard to guide them, and no fixed principles, hence they belong to a reformatory class. Happily they are steadily evolving towards a larger knowledge of the subject, and a clearer conception of what is required.

A second class of hospitals, both corporate and private, is struggling with the same problem. The management is based on the theory that inebriety is half disease and half vice; that patients are irresponsible, to some degree, while drinking, and at all other times are sane.

Some of these institutions receive mental cases and persons who are eccentric and have feeble minds and

bodies. Most of the insane asylums have wards for the inebriates, in which the disease is recognized and restraint applied for temporary periods. Beyond that there is no recognition of debility or disease.

A few private hospitals exist where inebriates are treated exclusively as diseased, following the theories of the great founder, Dr. Turner, in which remedies of all grades and degrees are applied, and the patient is recognized as both organically and functionally diseased, and the treatment is a continuous effort to build up and restore him to healthy living again.

A third class of hospitals formerly quite numerous, now almost extinct, ignore all questions of disease, regarding the patient as a moral dement, who happens to be poisoned with alcohol, and when this is removed the real remedy is the pledge, the prayer and appeals to his higher will power. Some of these institutions have furnished remarkable examples of suggestion, psychical impressions and possibilities of treatment, along lines unknown before.

A fourth class of hospitals which began in a small way soon after the advent of Binghamton Asylum claimed to have discovered some specific remedies and methods of cure. They are promoted very largely by irregulars and men without training or reputation, and depend upon their extraordinary pretensions and startling assertions.

A few years ago they attained great prominence, but latterly they have declined. They require no laws of restraint and seem to depend entirely on the ability of the patient to pay the fee charged.

These four general classifications describe the institutional work for the treatment of inebriates at present. The first class managed by the state and county officials are the most hopeful and are probably doing the best

work, although the inmates are almost altogether of the chronic, incurable classes.

Their work of housing and controlling them gives an opportunity for study which will be taken advantage of in the future. The inmates committed by law are to some extent provided with occupation and this appeals to the taxpayer, not only in removing the patient from the community, but relieving the burdens which fall upon the family.

There is every reason to hope that these institutions will make their inmates more or less self-supporting as well as to restore a certain percentage to normal living again.

The private corporate hospitals, depending upon the income from patients for their existence, are stimulated to discover and combine all means possible to bring about restoration. Their particular purpose is to concentrate all the known remedies and measures for curing the victim and preventing him from future relapse.

The most advanced study and work is to be expected from these institutions, because of the stimulus and incentive to attract patients and produce permanent results. The State of Connecticut has a most advanced law, giving private incorporate hospitals legal control over the inmates. Other States have limited restrictions which will be greatly improved in the near future.

Hospitals and insane asylums with special wards for the treatment of acute cases of this class are becoming more and more available and give very substantial aid and help. Much depends upon the attitude of friends and relatives who permit the patient to go home long before he is cured.

The egotism and irritation and evident dementia of the patient after the subsidence of the acute symptoms

are not recognized. A very large class of persons who come for treatment to hospitals are in the terminal incurable stages. They are credulous, emotional neurotics who have tried all sorts of means and remedies without success, and in the remorseful, period after the removal of spirits, grasp at every new hope and new expectation for permanent restoration. Later they consider themselves cured and are very insistent on returning to their home life and circles again. When they relapse the hospital and its management are considered responsible.

A certain percentage of these inebriates are moral paralytics and create great expectation and enthusiasm, among their friends, pertaining to their cure, and often pose as examples of the extraordinary work done in the institution, or by secret remedies.

Later, when they relapse, they seem to take malicious pleasure in condemning the hospital and the means used in their former treatment. Public sentiment is always influenced more or less by these relapsed patients whose vociferous declarations of failures or successes in hospitals are regarded as evidence of the real condition.

In this class of hospital patients are the great army of border liners, including the psychopaths, paranoiacs and degenerates in the first stages of insanity. There is another class of inmates becoming more numerous every year, who frequent these hospitals. They are the brain exhausted, practically worn out, men and women who use alcohol as a narcotic to cover up the pains and discomforts from which they suffer, and to enable them, in some slight measure, to continue amidst the changing conditions of life.

This class patronize the quack hospitals largely, attracted by the pretensions and promises of rapid permanent cure. Later they go to better organized institu-

tions and accept the restraint, receive scientific care and utilize the methods offered, in a rational business-like spirit.

Many such persons recover. After the subsidence of the acute symptoms, the restraint of the hospital, of the surroundings and the physical conditions, are accepted as necessities and made available to the fullest extent. Such persons never pose as examples of cures, but go back to private life without making any reference to this treatment or its necessity.

The impression prevails that it leaves a stigma to be obliged to take such treatment, hence it is not mentioned in later life. All well organized institutions, doing legitimate work, have lists of persons restored, who never refer to the institution or their treatment, for this reason.

Another class of patients are continuously extolling or condemning such institutions, and referring to their experience with suspicious volubility.

There is another class to whom the hospital is a city of refuge. Such persons recognize their need of help and go for treatment either openly or secretly. Some of them are paroxysmal drinkers who go to break up the paroxysm, for the correction of some local affection or rest from certain nerve exhaustion.

The great hotel sanitoriums of this country and Europe have a very large number of persons who are moderate or excessive drinkers and who realize in a slight degree the danger of their present condition, and seek medical help. Some of the more modern names of nervous diseases are literally degenerations and disorders from alcohol.

At these institutions sanatorium methods and remedies, such as baths, electricity and massage are very effective and wise physicians recognizing the real causes urge

abstinence from spirits and other exciting causes. Most of these patients come to organized hospitals after a time and secure exact scientific care.

Institutional care of inebriates is thus built up slowly from sanitoriums and other places where seclusion and rest can be had. Institutional care with its change of surroundings and living, its military conditions of life, diversions for the brain and nervous system, together with special appliances for this particular condition, is a necessity that is growing constantly.

The late Dr. Mott always referred to the inebriate as one with a fractured brain and nervous system, requiring the splint and bandage of an institution. This figure describes in a very suggestive way many of the conditions essential. Institutional treatment is literally placing the patient in a condition where his malady can be studied and better understood than elsewhere, and also where the application of means and measures can be concentrated and made to promote restoration with a degree of certainty not possible elsewhere.

Experience has shown that a certain number of persons find in hospitals both a physical and psychical help which cannot be obtained elsewhere. Many of the older institutions have a class of patients who come regularly at intervals for the security which the hospital offers.

They come suffering from excitement and exhaustion; often associated with the use of spirits or marked by an intense dread and fear of drinking again. Common examples are that of a lawyer who many years ago drank to excess; then recovered. At irregular intervals he comes to the hospital, takes baths, rests a few days and then goes away. The relief which the institution gives him and the psychical security of removal from temptation brings about a rest and restoration.

A physician who has an obsession that if he drank spirits he would kill his family and himself, comes to an institution to prevent him from drinking. He does not drink, but he is frightened at the prospect of temptation. The moment he reaches the institution his fears dissolve and later he returns, quiet and normal in every way.

Other persons come to the institution after having drunk and committed overt acts. They are filled with the sense of danger, and are led to make tremendous efforts to avert it.

The same conditions are noted in the better class of Turkish baths in large cities. Here can be seen persons recovering from drink paroxysms and others who are on the verge of drinking, taking prolonged baths and becoming fully restored.

Sanitoriums at mineral springs have many persons of this class, who drink largely of the waters, take the baths, and not only expect but receive temporary help and restoration. A certain hospital in one of the large eastern cities has a number of rooms with barred windows, set apart for persons who are in the delirious stage of inebriety.

Many persons come from the higher walks of life, and ask to be admitted and put under restraint so they can overcome the delirious impulse to drink. Institutional treatment does more than provide restraint and protection. Where they are properly managed the patient can be educated and taught to understand his condition, and to know the danger signals, and provide for them in the future.

He is trained to interpret correctly some of the phenomena of his condition and to realize the particular effect from distinct causes, and in this way he has a new

comprehension of his condition and the dangers which beset him. In a well ordered institution this education and mental training has a very pronounced value to most patients.

In some of the larger institutions talks and experience meetings are conducted by the patients, in which different views are given and impressions made that are very helpful. Where the physician seeks to break up the delusions of the patient by private talks or lectures, and calls attention to the facts of his condition and the needs of clearer recognition, he is really giving treatment that has a peculiar value, although not often recognized.

All the institutions doing scientific work should give prominence to these psychical forces, and seek to direct the patient along lines of healthy thought and living. This, combined with other measures and means, constitute the highest kind of scientific modalities that can be used.

There can be no question that institutional treatment of inebriates will occupy a very large place in the future, also that home and office treatment will be preliminary or furnish the after care so essential. The need of isolation, change, forced rest and concentration of special means and measures adapted for these psychoses, is becoming more and more recognized.

Some objectors claim that certain persons are impressed that no help can be had outside of a hospital, and for all sorts of mental and physical disturbances they turn to the hospital for relief. This may be true in some measure, but in the psychosis of inebriety it can never be an abuse.

CHAPTER XXV.

THE STATE CARE AND TREATMENT OF INEBRIETY.

Synopsis.—Inebriates seldom recognized until they reach chronic stages. Such persons are frequently dependent on their friends. The state will not help them unless they have become dependent and paupers. The assumption is that they have reached this stage by a wilful disregard of ordinary prudence. Insane and idiotic are considered to have superior claims on the sympathy of the public. The state tries to regulate the traffic by license. The U. S. Court has decided that there is no inherent right to sell spirits, because of the perils of the business. License and attempts to control are giving a right to destroy one's self and then punishing him for this. Great inconsistencies. No one has a right to destroy himself. The state should enforce this. The present treatment contrary to the teachings of science. Persons who use spirits are poisoned and must be housed and controlled. The present methods dangerous. Jails and station houses, schools of crime. The state should organize work-house hospitals and control the inmates. The incurables to have indefinite sentences. Others shorter periods with parol. Almira Reformatory. An object lesson in the principles of treatment. Laws of Conn., superior to others. The practical treatment demonstrated in many ways. English hospitals show the value of the work. The Binghamton Asylum outlined the great principles. Hospitals in their infancy. The principles which must be concentrated and applied are seen in many institutions.

Inebriety is never recognized until the patient has reached conditions that border on chronicity or incurable stages. When such persons become dependent on their friends and the state, then it dawns on the minds of the friends that they are inebriates.

The State assumes that where distress and poverty are apparently the direct result of neglect and wilful disregard of ordinary prudence, there is no legal liability, except in the extreme stages and then only the jail and almshouse, and the most limited possible means of protection should be given. This is founded on the theory that inebriety is a moral disorder, and the victim is vicious and wilful and could at any time, by the exercise of his will, have prevented this condition. Hence this neglect

should be punished by suffering and deprivation of many of the comforts of life.

The insane, idiotic and epileptic are considered to have superior claims on the sympathy of the public, and hence are entitled to protection and kindness, and more charitable legislation. The State assumes that alcohol is a necessity, and that when they have passed laws to regulate its traffic as a beverage, and by license and law keep its sale within legitimate and rational bounds, they have done their whole duty.

The United States Supreme Court has decided that there is no inherent right given to any citizen of the State or Nation to sell intoxicating liquors, because the business is perilous and dangerous to individuals and the community. Hence it may be prohibited by regulations and laws that any state may determine.

The inconsistency of legalizing the business of selling spirits and holding the salesman and consumer accountable for the effects which are inevitable is very startling. It is literally giving a man the right to become insane and degenerate, and then punishing him for this condition.

Many persons consider it wisdom to regulate the sale of spirits and use the money obtained by the license for the protection of those who are injured by it. This is another inconsistency that it is difficult to understand. The economic side of the license question shows beyond all question a tremendous loss in the money received from license funds and the amount paid out for police, hospital and almshouse expenditures to take care of the victims. It has been urged that wherever a city or town insists on granting the privilege of selling spirits as a beverage, it is in duty bound to provide homes and hospitals for the care of the inebriate and persons made paupers from using spirits.

It is very evident that the state must recognize the injuries which result from the free or licensed sale of spirits, and should use every possible means to diminish or permanently check the injuries which follow from it.

The great principle is that no one should have a right to destroy himself and become incapable of doing his duty as a citizen, nor should he be permitted to become a burden or a source of loss and injury to others in the community.

This principle is recognized in legislation concerning public nuisances, sanitary evils and diseases from every source which endanger the lives and homes of the community. Thus pollution of streams by sewerage, neglect to remove dangerous infections or conditions which encourage disease, are punished as offenses and crimes of the community.

The fact is well recognized that no one has a legal right to so act and conduct himself as to peril the sanitary and healthful interests of others. By destroying all sense of obligation and duty to others, and all consciousness of others' interests, the inebriate becomes a source of danger. His brain is bewildered and his reason is disturbed, and he can not act or conduct himself with any degree of certainty, hence he should be controlled, and come under the class of infectious and contagious disease victims.

At present all inebriates are recognized as sane and normal, and allowed to come and go with little or no restriction. When they fall down in the street stupid, or when they commit assault or crime, they are taken to hospitals and jails and the difficulty is considered only transient. There is no recognition of their insane acts and conduct in their homes, to their families and those about them.

Science indicates clearly that every man, either as a moderate or excessive user of spirits is dangerous, not only to himself, but to others. He is infectious and uncertain, and is likely any moment to become a burden and loss to the community. He is not only insane, but he is a criminal from the slightest exciting causes, and, more than that, he is almost certain to transmit his disease and degeneration to the future.

It has been said by good authority that no man has a right to use spirits to injure himself and impair his consciousness of the surroundings and his relation to others, and it is the duty of the State to stop him, take away his liberty and force him into conditions of normal, healthy living.

This great principle applies and is becoming more and more thoroughly recognized every year. The State does license the sale of spirits, but it is its obvious duty to recognize the inebriate as a source of danger and peril to its best interests. The present methods of neglect, and harsh means only at the last moment, when restoration is practically impossible, will disappear in the near future.

Every city and town should have hospitals and homes for the control and care of inebriates, where the exciting causes can be removed, and where the best conditions of hygienic living and the appliances of science can be concentrated to bring about a radical restoration.

Such a work has already been tested, not only as practical and rational, but curative. The inebriate should be sent to State farms and State colonies, restrained and made self-supporting, and after a period under medical care, during which he has nerve rest, restoration takes place; then he should be permitted to go out on parole and return whenever relapses occur.

If frequent paroles and relapses show a degree of incurability, the terms of commitment should be indefinite. Every large city has a number of pauper inebriates, whose frequent arrests for crime and intoxication are destructive to themselves and an increasing burden on the community.

The jails and station houses are schools for greater degeneration and incapacity. They should be housed in farm colonies for an indefinite time, and provided with labor and occupation, and made self-supporting as far as possible. The treatment in such places would be no experiment. Already it has been demonstrated in many ways.

Some of the better class of jails, private hospitals and reformatories and other institutions where there is sharp military restraint, with obligation and the application of persistent restorative measures, show beyond all question what can be done. Thus, in one institution receiving the most degenerate class of inebriates, where baths are given daily, with good food and certain light duties, the changes noted are almost marvelous.

Many of the patients when discharged give promise of permanent restoration, and if this treatment could be carried out for a sufficiently long time, the results would be very promising.

An ideal institution, which is thoroughly practical and will be positively attained in the near future, will be a farm colony in the country, with every facility for farm and garden work and light mechanical labor; small, inexpensive dormitories, built about a central administrative building, would permit classification and grouping of people.

Full legal power of restraint covering years should be given by the courts, and every patient should have an opportunity to go out on parole when his restoration

warrants a resumption of natural, temperate living. The patient should understand that restraint and control in an institution depends entirely on his recognition of the rules and regulations, and on his efforts to take advantage of every means used to restore his body and mind.

If he fails in any particular, the restraint will be increased and his liberty curtailed, and the duration of his confinement lengthened. If he runs away, he will be returned and will be held in more strict surveillance than before. The institution will be conducted on a military plan, in which baths, exercise, medicinal measures and duties of every kind will be carried out with great exactness.

The muscle worker will be required to engage in outdoor employment on the farm or in the garden for a certain length of time during the day. The brain worker and the mechanic will be given some lighter work in the workshop, or at some occupation along the line of their previous life-work.

If he refuses to take his part in these duties, his confinement will be more strict and his comforts diminished. If he perform the duties cheerfully, greater liberty will be allowed, more comforts and some returns for his services, which may be used to increase the luxuries or to help others who are dependent.

Occupation should be considered a remedial measure of as great value as medicine, daily baths, electricity, massage, and such other measures as seem to be required by the condition of the patient. In addition to this, the evenings are to be occupied with lectures, concerts, musicales, and every measure to stimulate and rouse up the palsied brain.

In this way, both days and evenings would be a continuous medicinal hygienic culture school to control the disordered impulses, strengthen the nerve energies and divert the mind from the past, giving it new impulses and

thoughts for the future. The removal of spirits and the active treatment of disturbed conditions by every means known to science would be the first objective point. Then a re-education and materialization of military, medical and psychical measures would restore the patient to a normal condition.

Such institutions should receive the chronic repeaters and those found intoxicated on the streets, grading them according to their conditions and capacity to live normal, rational lives. The military restraint, severe at first, growing less as they show capacity to bear freedom. When found incurable, they should be placed in a group by themselves and treated according to the conditions present.

Another class less prominent, whose drinking is more of the symptomatic and insane type, should be treated by the same active measures, given alternate liberty and restraint, held in strict accountability for the literal fulfillment of every duty, and kept occupied during the entire day, when not resting.

A third class, whose inebriety is of a very recent origin, should have special accommodations and particular opportunities for rest in suitable surroundings. The first class, the incurables, to a very large extent, would be kept in such institutions for their lifetime.

They would become self-supporting in some measure, and at all events the burdens would be lifted from the taxpayers and their families, and they could be kept in forced conditions of healthy living.

The second class would be restored after a longer or shorter residence, and, going out on parole would very likely take up responsible positions and live normal lives for the future. The third class, the transient and temporary inebriates could be checked and restored and sent back to healthy, normal living. This latter class, to a very large extent, could be cured and prevented from

becoming chronic inebriates or insane, and the work of a colony for this class alone would be the highest practical kind of preventive medicine.

The practical results of housing these three classes and taking them out of their infectious degenerative centers would be a matter of the highest economy to the public and to the community, as well as to the homes of many persons.

A colony of this kind would do work equal to an insane hospital, not only by checking degenerative diseases at the beginning, but preventing crime and pauperism, which is certain to follow, as in the present conditions.

Of course, a large number of private institutions would be organized with full legal power of control to treat persons who are able to pay, and to give more individual treatment, and these are already on the ground, only lacking the power of restraint and the sympathy of the public. The pauper and indigent classes that form so large a burden on the tax-payers, and the homes in every community would be lessened, and, by being grouped and cared for in colonies, the sources of infection and injury would be broken up and destroyed.

The great submerged class, that are going down and carrying with them a vast tide of wretchedness and misery, could be halted and many of them turned back.

Every inebriate hospital and every quack institution, and every reformatory movement by church or society furnishes evidence of the possibility of cure and restoration, which could be enlarged and developed into grand humanitarian work by state institutions and farm colonies.

The Elmira Reformatory, under the direction of an expert manager, demonstrated that juvenile criminals could be restored and that crime could be checked by the use of scientific means and measures. This institution

literally has revolutionized many of the great subjects of penology and pointed out new methods and possibilities of treatment.

The state treatment of inebriates, including all classes, can be equally successful along similar lines, and it will be no experiment, but simply a question of judicious and wise management.

Already institutions have begun in this direction, and the magnitude of the problem has confused the managers in some way, but their success under difficulties has shown the possibilities of success in the future. One great difficulty is in trying to follow theoretic lines, and not studying the problem as original and peculiar.

Many years ago the State of Connecticut passed laws giving legal power to confine and treat persons who have become inebriates, for a definite length of time. This law was fifty years ahead of public sentiment, and has never been utilized except in a few private institutions. Of all the legal enactments in the world, this is the highest and most thorough in its power of control.

There should be no public sentiment or opposition or fear of abusing personal liberty in the effort to establish farm colonies. The great fact should be recognized that no one should be allowed to destroy himself and imperil the interests of his friends and neighbors by using spirits to excess.

He should forfeit his liberty and his free will, because he shows no ability for self-control, and hence must be cared for by others. There is no subject to-day more vital to the interests of every community than that of housing the inebriate and restraining him from suicide and injuries to his friends and family.

The late Dr. Wright expressed this in the following: "Restrain and control the inebriate, whether a millionaire

or a pauper, and you reduce crime, pauperism, criminality and disease to a minimum." This is preventive medicine and political economy of the highest type. The present methods of allowing liberty and only applying restraint when the evils and injuries are developed, is reckless ignorance. In this way, the very conditions for the growth and development of inebriety are promoted.

There is no science, no economy, no sense in this. The English Parliament, twenty years ago, recognized the value of inebriate hospitals, and appointed an inspector who should superintend their organization and control. Over twenty institutions of this kind, both public and private, have been organized and are doing good work. Under the care of an able superintendent and inspector, Dr. R. H. Brantwaite, very valuable and interesting contributions have been made to the literature on the subject.

While the practical working and value of such institutions are established beyond question, there are many difficult problems which are yet unsettled, and about which considerable controversy exists. In this country, particular wards are put aside in all the large insane asylums and reformatories, where special treatment and care of inebriates is carried on.

While this is unsatisfactory, there is unmistakable evidence that work of this kind can be done in farm colonies, especially adapted for this purpose. The first inebriate asylum at Binghamton distinctly outlined the need of such work, and pointed out its value in general, educational, physiological and psychological training, and the possibilities of restoring many persons, now lost by the want of such treatment.

The State Asylum at Foxboro, Mass., has been doing some excellent experimental work in housing and treating the chronic inebriate. Their various reports reveal difficulties to be overcome which a larger knowledge would

put aside. The attempt to divide the inebriates into curable and incurable, criminal and insane, and give separate treatment is beset with difficulties.

Several of the reports are marred by efforts to distinguish between the normal and abnormal inebriate, and inebriates whose conduct is criminal and those whose conduct is not. If the energy spent in trying to differentiate and mark out the classes, could be concentrated in laboratory measurements and clinical studies, many new facts would appear.

Evidently the cases are not thoroughly studied where the author spends time in the classifications of all persons who drink to excess, and who may be practically classified as chronic, require hospital treatment, and this treatment has but two objective points, namely, restraint and training both mental and physical.

A well-appointed hospital will regulate this according to the patients and the conditions. The state can not discriminate, except in a very general way, and to call one class curable and the other incurable, or one class criminal and the other not so, and attempt particular treatment adapted to each, assumes a degree of knowledge of the nature and character of inebriety not yet attained.

The temporary treatment of the inebriate in a few of the older institutions on a general line of classifications is certainly more practical, because it gives opportunity for special means and measures in connection with other efforts that could not be secured in other institutions.

A state institution at Knoxville, Iowa, is struggling with the same problems. The frequent change of its managers is a serious obstacle towards any permanent work. Notwithstanding this, they have so far demonstrated the reality of their work as to entitle them to the very warmest indorsement and sympathy of all.

CHAPTER XXVI.

TREATMENT BY HOT AIR, RADIANT LIGHT BATHS, VIBRATION AND ELECTRIC CURRENTS.

Synopsis.—These various means of treatment becoming more prominent in inebriety. Opinion of Dr. Shepard, and its confirmation. Public baths in different cities. Literally treating inebriates in the acute stages. The physiology of this. The baths in sanitoriums very essential. Effects of different kinds of baths. Corn baths in the western countries. Their physiology and practical value. Radium light baths. Their construction. Comparison with hot air. Uniform good effects. Action of light on the body. Greatest value when supplemented with other measures. Destroys the desire for spirits, causing sleep. Some peculiarities of the light bath introduced by Dr. Kellogg of Battle Creek, Mich. Vibratory stimulation a valuable agent. Conclusions of the late Dr. Pilgrim. Its effects on different organs of the body. Its value increased in connection with other measures. Electric currents of great medicinal power. Static breeze valuable. Alternating currents. Auto-condensation currents. Some theories of their action. Their value increased by other drugs. Some of these effects. These are so uniform as to give them a permanent place among great remedies. Examples. Psychological effects. Subject should be studied with care and discretion. Their great value will then appear.

The practical therapeutic value of hot air, steam and radiant light baths, together with massage, vibratory exercise by machines, and the electric current in the treatment of inebriety calls for extended study and consideration. These measures seem to occupy so large a place in the treatment of these toxæmias as to become essential in all therapeutic measures for relief.

Dr. C. H. Shepard, of Brooklyn, N. Y., who first introduced Turkish baths in America, in 1864, declares that this bath is more of a specific for the cure of inebriety than any single therapeutic means. This statement has been confirmed in many ways, and all authorities agree that in connection with other measures it is one of the most powerful agents now in use.

Strikingly confirmatory is the experience of modern Turkish baths in large cities, where they keep open all night and provide cots for patrons who come in under the influence of spirits, and who after profuse sweating and rubbing, sleep and go out in the morning restored.

Many of the baths in cities give such treatment daily to a large number of persons, and they are literally inebriate hospitals, giving the first care and treatment, although not generally considered in this light. Periodic and constant drinkers recognize their impaired condition and resort to the baths for elimination and diversion of the spirits from the blood to the surface, finding relief in the profuse sweating and rubbing, and the sleep which follows.

Periodic drinkers, at the beginning of the drink storm, rush to the bath to overcome the obsession for drink and succeed for a time. Others, who fear that their condition from the use of spirits will impair their efficiency, go to the bath for the purpose of sweating it out and starting anew.

Thus the bath has become a fountain of healing to an increasing number of persons. The physiological rationale is very evident. Thus the high temperature of the room acting on the surface of the body increases the circulation of the capillaries and causes an intense determination of the blood to the surface of the body. This causes intense perspiration, and is a literal flushing of the body through the skin, in which the toxins and waste products of cell and tissue are thrown off.

The sudden change in the surface circulation overcomes the vaso-motor palsies of the capillaries, and in this way congestion and pressure on different organs are removed. It is very much the same as flushing the alimentary canal with salines, driving off the waste material and accumulating products.

The effect is very marked in subduing the excitement and diminishing the stupor by relief from irritation. The heart's activity is lessened, and the temperature of the body is diminished. The blood pressure is lowered, and with it a decided tendency to sleep. The toxins are eliminated, and thus one's source of poisoning is lessened.

The derangement of the capillary circulation is overcome, and the congestions and palsies so common are removed. It not unfrequently happens that persons in the Turkish baths do not perspire quickly. There are surface congestions difficult to overcome, hence large quantities of water must be drunk, and the persons taken out and the skin softened with soap and massaged under a hot shower.

In sanitariums, where the baths are used very freely, the action of hot air on the skin of inebriates is studied with some care. If perspiration is very intense from the start, after a massage and rubbing, cold showers are given, and the patient is wrapped up in a warm blanket until reaction follows.

Where the perspiration is very tardy, massage of the skin and hot showers precede the sweating. The effect of profuse perspiration can be greatly increased by flushing the alimentary canal and kidneys with warm or mineral waters. After the bath and reclining in a dark room, and a short sleep, if the skin becomes dry and hot, a hot shower is given, and surface stimulation is kept up by means of showers and steam baths.

If the patient complains of headaches after the hot air bath, a steam bath may be given at intervals of two or three hours. Where the patient has perspired freely and the skin is in a hypersensitive condition, a steam bath may be given with better effects than hot air.

Often persons delirious, perspiring freely, should be given a hot shower, followed by a cold douche, then taken

to a steam bath for a short time, then to a cold shower and wrapped up in blankets in a dark room.

In the western countries corn baths at one time were frequently given with good effect and frequency. Large ears of corn were boiled for a long time, then placed around the patient's body and covered with blankets. The heat retained by the ears of corn produced a very high surface temperature, and this stimulated the capillaries, bringing about the same results as that from steam.

Diaphoretic drugs have the same effect with the addition of the depression from the untoward action of the medicine. Stimulation of the skin is more safely secured by external measures, of which hot air, steam and other baths, are the best means.

The radiant light bath, which has recently come into considerable prominence, should receive some consideration. Up to this time its value has been very enthusiastically praised, and by many it is considered superior to the hot air. The bath consists of a room four or five feet square lined with tin, or painted, to give it a radiating surface, over which are arranged a large number of incandescent lights. These lights may be supplemented by reflectors back of each one, intensifying the rays.

The bath may be in the form of a cabinet, in which the head projects and the body is surrounded by a large number of incandescent lamps. Some of the baths are lined with mirrors, which intensify the lights.

The patient sitting in this bath perspires very quickly. While the temperature does not increase to more than 130 or 160 degrees, the perspiration is very rapid and intense. The particular value of the bath seems to be in its sudden profound stimulation of the capillaries.

The hot air bath requires from fifteen to twenty minutes to produce active perspiration. In the radiant light

bath the same effects, only more powerful, in from five to ten minutes. The temperature remains about the same. The patient is conscious of a decided sedative, soothing action. The sensation of heat is less than in the hot air bath, but the skin is more intensely reddened, and elimination is more profound.

In some instances a very marked odor from the oily products of the skin is apparent. In others, all odors seem to be neutralized. Areas of the skin that are hyperæsthetic and anesthetic are brought out with great distinctness. After a time the perspiration brings with it a sense of exhaustion, and the patient is then placed under a shower, after which a decided tendency to sleep follows.

These effects are so marked and uniform as to give it a greater prominence than that of the hot air bath. Where the skin is palsied and does not respond quickly, a warm shower with soap is used to soften the skin and to increase the surface circulation.

Then the light bath acts with great intensity. In the hot air bath, there are often depression and a sense of uneasiness and irritation, but in the radiant light bath these effects are not noticed.

After one or two baths the skin seems to become very susceptible to the action of light, and perspiration starts almost immediately when the light is turned on. There can be no question that the action of light has a more profound physiological action on the surface than that of hot air.

The light penetrates to all the tissues of the body and is converted into heat waves, giving renewed activity to the cells and circulation of fluids. It is practically a bombardment of both heat and chemical rays, penetrating through the surface into the tissues, destroying the toxins and bacteria, and setting up activities anew.

The arc light is regarded as the most powerful, with its ultra violet rays. Cabinets and rooms in which the arc light is used have become more popular, and many very interesting studies have been made showing their superiority to the incandescent lamp.

In the treatment of inebriety, the radiant light bath, to be most effectual, must be supplemented by showers, massage, and various other measures, particularly adapted to the case. After the bath has been used a few times, the susceptibility to the stimulant action of light should be recognized, and the duration of the bath diminished.

If the hot showers and massage afterwards are not followed by a sedative action and sleep, a new study of the conditions should be made. In some persons the sudden withdrawal of large amounts of water from the surface is in the nature of a shock, producing irritation and restlessness afterwards. In others, it is the opposite.

Warm or cold showers after the bath may frequently correct this condition. This must be considered in the after treatment. In some persons this bath is followed, after the rest and sedation, by an increased desire for spirits, but fortunately this can be overcome by any of the bitter tonics, whose effects seem to be much more active after the bath than before.

Where the desire for spirits is diminished accompanied by an active impulse to overcome it, a repetition of baths, of short length, will aid this impulse. Many very curious, unexplained facts have been noted from the effects of this particular remedy. Thus, in one instance, a very nervous, excitable inebriate would fall asleep in the bathroom and remain lethargic and dull, sleeping and drowsing for many hours after. All desire for spirits disappeared as soon as perspiration began.

In another instance a steady drinker could not sleep for many hours without restlessness and a feeling of laughter. Later he would sleep very profoundly for a long time.

In a third case it was necessary to take a bath early in the morning, as its stimulating effects lasted all day, taking the place of spirits, and enabling the person to do without them.

In a fourth case the action of this bath was followed by intense craving for food; then sedation, sleep and restoration.

In the acute symptoms of inebriety this bath is uniformly sedative, and this effect can be increased by warm showers, carbonated waters, and reclining in a darkened room.

Several authors have spoken about the particular good effects of the radiant light bath, where the patients had an opportunity to disport in a swimming tank and exercise themselves. This, of course, would happen in those who had used hot air or steam baths.

Experience has shown that where a person becomes very sensitive to the light, the duration of the bath should be confined to a very few moments, not going beyond surface stimulation of warmth and moisture, then a warm shower and reclining.

Another fact is of great significance, namely, that the action of the drugs seem to be far more intense and active after the bath. Thus sedatives, cathartics and tonics, particularly of the vegetable class, are more powerful, even in smaller doses.

In alcohol delirium the radiant light bath has proved to be of almost specific value in many instances. Free catharsis and warm showers softening the skin, and producing increased surface circulation, then a prolonged radiant light bath. This is followed by showers and re-

clining, and complete subsidence of the delirium for many hours.

On its return a similar course was followed by prolonged narcotic effect and rapid recovery. It is still an open question whether this treatment would be equally efficient in all cases. In an institution where such baths are in active service, the results will be different from those in a private home. It may be asserted with great confidence that any kind of a bath by which high heat can be applied to the surface of the body will always be found exceedingly valuable.

Dr. J. H. Kellogg, of Battle Creek, Mich., who first introduced the radiant light bath, pointed out its great value as an eliminant and sedative. He showed that it not only acted on the arterial tension, reducing it, but it had a powerful physiological action on irritation, and was a germ destroyer.

He showed that its effects were not always explainable, but like electricity, it presented some retarding forces to diseased states, and gave some new power to the cell and tissue. Clinical experience has brought a large mass of confirmatory evidence both concerning this bath and that of the hot air.

Thus persons exhausted from overwork, worry and defective nutrition find in both of these baths relief and sedation greater than from any other source. Thus, a professional man suffering from periodical drink storms, can overcome them by hot air baths at the beginning of the period and in this way he has been able for many years to prevent a drink excess.

In another instance an inebriate resorts to a bath in his own house, taking two or more a day, followed by a rubbings with oils and vigorous massage, and in this way he has been able to keep from using spirits.

In one case an inordinate thirst which precedes the drink storm is treated with hot air baths and salt rubs, followed by a static breeze. The result is a complete subsidence of the drink excess.

A physician reported a number of cases of chronic inebriates treated in a jail by hot water douches and vigorous rubbing with a solution of salt. The results were very good. A number of cases have been reported where the insomnia following the inebriety was broken up by the radiant light bath and salt showers. These, together with other means, were followed by a remarkable recovery.

Up to this time the clinical evidence of the value of this form of bath showed that it is one of the new modalities that promise the very best results from farther use.

Another remedial measure is vibratory stimulation of the muscles by delicately adjusted machines. This has been found to be of great value in a large number of cases. The following summary of its physiological action by the late Dr. Pilgrim, outlines in a very satisfactory way many of the facts which have been confirmed beyond all question.

The action of vibratory stimulation on the body is:

1. Increasing the volume of blood and lymph flow to a given area or organ.
2. Increasing nutrition by stimulating secretion.
3. Increasing the muscular respiratory process and the functions, and the general metabolism and the production of heat.
4. Stimulating the excretory organs and the functions of elimination.
5. Diminishing blood tension and relieving muscular contractures.
6. Relieving engorgement and congestion.

7. Increasing the removal through the natural channel of the lymphatics of exudates and other products of inflammation.

8. Inhibition and relieving pain.

Evidently these results and the need for stimulative measures are called for in most cases of inebriety. Many persons who drink both moderately and at intervals suffer from contractions and impaired activity of both the organs and glands, and frequently hand massage and so-called osteopathic measures are followed by the best results.

Stimulation over the liver and along the lines of the nerves, for cirrhosis and neuritis, and other muscular palsies, together with abdominal muscular stimulation, are all most practical and efficient measures to relieve the conditions and assist toward healthy activity.

Several cases have been reported where the premonitory symptoms of the drink craze have been overcome by vibratory treatment and baths. Its use is indicated, particularly in so-called rheumatisms and sclerotic states following the use of alcohol, and when used in conjunction with electric light baths and free showers, the very best results will follow.

Persons who are overfed and underworked and who use alcohol, should receive vibratory treatment. Persons who are worn out from defective nutrition and continuous poisoning from spirits, and persons with enlarged livers or hearts should be given this treatment.

At first it should be light and brief as to duration, then increasing the length of time, localizing the vibratory activities over parts of the body that seem to be congested. A mild vibratory treatment over the entire body stimulates the capillaries and makes the electric light bath much more active and in many ways seems to give power to eliminated drugs by rendering the circulation more active.

The vibratory machine, both before and after the bath, is a very powerful aid and a remedial measure, particularly in cases of muscular irritation and insomnia. It may be called a mechanical sedative, and its effects may be considered both physical and psychical.

Its use in barber shops, over the face and head, shows that it is recognized as an agreeable stimulant as well as sedative. In institutions where its effects can be studied and applied with more or less exactness, it has become a necessity, particularly to diminish nerve excitement and muscular energy, and to bring with it a sense of relief.

Experience has shown that its value consists of its scientific rational use, and that it is possible to increase the very irritation and many of the difficulties which it is found to remove by a careless use.

Electric currents from a static machine are very valuable remedial agents that are coming into increasing prominence. High frequency currents, for their tonic effect and after the removal of spirits, are very satisfactory. The relief and rest in many cases is almost specific. In others the effects are less marked.

The static breeze, given regularly, varying according to the skill of the operator, and the form of current which seems to be called for, becomes a very important part of the institutional treatment of inebriety.

In a general way it may be said that the electric current is either a stimulant or sedative. Sometimes one effect is more pronounced than the other, and in all cases the sedative effect is secondary, and is apparent in all forms of treatment.

The alternating current aids and increases the assimilation and digestion of the patient, and should be used in all after treatment as a tonic of exceeding value. Occasionally persons intoxicated are restored at once by the action of the electric current. In others stupor and

narcotism is intensified. In other cases, irritation and extreme restlessness follow. It is found that the static breeze, the alternating currents and the auto-condensation currents are most effectual after the baths and hydro-pathic measures.

The electric current seems to have a more intense action on the cells and nerves after the radiant light bath. The fact should be remembered that the effects of electric currents, in almost any form, differ very widely in neurotic cases. In the complex conditions which mark inebriety, these various effects are still more pronounced.

It has been asserted that there has been a distinct antagonism between the palsy of alcohol and the stimulating action of the electric current. In some cases this is very evident, where the electric current was given for the purpose of breaking up the drink craze. In some cases this effect was very marked. In others it was the opposite, showing that the facts are not well known and the enthusiastic praise and bitter condemnation is the best evidence of this.

It is the experience of a large number of observers that the continued use of the alternating current is a very powerful tonic for all forms of local and general inflammatory conditions, following and associated with the use of alcohol.

There are many curious clinical facts which arise from the use of electricity in the treatment of inebriety that have not yet been formulated into general conclusions, and at present do not seem to have been studied with any degree of exactness.

Thus the nausea following the withdrawal of spirits is often completely overcome by the electric current. Alcohol is not tolerated if given immediately before or after the electric current is used. The effects are nausea and vomiting.

The headache and oppression preceding or following the use of spirits may be greatly increased or diminished by the electric current. In a periodic drinker the drink craze was preceded by gastralgia and fear of cancer of the stomach, and the electric current over this region broke up this impression and with it all desire for spirits.

In another instance a constant drinker suffered from extreme revulsion from the effects and odor of spirits after the use of the electric current. This lasted for some months. A static breeze in some instances was used to overcome the delirium with success. In others it greatly intensified it. An enthusiastic man attempted to treat acute intoxication by the galvanic current. His claims of diminishing the toxic period and shortening the period of restoration was not confirmed by other observers.

There is undoubtedly associated with the electric current a psychical influence, which charlatans frequently take advantage of. A number of persons are reported in which the influence and shock of an electrical current has overcome the intoxication, and produced an intense revulsion for spirits which continued for the rest of life.

One man asserts at great length that the toxæmic conditions which follow from the use of spirits intensify the passage of electric currents, and that the man in this condition is more susceptible, has lower vitality, and more quickly succumbs to the disturbing influence of the current.

There are many facts in the experience of reliable authorities that make it evident that the tonic and stimulant properties of the electric current are a very valuable remedy in all forms of inebriety, particularly when supplemented by other means and measures.

The psychic element of fear and expectancy concerning this agent must always be considered and made use

of, not only to neutralize the obsessions and idiosyncrasies, but to increase the faith and confidence of the patient. Undoubtedly it is a medical agency of great potentiality which will be understood in the future from further and more exact study.

CHAPTER XXVII.

MENTAL THERAPEUTICS AND SUGGESTIONS IN THE TREATMENT OF INEBRIETY.

Synopsis.—Suggestion a very powerful measure in treatment. Different theories of its permanency. Gold cure system of suggestion. A blundering effort to utilize forces. Common illustrations of suggestion in temperance meetings. Reasons why they are not permanent. All cases must be prepared for suggestion by removing toxins, and placing the person in favorable conditions. A study of each case will show how suggestion can be applied with advantage. Methods by which suggestion can be made effectual. Illustrations. Failures of other measures. Preparations and use of means encouraging the growth of suggestion. Church clinics and their methods, failures. How they could be made effectual. Summary and possibilities of this form of treatment.

Several writers have affirmed very positively that suggestion and hypnotic influences are most valuable in the cure of spirit and drug-takers; also that more cures follow from this measure than from any other.

It has been stated elsewhere that the inebriate is curable by apparently very unusual means, and that in all probability the cure depends on some change in the brain, and not on the last means used. The fact that recovery dates from the application of some peculiar and commonplace measures does not prove that it is the direct result of these means.

Cures following the pledge or conversion are very pronounced, and why they do not always occur when the same means are used is a mystery. Some literature giving records of cases cured by suggestion is very startling, but attempts to repeat these experiences are attended with so many failures as to discourage further efforts.

One writer asserts that seventy-five per cent. of all inebriates can be cured by hypnotism or suggestion.

The cure, he declares, will fail in at least sixty per cent, after five years, and that not more than four per cent of this number will be permanently restored. This statement is not based on very careful studies, and evidently is an opinion, which in a very general way outlines the facts that indicate what an indiscriminate application of such measures might possibly bring about.

There is no question whatever about the powerful influence of the mind over the body, and the possibility of overcoming diseased impulses, breaking up obsessions and checking toxins. In all efforts to overcome disease the element of hope and confidence on the part of the patient is a very essential remedial measure, and without it the results are not certain or permanent.

The gold cure craze, which has attracted so much attention in the past, was literally suggestion and so-called hypnotic influences made impressive by the use of drugs. When the patient was told emphatically that spirits were poisonous and injurious, the demonstration by the use of spirits containing nauseating drugs proved it.

Then by the use of narcotics in small quantities, at short intervals, the impression of health and perfect release from the drink craze was built up. A final test, giving spirits with apomorphia and explaining the phenomena afterwards as distinctly that of poisoning, and evidence that the patient could not use it in the future, so impressed itself upon the mind of the patient that he was for the time being cured.

Later, when he recovered to some degree, an effort to confirm the early impressions proved that they were not real, hence he relapsed. This great empiric wave in a most blundering stupid fashion brought out the fact that psychological therapeutics contain possibilities of cure beyond any conception.

The inebriate, with his disordered mentality and functional instability, is very susceptible to mental impressions, but their permanency depends on a great variety of conditions which must be controlled with scientific exactness.

The common illustration of gathering the drink degenerates from the street and urging them to sign the pledge and be helped by prayer and conversion, shows a degree of susceptibility and credulity which should be utilized along different lines.

The reform waves of pledge signing and temperance revivals, in which large numbers of persons acting on suggestion change the course of their life for the time, and make an attempt to live normally, all indicate the value of psychical therapeutics.

Evidently, impressions made at this time have little or no basis in mental vigor to sustain them. It is also clear that there must be a certain degree of normal vigor on which to build up suggestion and rouse latent impressions to overcome diseased impulses. The inebriate, coming under medical care, is always starved and poisoned, and nothing can be done for him until these conditions are in a measure removed.

We have outlined the possibility of this by hydro-pathic eliminative measures, together with electricity and other remedies found useful in a general restoration of both body and mind. In the meantime, a careful study will show the presence of some peculiar and special obsessions, such as the fear of death, remorse at his condition, the suffering he has caused his family and parents, or the failure of his ambition for position or wealth, and other states which can be called practically obsessions or impulses which seem to dominate and distress him.

If to this there is the suspicious egoism that he has no responsibility in this, but is simply the victim of con-

ditions imposed upon him, which he could at any time have changed, and that his effort to stop is more to gratify others than himself, a more pronounced state of degeneration is present.

These peculiarities or obsessions indicate the direction which suggestion must take, and the form of the mental therapeutics that is to be applied. At an opportune moment after the patient has recovered to a certain degree, and is in a moderately healthy state of mind and body, he should be given a special treatment and told that the object of this is to suggest to him some plans and methods that will increase his future strength and vigor.

If he has confidence in the physician he will enter into this with great heartiness. He is then placed in a luxurious chair in a cheerful room and encouraged to relax and open his mind to a confidential talk. Then in a monotonous quiet manner the physician will repeat the leading facts of his life, asking him to correct or restate them, being careful not to dwell on any particular theory which he may have formed.

The conversation going on in a quiet monotonous way produces a degree of receptivity in which the physician will suggest the destructive influences of alcohol and the danger of its future use. This may be repeated over and over, particularly having reference to the patient's secret fears and sorrows, indicating how far he can overcome these conditions and make them impossible in the future.

Somnolence will appear after a time, and the patient must be told to drowse or sleep, and during this quiescent period the same idea should be reiterated over and over again in clear, emphatic language. Then, if the patient continues quiet, tell him to sleep and that you will return in a few moments. The fact of sleeping is evi-

dence that the mind is influenced, and that the effect desired is accomplished in some degree.

A day or two later give another similar treatment, suggest the same line of thought, and encourage the patient to drowse or sleep. A very marked influence will be noted after a few treatments of this kind. The previous conceptions of the patient will apparently change, and a species of re-educating the mind and consciousness will grow with each effort.

Where the patient does not fall into a sleep after these suggestive talks, it is well to lay down the rules about certain unimportant matters concerning diet, methods of living and exaggerate their necessity, so that the mind may be diverted from reasoning on what was said. Where the patients are not actively receptive to these influences it is well to find occasion for a warm bath, a static breeze, with perfect relaxation before the treatment, which should be at night so that the patient can retire soon after.

In some instances it is wise to select a time of day in which the patient seems to be most vigorous and anxious to do everything that will assist towards his final cure. In one instance a young man received a letter from his mother in which she appealed to him to use every opportunity to make his recovery permanent; it was noticed that this was the most favorable time for hypnotic suggestion.

He was taken to his room and in a very short time, after listening to the monotonous iterations of the physician, fell asleep; then was given emphatic instructions about what he must do. He was allowed to sleep until he awakened naturally. Baths and soothing measures were given in anticipation of the weekly letter from his mother to make his condition more favorable for the

growth of powerful impressions. His recovery was permanent, and his life has been very exemplary for years.

In another instance an ambitious man who began to drink in college life, and whose drinking had been a continuous obstacle to his promotion and success, came under treatment in a condition of great despair. After a few weeks of vigorous treatment he recovered and reached a stage where he wished to get well to please his wife and not for himself.

He was given vigorous outdoor exercise, then a static breeze and warm bath and taken to a quiet room where suggestive treatment, particularly enforcing the idea that he should recover to save his wife from sorrow. This was usually followed by sleep and great satisfaction afterwards. The treatment was given every other day. Gradually the suggestions widened with the fact that he could not drink and that his future could be made brighter than ever by abstinence from drink. The results were very satisfactory, and his restoration was pronounced.

In another instance, in which a patient believed that his drinking was due to failures of his friends to appreciate his strength, various hypnotic treatments had been tried with failure. He had been a college athlete and had neglected to keep up his former exercise. On admission he was put in physical training, walked every day, took vigorous baths with electrical treatment. In a short time psychical suggestion was tried and found to be very effective. He fell asleep quickly and the suggestions made to him at this time produced a decided change in his delusions. Every other day he was given a suggestive treatment and was told that his delusions concerning alcohol must disappear, and that his egotistic opinion of his ability to control himself was wrong. His future depended entirely on his use of means. It was

noticed that he was conscious in a measure of what was said, but he affirmed that he had changed his mind and was now going to live differently. He recovered.

In each case the object was to secure perfect relaxation and a degree of vigor that would respond and would not in any way be interfered with by any physical condition. Constipation from indigestion was treated and overcome before suggestion was given, and every possible means used to secure the best vigor of the body, so that it would not interfere with the influence of the mind. In one instance a drinking man had become practically incapacitated for all work. Christian Science healers made very strenuous efforts to help him, but failed. It was noticed that they paid little regard to his present condition, but sought to overcome his obsession for drink by suggestion and appealing to his fears. The result was skepticism, doubt and despair.

Coming under treatment he was found to be very susceptible to the Turkish bath and fell asleep after reclining in the cooling-room. Sometimes this sleep lasted for hours. During this period suggestion was given to him of which he was not conscious afterwards, saying that he did not remember of anyone talking with him.

Later a special suggestive conversation was begun after the bath, and continued up to the time when he went to sleep. After a few treatments of this kind he announced most emphatically that he had lost all taste for spirits, and would not under any circumstances allow the idea to come into his mind. Evidently he outgrew his old condition, and after a few weeks' treatment went out cured.

Another instance brings out the fact in a more practical way. A business man, who drank every night to procure sleep, was advised to go to the Turkish bath in

the early part of the evening, then go to his home and be given a suggestive treatment while lying in bed. The physician who gave the treatment followed it with strychnine and atropia tonics and very minute directions concerning his living and work during the day. The bath at night was to be followed by a warm shower. The result was permanent recovery.

A physician who drank to great excess went to the home of a quack, where the same practical treatment was given, principally warm baths and massage, then suggestion and sleep. He recovered and was most enthusiastic over the means used, although ashamed of having been under the care of such a person.

A distinguished professor, who makes suggestion a large element of treatment, refuses to do anything for a patient who is using spirits, but urges that they become sober, take a bath and attain some degree of normal vigor before he will apply any suggestions.

In the various church clinics, where sleep is supposed to favor the reception and permanency of the impression, various drugs are used to produce conditions favorable for this state. This seems very doubtful practice, and open to serious objections.

A warm bath, an electrical breeze, or a lucodescant light up and down the spine would furnish far more favorable conditions for hypnosis. Partial or complete drug sleep can not in the nature of things be a condition where impressions from without can have any permanency. Patients poisoned by toxins, either from spirits or formed from conditions within, are in unfavorable conditions for mental treatment.

At one of the church clinics a gormand was very anxious to be directed how to overcome the depression and gloom which incapacitated him. The operator ad-

vised him to go to a sanatorium and take active treatment, and then come to him for suggestion. This resulted in recovery.

In an institution where the surroundings can be controlled, and where the patient's habits of living can be regulated, suggestive treatment can be made very practical, but it is always wise to be frank, and under no circumstances deceive the patient as to the purpose and object of the methods to be used.

If the patient possesses more than usual intelligence, explain to him the use of mental measures and how far they are dependent on physical conditions, and then insist on every means to prepare his mind and body for the reception of impressions that are given.

If somnolence follows, it should be encouraged, and often the subsidence of consciousness opens greater facilities for impressing the subconsciousness. Sometimes it is well to prepare the patient's mind by suggestions and statements in advance, calling attention to certain results, mental contagions, which follow directly, and then lead up to an effort to use this as distinct medicine.

It is found that relaxation, both physical and mental, are very largely essential in awakening the subconscious and giving it a special power to control the organism and its obsessions. In making impressions or suggesting lines of conduct, it is quite necessary to bear in mind the delusions or peculiar conceptions of the patient concerning his own condition. Anything that antagonizes these former impressions will excite rather than soothe.

Hence impressions must be along lines that direct the mind out into other and better conditions. After a few treatments a degree of confidence is established, then the physician can suggest lines of conduct that at first would not be favorably received. It is not necessary to have

the patient in a sleeping state, although this is much more favorable.

Efforts to produce sleep by colored lights passed over the forehead, pressing the eyelids down, and other measures are all practical in certain instances, and should be used according to the conditions of the patient and his susceptibility.

In this general summary the facts to be made prominent are these: Many inebriates cannot only be helped, but permanently cured, by psychical therapeutics; but they must be used along rational lines and in most favorable conditions. Every physician should be competent to understand and use these psychical laws, and make them contribute toward the restoration of the patient.

It is altogether likely that suggestion, meaning by this word, mental impressions of every kind, has a great deal to do in the growth of inebriety, and it is absolutely certain that the same forces, properly used, will be of immense help in the prevention and cure.

CHAPTER XXVIII.

HISTORY OF THE EMPIRICISM CONNECTED WITH INEBRIETY.

Synopsis.—Empiricism associated with every great truth. Early efforts to cure inebriety by secret remedies. Work at Binghamton Asylum. Cinchona bark cure. The first great specific came from publication of *The Journal of Inebriety*. Its accidental publicity. Methods of promoting it. The interest and excitement which followed. An expectancy in the public mind, and failures to give relief by other measures prepared the way for this means. Methods of promotion and efforts to keep the scheme before the public. Appearance of rivals. One of the most prominent and the methods used. Their activity and final failures. Physicians responsible, by indifference for the growth of these schemes. A second great rival, promoted as a stock company. Methods used. Promissory notes of poor patients and respectability of board of managers made a fortune for the promoters. Efforts to extend the work to Europe, and the failures. A suit in the U. S. Court, in which the early history of these means became permanent records. Drugs were common and well known. Contained nothing new. Certain number of persons benefited. On this the claims of the institutions were supported. Drug cures contained the drugs concealed. Physicians are often deceived. Hospitals of the country show an increasing number of persons who come for physical treatment. The chief promoters of these schemes were victims themselves, and many of them are dead from the very means which they claimed to have discovered as specific cures.

A study of the various means of treatment used in inebriety would be incomplete without reference to the empiric methods and so-called specific remedies which have attracted so much attention during the last few years.

Some details of these movements will be exceedingly interesting as historic facts, showing that every advance in science brings into prominence charlatans who seek to secure some personal advantage from these movements.

As early as 1850 there appeared advertisements for secret remedies for the cure of the drink craze. It was evident that some one had caught the idea of physical treatment by drugs, and customers were found.

During the war of the sixties the Binghamton institution appeared and drug treatment became a recognized

method of cure. The inebriety that followed the disbanding of the armies attracted a good deal of attention, and quack curers came into greater prominence, but none of them seemed prosperous.

In the early seventies a cinchona bark cure created a great deal of interest, and was urged by physicians as having a specific value. Extravagant claims were made for it, but when subjected to scientific scrutiny and test, were not confirmed.

Temperance work, both prayer and the pledge, were pressed in all directions as giving the largest hope for restoration. The unsatisfactory results which followed from them, together with the desultory efforts of physicians by special drugs or system of treatment, prepared the public and created an expectancy that some time a remedy would be found.

In the latter part of the seventies *The Journal of Inebriety* published a paper by a physician in Moscow, Russia, which claimed very unusual results, for the treatment of inebriety by the use of strychnine and atropia given by the needle.

This attracted the attention of an advertising physician, who claimed to have discovered a specific cure for epilepsy, and whose positive assertions were startling. A correspondence followed between the editor of the *Journal of Inebriety* and the physician, in which various suggestions were offered, and possible effects from certain combinations of new remedies were proposed. Later this physician announced the discovery of a specific with an attractive name for the cure of inebriety and epilepsy and other diseases.

After a time all other claims were dropped, and it was announced that a specific for inebriety had been discovered. For a time his assertions attracted no attention,

and his claims of cures by secret drugs seemed in no way different from other empirics.

Then suddenly the pages of one of the leading newspapers of the country were filled with the statements of two persons who had been treated by this method and fully recovered. Their experience and opinions were detailed at length with more or less shrewdness.

This immediately attracted attention and a number of inebriates made a test of the treatment, and they, too, announced most enthusiastically the reality of the claims, and the marvelous discovery of a new drug that would destroy the drink craze at once.

The news spread far and near, bringing with it a number of persons in all stages of the drink craze, who after four weeks' treatment went out, proclaiming the reality of the cure, and most enthusiastically urging others to take the treatment.

The statement was published far and near that a new discovery had been made, the evidence of which was the statements of so-called cured patients. The public had been prepared for this in many ways and a great number of persons sought this new treatment.

The managers, while greatly surprised at the sudden prominence and rush of patients, realized at once the necessity of taking the golden tide at its flood, and keeping the commercial side prominent. Large fees were charged and patients were encouraged and paid to advertise the work, and prove its possibilities in every direction.

Rights were sold to use the drug in certain sections of the country, and open other institutions, for its administration. The original institution was to supply the drugs used and keep up the mystery, and no one was to know what the drugs used were.

Appealing to both the philanthropic and commercial instincts of the country and particularly to the great army of inebriates and reformers, they succeeded in opening institutions in almost every state of the union. Physicians who were inebriates took the treatment and entered with great eagerness into the work of curing others, accepting the statements of the promoters, regardless of ethical principles or the want of exact knowledge.

A wave of the most extravagant credulous expectation, exploited by duplicity and cunning swept over the country. The claims of a new discovery and new remedy, and the evidence of it in the number of cured cases, were pressed to the fullest extent, and all efforts to secure accurate information concerning the means and the drugs used, were suppressed.

Rivals appeared following the same lines, having new and more perfect remedies, all making the same claims, only differing in name and ways of promotion. One of these rivals deserves a special mention for the shrewdness and audacity displayed.

Instead of having a central home and requiring patients to come for treatment, they went out into the streets and police courts, and gathered the most incurable cases, giving them treatment in hired houses, close by their homes. When such persons had lost all desire for spirits and were buoyed up with the faith that they were permanently cured, they became agents and promoters to bring in other patients, particularly those who could pay a fee for treatment.

These reformed men were given a cash commission, and visited every section, wherever patients were found, planning and studying how they could secure money enough to take the treatment, and posing as examples of the great power of the drug.

In a short time a large number of patients were under treatment and the enthusiasm had reached a high level. Then the managers would organize a company to carry on the work, hire a prominent house and place it in charge of some local physicians, they furnishing the drugs instructing the managers how to conduct the work, and, giving them the strongest assurances of its permanence.

Sometimes they organized companies and sold their stock. At other times they sold out their rights to carry on the treatment. In this way many institutions were organized and philanthropists and business men were greatly interested. At one time it was claimed that there were over 300 homes in different parts of the country, giving secret drug treatment, particularly representing the original promoter and the great rival. These local institutions, as a rule, left to the business ability and judgment of reformed patients, failed, and as time went on relapses increased, and the number of patients fell off. Then came bankruptcy and disappointment.

The managers adopted disreputable methods to keep the work going, and this hurried on their final failure. Physicians who joined these various efforts both for personal and pecuniary motives lost not only their reputation but their money, and philanthropists and investors likewise suffered. Tremendous efforts to keep the work going only brought into prominence the false claims and pretensions.

A second great rival should be noted for its greater shrewdness and dishonesty. Claims were made, particularly among the wealthier classes of persons, that a new combination of drugs had been discovered which were far more certain than anything ever known before, and that its application had proven this beyond question.

Some very shrewd promoters saw an opportunity for wealth in this field, and a company was organized with an

enormous capital, and a board of managers, trustees and officers of the highest respectability and commercial standing. The idea was pressed that at last a new reform work had come which, while curative and beneficial to the poor, who could be treated free, it would be made profitable by charging liberal sums to those able to pay.

It was the same secret drug given by the needle, accompanied with the most extravagant assertions and expectations, uttered in church and in public press, and accepted as the last final discovery in the world of science.

Promoters were sent to the poorer sections of the large cities and drinking men of every grade were given four weeks' treatment, and in return signed promissory notes. These notes were placed among the assets of the company, and used to show the enormous profits and promote the sale of stocks.

Vast sums of money represented by these notes were accumulated, while the actual income in cash was not sufficient to pay current expenses. This the promoters concealed and stock was sold to reformed patients and the families of persons in which drinking men existed.

Business men and speculators interested in the problem all took stock. The eminent men on the board of directors and the exceeding respectability and plausibility of the whole scheme resulted in the sale of over a million dollars' worth of stock. A large part of this was cash. Then suddenly the promoters realized on the stock, sold out and disappeared, and the board of directors who had given their names and influence to the promotion of this scheme withdrew in disgust, leaving only a few persons who had invested all their capital in the company, to continue the work, and if possible get some returns from the wreck.

This scheme is still extant and its managers are selling the prescriptions of the company to physicians with rights to treat persons in different sections. As in all the other specifics the remedies used were secret, and the managers depended largely upon enthusiasm, and assertions, and when the tide of success began to ebb, they deserted, or used such extraordinary efforts to avert the coming storm, that in reality hastened it.

Another fatal element was the management by reformed or cured patients. They lacked consistency and persistency, and while showing some shrewdness, were reckless and assuming and depended upon the element of secrecy and appeals to the credulity.

Of all the various schemes for the specific cure of in-briety, this was the most disastrous financially to a large number of persons, and reflected very seriously on the credulity of a number of respectable men.

The original specific curers, in their desperation to hold their own interests, went into court to force a rival to pay damages for infringing on their name and methods. Two long suits followed in the U. S. Courts in which the various remedies, means of treatment and methods of influencing the public were brought out in great detail.

The result was, the case was dismissed on the ground that both plaintiff and defendant were unclean in the eyes of the law and using disreputable means to promote their own interests. The records of this suit are a most interesting psychological study, both of the men who promoted them, and the remedies used, together with the various means and methods to keep up the interests of the public and attract the attention of patients.

The specific drugs which they claimed to have discovered have been repeatedly analyzed and found to be combinations of well known remedies, containing nothing new or unknown to the profession, although the promoters

still insist that they have discovered new drugs and new effects. Many of these cures are still advertised and thoughtless physicians, without knowledge of the subject, have been more or less responsible by sending patients to them, or permitting them to go, and thus keeping the work alive. Many relapsed patients still go to these places. The public, without any particular information, give a sort of a quasi-recognition of their existence.

Out of these empiric efforts there has grown a wide spread sentiment that inebriety can be cured by physical means and methods. This is based not only on the result of the empiric means used, but other evidence which is accumulating in every direction.

All the large hospitals and various sanatoriums and homes for nervous people receive such patients, and provide special wards for them, and relapsed cases go from place to place with confidence and promise of restoration.

Many of the opium cures which have come up within the last twenty years are merely different forms of opium concealed in other drugs and offered as specifics. They have never retained any prominence, although from the advertisements, they are still patronized, but there is no general endorsement of them. Repeated exposures of their disreputable methods have very little influence, except to advertise them.

Lists of opium takers are compiled and sold from one institution to the other, and the army of repeaters going from one place to another are very numerous.

Out of all these quack measures and means a few institutions have emerged claiming to do legitimate work on ethical principles, using rational means and measures. They are, as a rule, managed by a different class of men from the early promoters.

On the continent, the empiric alcohol and drug curers were forced by law to register the exact drugs used. This was to be open and free for the observation of any one. As a result they were not prosperous, although a number of drugs are advertised, and some sent to this country, with very pretentious claims.

The quacks in England had no restrictions, but the conservatism of the country made it impossible to get any prominent recognition. There are at least a dozen very shrewdly named combinations of drugs, advertised to cure the drink craze at home, and without any publicity. They have repeatedly been analyzed and exposed, but this does not seem to make any impression on their appearance in the public press. The empiric treatment of inebriety is rapidly passing away, and the public have lost confidence in anything that depends on secrecy and pretention.

Yet the continued finding of new drugs and continued pretensions of new discoveries show that the element of credulity has not died out. It is a curious fact that many of the great promoters of these different schemes, particularly those who posed so prominently before the public, died from the disease for which they claimed to have found a cure.

Others disappeared and their loud pretentious claims are matters of history. The future historian of the great superstitions and empiric waves of the century will include the alcohol specifics, and the credulity and excitement which followed from it, as among the great events of the closing years of the century.

CHAPTER XXIX.

CRIMINAL INEBRIATES AND MEDICO-LEGAL SUPERSTITIONS.

Synopsis.—Confusions of medical testimony concerning the responsibility of inebriates. Constant conflicts between doctors and lawyers. A summary of six different cases in which these questions were settled on false theories and assumptions. These examples represent a very large number of persons who are continually before the courts for crime committed while drinking. The assumptions of the court and the strain to make the physicians recognize these assumptions. The evident defects of the brain from a spasmodic or continuous use of spirits. Crime the natural result of the continuous or paroxysmal use of spirits, resembling epileptoid paroxysms. No inebriate can be regarded as sane. No possibility of forming lines between sanity and insanity. A matter of facts, not theories. Physicians should have but one purpose in the court room, of presenting facts no matter what the conclusions may be. He should act judicially and never be forced into explanation, where only theories can be used as a guide. Some of the delusions in a court room when questions of responsibility are raised. General considerations and summary of what is required.

The medico-legal relations of inebriates accused of crime are most confusing. Theories both ancient and modern are reiterated with dogmatic confidence and both judge and juries are hopelessly involved and have most confused ideas of inebriety and its relations to responsibility and crime.

As an illustration of the conflicts between facts and theories, records of six different homicides are selected, where the questions of responsibility and the conditions present were the subjects of some controversy. These cases are in no way different from others which are constantly coming under legal recognition.

In each of these examples the prisoner was convicted and suffered the extreme penalty of the law. In each there was a pronounced history of using spirits to excess before and also at the time the crime is committed. The

defense in each case was insanity from inebriety and alcoholism, with incapacity to judge of the nature and consequence of the acts.

The prosecution urged that the use of alcohol in no way lessened the responsibility of the prisoner, or diminished the average mental capacity to realize the nature and consequence of the act. They also urged that the use of alcohol must be considered as evidence of some motive and not of impaired sanity.

The judges clearly sustained the verdicts of the jury and congratulated them on the equity and justice of their findings. One judge, in his sentence, predicted that when inebriates realized the majesty of the law which would permit no excuse, but hold them accountable, such crime would be lessened.

Other judges were harsh or pathetic in their sentences, all believing that the prisoner was accountable, and could have controlled himself if he wished. The medical testimony to the prosecution was a strange mixture of theories and delusions concerning inebriety and the acts of persons under its influence.

Nearly all the witnesses believed that a man, unless intoxicated was accountable, could reason wisely and had the power of control, and the legal conceptions of insanity and inebriety were regarded as exact proofs which science could and dare not deny, but must confirm.

The prosecution made very emphatic the theory that intoxication under no circumstances could be an excuse for, or urged in defense of, crime, and the medical witnesses of the prosecution seemed to bring their facts down to fit these conclusions. A grouping of some of the main facts of each case will bring out more clearly the errors and mistakes.

In the first case, as in all others, the physicians were made to acknowledge that they knew the teaching of the

law, that intoxication was no excuse for crime. Starting from this point the great effort seemed to be to keep down all testimony that conflicted with this dictum.

The facts in the prisoner's history were that he came from a degenerate family in which insanity, inebriety, pauperism and idiocy had appeared in many members. He had been an inebriate tramp, had suffered from delirium tremens, sun stroke and typhoid fever.

In occupation he was a gambler, a hotel manager and a hack driver, and lived very irregularly. He drank daily, but seldom to intoxication. One day after an alcoholic excess he threatened to kill a man. The next day while intoxicated he renewed that threat, and the third day he sought and killed the man.

While drinking to excess continuously, he was seldom stupid. At the trial two expert physicians swore that he had full power of realizing the nature and consequence of his acts. As he was driving a hack at the time, and acted rationally, he could not have been insane or unconscious of what he was doing. They called alcohol a stimulant and doubted its paralyzing action, except in excessive doses. In defense the prisoner was called an alcoholic dement.

In the second case the prisoner killed his brother. He claimed to have no recollection of the act, or what had happened for a day or so before and only recovered his memory after being in jail for forty-eight hours. He was a periodic inebriate and had been drinking every night for two weeks.

During this time he begged money and when refused declared he would have it if he had to kill some one. The next day his brother was found murdered, and he was in possession of money. He had served in the army in 1864 and had drunk from that time, at intervals, living a very

irregular life. His father was an inebriate and his mother died in an insane asylum.

On the trial, several physicians swore that he was of sound mind and fully capable of knowing what he did, even when under the influence of spirits. On the other side, the medical testimony showed that he was insane and delusional, and could not have been conscious of the consequence of his act.

In the third case, a man of more than usual ability, after an injury from a railway accident, became a low inebriate, worked as a barkeeper, pawnbroker, drank continuously, and was never delirious or stupid.

Finally he killed a low woman companion and ran away. Minute evidence of his unchanged appearance, both before and after the act, was presented, and the same clash of medical testimony appeared. One declared him sane and the other insane.

Case four was of a low drinking Italian laborer who drank every night to a stupor, and worked during the day time with apparent consciousness of surroundings. He killed the barkeeper who refused to sell him more spirits. The same testimony was offered by medical witnesses for the prosecution and defense.

The fifth case was of an inebriate who murdered his wife. He had been a periodic inebriate for many years and lately had had delusions of his wife's infidelity, that were never manifest, except when the man was drinking. In the free intervals there was apparent sanity, but while drinking he was suspicious, violent and intensely irritable. The same conflicting testimony declared him sane and insane.

The sixth case was a farmer, who drank cider brandy continuously for years, and in a rage at his brother-in-law, who was trying to help him, shot him. The history showed a marked decline of both mind and body for a

long time before the homicide, and on the trial he was apathetic and stupid.

In three of these cases the medical evidence offered showed the irresponsibility of the criminals who were more or less exhausted, and yet the impression was created that it was simply paid testimony and did not represent the facts.

One medical witness declared that alcohol was always a stimulant and could not be called poisonous except in extremely large doses. The old theory of the right and wrong test, and the capacity to control, with free will as to the nature of the acts, was pressed to the fullest extent.

The assumption of capacity and responsibility was based on the fact that the act was not performed in a stupid wildly intoxicated condition, hence the person knew what he was about.

The idea was prominent in many of the cases that a defense of insanity must depend on the delirium, idiocy or evident dementia of the person, and unless these symptoms are very pronounced, there could be no claim of irresponsibility.

The idea was pressed, although sharply denied by some of the medical men, that a number of thoroughly insane men exhibit a degree of mental acuteness and vigor, fully equal to that of most sane persons. This idea was treated as fiction.

In each one of these cases the evidence of irresponsibility was founded on a distinct chain of facts that could have no other interpretation. Thus in the first case a marked heredity and distinct psychosis, intensified by a sun-stroke and the continuous poisoning of alcohol was unmistakable.

In the second case a neurotic inheritance coupled with explosive drink paroxysms and consequent failures to

reason accurately concerning the nature and conduct of his acts was undoubtedly present.

In case three a distinct injury to the brain was followed by a pronounced change of symptoms and character, and the sequel showed a diseased brain.

The other three cases had equally pronounced symptoms of disease, only they were not studied. In all these cases there was an automatic activity that was mistaken for sanity. The principle fact of excessive use of alcohol both as a cause and symptom of previous conditions, escaped the attention and was not considered.

It is a fair assumption that these six cases represent a very large class of persons that are continually coming before the courts, and are judged by theories and legal opinions that have no support in modern facts. To assume the sanity of any person who uses spirits to excess at intervals or continuously is not supported by the facts.

The continued depression and temporary exaltation of the heart and functional activities must of necessity impair not only the power of control, but the capacity to reason from the impaired impression of the senses.

To assume that toxæmias from alcohol are a mere temporary derangement of the same class as indigestion, exhaustion from muscular work, is untrue and dangerously misleading.

The result of accurate experiments shows that very small quantities of spirits have a measurable paralyzing action on both the senses and functional activities of the body. It is obviously impossible to continuously depress all the vital functions of the mental and physical organism and retain health.

Beyond this there is a wide realm of favorable soils and conditions which intensify the depressing action of alcohol, and produce states of exhaustion which call for relief for which alcohol is the most grateful remedy.

It has been shown elsewhere that in at least one-third of all inebriates, the use of alcohol is a symptom of some brain defect, either congenital or acquired, or some latent tendency to exhaustion, which is manifest in the craze for spirits.

Not only is it a symptom, but an acute exciting cause of pronounced degenerations and defects. It is very evident that a man with defective heredity, or a distinct neurosis, who begins to drink, has started on a career of pronounced degeneration.

In addition to this, the well known fact, that in all instances every small dose of spirits has a distinct measurable effect on both the senses and reasoning, is almost conclusive of the unsoundness of persons in this condition.

The continuous drinker is, of course, much more impaired than one who uses spirits at intervals with periods of rest between them. The intoxicated man is clearly insane. While this may apparently be transient there can be no question of its profound impairment of the power of sane thought and act.

Rational acts and conduct must be automatic, particularly along accustomed lines. Outside of that the capacity of the brain to appreciate and judge of the conditions is weakened.

The clinical facts do not sustain the assumption that the effects from continuous or transient use of alcohol are temporary and easily overcome. The question of how far the person was unable to understand the nature and consciousness of his acts, or if he did understand them had the power of control, must be decided according to each individual case. The recognition that alcohol paralyzes the higher functions of the brain, particularly consciousness and the recognition of right and wrong would seem

to make it one of the most positive agents known to produce conditions of insanity.

The depression of the senses is also another very significant fact, suggesting delusions and hallucinations of all descriptions. Amnesia is another most significant condition. Thus physiologically the evidence would seem to be very pronounced that all inebriates are impaired and mentally unable to sanely comprehend the conditions of surroundings and their relation to them.

Crime would be a most natural result, and this is found to be the case. The more prominent the inebriety and the longer its duration, the greater the incompetence of the brain to act rationally and soundly. The effort to find a dividing line where sanity and insanity joins, or where persons in this condition realize their acts, and have the power of control, is an absolute impossibility.

All crime committed by inebriates and persons under the influence of spirits is the result of brain defects, brain unsoundness and weakness. Delusions, illusions and hallucinations with morbid impulses gathering and breaking like storms in the sky are the common conditions, inevitable from this soil.

The fact that all persons who drink do not commit crime is largely a matter of accident with very few exceptions. Such persons have most favorable conditions and soils for the growth of criminal acts. The inebriate who suddenly is exposed to temptation, falls with little or no resisting power.

Thus a moderate drinker, whose conduct as a book-keeper in a large bank was beyond all question, when promoted to a cashier and exposed to temptation, acted most insanely and became a defaulter. The conditions were the same in both, only different kinds of temptation.

The adjuster of a large insurance company became involved in criminal acts and bitter controversy. He was a

moderate drinker and an inebriate, hence his brain was impaired. A total abstainer, taking his place, adjusted the claims without the slightest friction.

In court no claim of insanity would have been allowed, for the acts of this adjuster, and yet he was obviously unsound. The man who, under the influence of spirits, talks of homicidal acts, only needs favorable circumstances to execute them. The same man who acts in a most unusual unreasonable manner against his own interests is on the verge of doing some of the most insane things without consciousness of them.

In the disputed cases that come before the court a careful study should be made of the explosive epileptoid character of his conduct. There is always the possibility of masked epilepsy or insane conduct as explosions of nerve force.

A careful study both before and after the act that is questioned will indicate how far the brain is impaired and unconscious at the time. The subsidence of the acute symptoms and the change of the person's manner and conduct are always to be regarded with critical interest and not to be considered as evidence of perfect sanity.

The intervals between the epileptoid paroxysms may be automatic sanity and reasoning. The same is true of the inebriate. His mental impairment is very evident from the sudden change of conditions and strain of unusual circumstances and surroundings, and exhaustive study of the criminal in the prison is very often misleading.

The fact that no evidence of unsoundness is present gives no indication of mental soundness under other circumstances and conditions. It is a legal superstition to overlook the conditions which lead up to the crime, and to regard the thought and conduct of the criminal, long after the execution of the act as evidence of his previous state.

The physician who is called to give evidence in the case of a criminal inebriate, has only two facts to determine. One, that of the condition of the prisoner previous to the crime, particularly his hereditary history and his use of alcohol; the other, the character and nature of the crime.

Opinions and theories as to the present condition of the person are insignificant and should be regarded as of minor importance. In the cases mentioned the physicians called to give testimony in the defense of the prisoner were asked to explain the wide difference between his present condition and the alleged insanity at the commission of the crime.

They failed to give sufficient prominence to the drink history and to show the impossibility of mental soundness after the use of alcohol. The delusion that insanity could come on like a fit of sickness without any special predisposing exciting causes and pass off leaving the patient sane and responsible again was made the stumbling-block in many instances.

The real fact that insanity and inebriety were diseases with beginnings, development and termination, following distinct ranges of causes, and uniform lines of growth was ignored. In place of this inebriety was regarded as a transient moral weakness, always under control, and insanity only apparent by pronounced symptoms of mania and delusions.

It is farcical for a medical man on a witness stand to be drawn into an explanation of metaphysical theories of inebriety and questions of responsibility. He should always refuse to give an opinion on presumptuous cases which involve a mixture of half facts based on moral and legal theories outside of all clear tangible evidence.

He should refuse to give any explanation of motives, or determine the capacity of control of any person under

the influence of alcohol, or on the commission of certain distinct acts. He should testify plainly of the incompetency of all persons poisoned by spirits to act sanely and wisely under given conditions.

He should never be drawn into details, but be allowed to give probable facts and the general conclusions from such facts. The central questions should be: Was the prisoner an inebriate in the general sense of that word? What was the history of his drinking before and at the time of the commission of the act? What was the nature of the act and the conditions which lead up to its perpetration? What conclusions or general facts did they suggest?

If these facts sustain the natural history of continuous alcoholic degeneration and defective reasoning with sense perversions they must be regarded as supporting the probability of disease of the brain and the unaccountability of the act.

There can be no possible boundary lines where sanity and insanity join, or where responsibility and irresponsibility unite. If the history shows that toxæmic poisoning and neurosis and psychosis are associated, the physician must reason on general principles and not on possible exceptions. The prisoner cannot be normal and sane with a history of continuous unsoundness and perversion long before the act was committed. Every year the facts are becoming more and more prominent that crime by persons who use spirits to excess are insanities in the broadest sense of that word, and that all legal treatment founded on theories before modern science had established the physical basis for crime is unjust.

Physicians and expert witnesses make a serious mistake in attempting to harmonize facts and theories and give exact interpretation of motives and conduct according to historic conceptions of insanity and inebriety. It is a

legal fiction and delusion to suppose that crimes committed while under the influence of alcohol are voluntary acts of a conscious brain.

It is a delusion to interpret acts that indicate premeditation, particularly in inebriates, as evidence of the sanity and consciousness of their nature. It is a delusion to consider inebriety a mere transient condition in which the victim chooses to poison himself for years and at all times has the power of restraint, and is always sane and accountable.

It is a delusion to consider alcohol as a stimulant when all scientific study contradicts this. It is a delusion to suppose that the man who is not wildly stupid or intoxicated from the use of spirits is able to control himself and reason accurately concerning his surroundings.

It is a sad delusion of the law when it insists on fixing boundary lines of responsibility and irresponsibility, and brings medical men into this penumbra-region of sanity and insanity to draw lines and indicate where human justice should punish and where it should remit crime.

The medical man on the witness stand should be the same as at the bed-side. The questions are those of facts, not of the theories, but of present conditions and their meaning.

The frequent criticisms of lawyers of the unreliability of expert testimony grows out of the foolish efforts of physicians to harmonize facts and theories and point out in detail conclusions which could only be determined from a very long and exhaustive study.

The physician in the court room should be a scientific teacher with no other thought than the facts and their sequences, irrespective of all antagonism to theories.

CHAPTER XXX.

FORMS OF IRRESPONSIBILITY, ALCOHOLIC AMNESIA, CLAIMS OF PRISONERS, ETC.

Synopsis.— Statements of no memory in inebriates likely to be true. Amnesia more or less common in inebriates. Often the lapses of memory can be verified. Very commonly seen in alcoholism, inebriety and epilepsy. Often traced to epilepsy, traumata and shocks. Persons suffering from this condition act and talk sanely, seldom giving evidence of no memory. They act automatically. The condition is one of central brain paralysis. If the patient has been insane in the past, and is degenerate and suffering from neurotic disease this condition may be expected. Some examples given. One of kleptomania. Third of homicide. The fourth of forging. These examples were verified by ample testimony. Examples of cases where the claim of no memory could not be verified. Several classes of inebriates evidently suffer from this form of palsy. One class marked by degeneration, heredity, psychosis. A second class where the crime is explosive and maniacal. A third class where the crime is sudden and precipitous. This resembles masked epilepsy. Some practical questions to be considered. The claims of no recollection should be the subject of careful study to verify or disprove. The importance of the subject. The danger of such persons. A summary of the facts to be considered in a study of these cases.

The frequent statements of prisoners in court, that they do not have any recollection of the acts or crime they are accused of, is found from exact study to be both a pathological and physiological fact. While the evidence may be uncertain in many instances, it is unmistakable in others, that crime is committed without a conscious knowledge, or memory of the acts and conduct at the time.

It is a well recognized fact that in certain states of the brain that are not understood, memory is palsied, and the mind fails to register the events for certain distinct periods. Like the somnambulist, a person may seem to realize his surroundings and show a certain consciousness in his acts and later be unable to recall anything which has happened.

These lapses of memory occur in many disordered states of the body and brain, but are usually of short duration, and seldom attract much attention. Often persons are unable to recall what they did at such a time, but long afterwards, the events are recalled very distinctly.

These memory blanks or amnesias have been noted more commonly in cases of epilepsy, inebriety and alcoholism. They evidently occur in many other conditions, and are sometimes traceable to poisons, traumata and shocks. In inebriety, they are always associated with the moderate or excessive use of spirits.

Such persons go about, acting and talking sanely, giving little or no evidence of brain disturbance, other than that of mild stupor or excessive activity, and apparently conscious of events and their surroundings. Later they awake and deny all recollection of acts or events for a certain period in the past.

This period to them dates from a certain point and ends hours or days after, the interval being a total blank like that of unconscious sleep. In the meantime automatic brain activities go on as usual. The paralyzing action of alcohol evidently centers on some brain areas, and later passes away. In the meantime registration of events is suppressed.

The claims of a criminal to have no memory or recollection of acts that he is accused of, should suggest the excessive use of spirits or some form of epilepsy or spasm of the blood vessels of the brain, which may be inferred from a variety of symptoms.

States of masked epilepsy are to be sought for in a study of the causes. If a history of moderate or excessive use of spirits can be made out, it is a reasonable inference that the statement of the person may have some basis in facts.

If the person has been insane, in the past, and has recovered; or has been injured by sun or heat stroke; or has been eccentric in conduct and thought, and is a neurotic; amnesias are very likely to occur.

In determining the accuracy of the statement of the person that he has no recollection of his acts, a very careful history of his mental and physical condition is essential, and in most cases corroborative or disproving facts can be brought out.

A clinical history of some cases will give a very clear view of these amnesic states. The first example was that of a man who was repeatedly arrested for horse theft. He always claimed to be unconscious and have no memory of the act.

The defense was regarded with ridicule by court and jury, and more severe sentences were imposed after each act, until finally he died in prison. The evidence brought out in different trials in defense was this:

His father was feeble-minded and died of consumption in early life. His mother was insane and died in an asylum. His early life was one of hardships with limited education and great irregularities of living. At sixteen he entered the army, suffered from exposure, sunstroke and fevers and began to use spirits.

At twenty he was employed as a hack driver and ten years later became owner of a livery stable. He drank steadily, yet attended to business, acting sanely, and apparently conscious of all his acts, but often complained that he could not recollect what he had done.

When about thirty-four years of age, his drinking increased, and in a state of semi-stupor he would bring back strange horses to his stables and claim he had bought them. The next day he would claim no recollection, and show considerable anxiety to find the owner of the horses.

Later the owner would appear and the horses would be given up, with various explanations.

It appeared that after a certain time of excessive drinking the sight of a good horse hitched up at the road side, or apparently without an owner, created an intense desire to possess and drive it. If driving his own horse, he would stop and leave it in some secure place, then go and take the new horse, and after a short drive take it to his livery stable, then go and get his own horse, and explain to the stable men that he had bought the new one.

He would fall asleep and awaken without any recollection of where he had been and what he had done. On several occasions he displayed cunning and shrewd reasoning in not taking the horses when the owners or drivers were in sight. When once in possession of the horse he displayed equal cunning in going about the back streets, and concealing his identity, and bringing the horse to the stable in the most secretive way.

Should the owner appear and demand his property he would give it up in a confused, abstracted way. No scolding or severe language made any impression on his mind. Often if the horse seemed weary and worn, he would take it to the nearest stable with strict orders that it should have special care.

On one occasion he joined in a search for a stolen horse, and found it in a stable where he had placed it many days before. Of this he had no recollection. In another instance he sold a horse which he had taken, but would not take any money, making a condition that the buyer should return the horse if he did not like it.

His horse stealing was all of this general character. There was no particular motive, and sometimes no effort at concealment, and on recovering from his alcoholic excess, he showed great interest and anxiety in having the

property restored, and expressed regrets and payed very freely for all losses.

His assertion of amnesia and unconsciousness of his acts was sustained by a great variety of evidence, but his automatic mental activity and cunning was made the standard of his mental condition. This was a marked case of amnesia and kleptomania which was not recognized by the court.

The next example was that of B———, who was executed for the murder of his wife. He asserted positively that he had no recollection or consciousness of the act, or of any event before or after. The evidence indicated that he was a periodic inebriate of ten years' duration, dating from a sun-stroke. His drink periods would last from one to two weeks, during which time he drank large quantities of whiskey daily, was intensely excitable, active and seldom stupid. He seemed sane and conscious of his acts and surroundings, but was intensely suspicious and exacting and irritable with all his associates. He would then go to sleep, awaken in a few hours, and have no recollection of what had happened during this drink period.

When sober he was kind, generous and confiding and seldom angry or irritable. While drinking his intellect seemed more acute and sensitive. His business was conducted with skill and great attention to detail. The only peculiarity was, he would make no promises and sign no papers, and refused to settle difficult questions of business.

When sober, he was prompt and exact in carrying out all his promises. His associates were very careful to put down every item of business and obligation of the firm in writing, for the reason that when he became sober, he would deny and doubt the transactions.

On several occasions destructive manias appeared, in which he showed violence without cause, and later had no

memory of it and was very penitent and sought in every way to repair the injury.

Finally he struck his wife with a chair and killed her, and awoke next day in jail. He disclaimed all knowledge of the crime, was anxious to die, plead guilty and welcomed his execution. There could be no question about the amnesia and the loss of memory, accompanied by maniacal and homicidal tendencies, and yet the defense of irresponsibility made no impression in the court.

The third example was that of a man of wealth and character, who forged a large note, and went to a distant city. He was arrested, tried and sentenced to state's prison. The defense was irresponsibility, amnesia and unconsciousness of the crime, by reason of excessive use of spirits. Evidence showed that he had drunk to excess at and before the crime, and yet his apparent rational conduct and cunning in concealing his identity were regarded as sanity.

Both his parents were neurotics. He began to drink in early years and was a moderate drinker for a long time. Then he drank to excess at short intervals. He complained of loss of memory after drinking heavily, and doubted transactions that he had made while in this state. Frequently he would make foolish purchases, discharge valuable workmen and later take them back without being able to explain the reason for his acts. His mental condition at this time was reserved and one of acute consciousness of his acts, and later he claimed that he had no recollection of what he did. He forged many notes for small amounts, and after denying that he had done so, settled with great difficulty.

Finally he forged a large amount, drew the money and invested it at once. When arrested he made a most childish defense in foolish conflicting statements. This was another case of alcoholic amnesia in which the his-

tory of the prisoner's conduct, and his assertions of no memory were verified by the facts and circumstances of the crime.

The following case illustrates the difficulty of confirming the prisoner's statement of amnesia and unconsciousness of acts. An inebriate killed a man in a fight. He was sentenced for life. His defense was, no memory or recollection of the act.

When not drinking he was a very ordinary frank man, acted with caution and reason, and showed good judgment as to the consequence of his conduct. He was a periodic drinker and drank in so-called moderation for two or three months, then would stop.

During this drink period he showed great sensitiveness about his condition and tried to conceal it and appear sober. If anything happened he would display great cunning in covering it up. When delirious and under the influence of spirits he would grow sober at once, from fear of exposure and publicity. He seemed to have the power of control to act sanely on occasion and with motives.

The crime was an accident, and at once he showed great judgment in concealment and efforts to make it appear that he was not guilty. When arrested he claimed unconsciousness of the act, but his previous conduct did not reveal any facts that would indicate this condition.

On the contrary, he seemed to be acutely conscious, and yet it is possible that he was unconscious. The exalted delirium may have been followed by amnesia, but at the time he acted with the most highly sensitive consciousness of what he was doing.

In another case a man shot his partner in business while both were intoxicated. He displayed unusual sanity and cunning in concealing the crime and having the body sent away. He made the same claim in defense. In a study

of his previous history there were no incidents that indicated any times of marked loss of memory. In his business relations, even while intoxicated, he was always able to judge of his conduct and appeared as if more than usually conscious of his acts and consequences. In all probability this defense was fictitious and without support.

Of these cases where a defense of no memory of the act is claimed, there are certain groups of common physical conditions of degeneration that can be outlined with more or less distinctness. Probably the largest number of inebriates who claim loss of memory in defense of their acts are chronic psychosis cases in which alcohol is both a symptom and a very active cause.

The history shows excessive use of spirits for a long period, either continuously or in paroxysms. This, with bad training in early life, bad surroundings and bad nutrition would, of necessity, result in great mental impairment and liability to many and diverse brain defects.

If to this there is added a history of bad heredity, the probability is much greater that their claims are correct. Such persons have always impaired consciousness and defective realization of their acts and conduct. They usually are governed by the lowest and most transient impulses, and act automatically in the ordinary relations of life.

Crimes of all kinds are generally accidents, depending on the surroundings and conditions, and not on premeditation or plan. They are incapable of reasoning sanely, or of realizing the results of their conduct, and the crime shows this, particularly in the marked indifference afterwards.

Crimes of such persons are usually along lines of previous conduct and thought, and seldom in a sphere of mental or physical activity unusual or outside of their every-day surroundings.

The claim of amnesia is very likely to be real, even although it cannot be sustained by collateral evidence. Mania is very rarely present. Concealed delusions and morbid impulses of a melancholic type are common. The mind resembles the body in exhaustion and feebleness, and acts along lines of least resistance.

A second group of persons accused of crime who claim to have no recollection of the acts, are those in whom the crime was unusual, unforeseen and extraordinary. Such persons are paroxysmal inebriates, periodic drinkers, dipsomaniacs, who suddenly use spirits with or without any cause, and drink to great excess, become prostrated, and only stop when acute inflammatory conditions begin. During this drink obsession their conduct and reasoning is essentially maniacal, and while they appear to be conscious and to reason from cause to effect, it is a matter of some doubt how far they are conscious or are governed by accurate recollections and full consciousness of their condition.

They are evidently unsound, unreasonable and incapable of control. The claim of amnesia should always be recognized as a possibility, and receive the most careful consideration. No sane reasoning or conduct should be considered as evidence *per se* of a clear registration of events, and no conduct afterwards should be regarded as conclusive evidence of memory, unless confirmed by other facts.

A third class of criminal inebriates frequently claim as a defense amnesia and want of memory. Many of the pronounced symptoms of insanity seen in the second class are absent. Not infrequently there is little or no history of alcoholic psychosis, imbecility, stupor and general degeneration.

They are the so-called moderate drinkers, persons who use beer and spirits in fixed quantities daily for long

periods of time, never seem intoxicated, never greatly incapacitated for the ordinary duties of life, and not infrequently occupying positions of responsibility, and apparently doing the work of sane and responsible men.

Suddenly such persons commit crime with suspicious coolness and indifference as to the consequences. The crime is open, seldom concealed, and the conduct and appearance after gives little evidence of the realization of the acts. In the defense the person will claim no recollection, and the evidence in support of this is the unreasonable act and the senseless conduct after.

A study of such cases opens a very interesting field of dementia, concealed delirium and delusions, and claim of no memory is very likely to be true. Other cases are noted where the crime is committed, following great mental irritation and depression, or a drink explosion:

Some condition of spasm resembling masked epilepsy precedes the act, and there is a strong probability that memory, consciousness and reasoning were all paralyzed for the time, and that the conduct was automatic, impulsive and maniacal.

In some studies of these cases there is a history of unusual suspicion, delusions and degrees of irritation and perturbation, followed by a drink storm and unaccountable acts in which crime is committed, then follows a subsidence of the acute symptoms and leaving amnesia and a blank concerning the past.

This was called a trance state years ago, and perhaps this term describes a sudden suspension of the registration of events as clearly as local palsies can be marked out in the extremities. That this blank is not always permanent is true in many instances.

Many persons drinking to stupor are fully unconscious of their condition at the time, but later they can recall the events with considerable accuracy. Crime committed during this period is always more or less automatic, follow-

ing some previous lines of conduct, and showing a marked failure to appreciate the relation of the surroundings.

Some governing center has suspended, and various impulses may merge into acts any moment, regardless of conditions and restraint. Evidently these blanks of memory are more or less common in persons who use spirits, and they increase with the mental feebleness and degenerations of the person.

The statement is often made that the person could recall after an interval, the occurrences while under the influence of alcohol. Later his memory became more and more indistinct, until finally he was unable to remember in any way what had happened during this period.

The practical question to be determined at a given case is the general mental condition of the person who sets up a claim of amnesia. The evidence must be based largely on collateral facts and inferences supported by circumstances. The court should decide whether this defense is of sufficient magnitude to require an expert examination and study of the mental conditions of the prisoner.

The results of such expert study may show a large preponderance of evidence sustaining this claim. Then the measure of responsibility will be modified, and their legal treatment will vary. The great central principle should never be minimized, that the inebriate of all these varied classes, who claims to have been unconscious should be recognized as insane, and incapable of realizing or controlling the facts, and should be kept under legal and medical surveillance for a long time.

Such men are dangerous and, like victims of contagious disease, must be housed and treated. Alcoholic amnesia is a veritable condition that should be recognized, and its claim should not be regarded as a mere subterfuge to avoid punishment, but should receive the same attention and study that any claim of insanity calls for in self-defense.

This outlying view indicates a practical field of medico-legal research that is largely unknown, but evidently is more or less prominent. These cases appeal to us, and the highest dictates of humanity and science call for an accurate study and comprehension of their presence and character.

The following summary may assist in grouping the facts to be considered in these cases. First, amnesia is a distinct central brain palsy, that exists beyond all question or doubt.

Second, it is a particular state in which memory and consciousness of acts and words are depressed, suspended and cut off, and the patient goes about automatically with little or no evidence of this change. The duration of this palsy may last from a few moments to several days, and the person appear conscious and natural along the line of ordinary life.

Third, during this amnesiac period crime against person or property may be committed without plan or motive. When accurately studied, the details and methods of execution will lack evidence of premeditation and consciousness of its nature and results. After the commission of the act a certain indifference and want of recognition of what he has done will also mark his conduct.

Fourth, when the question comes up in the court, and the accused denies any recollection of the event in question the facts to be settled are, whether statement is a simulation or a reality, and what evidence may be grouped to sustain or disprove his defense.

Fifth, the central question should be his drug psychosis and the neurotic psychosis, tendencies and degenerations which have come down. If this is clearly made out there is a strong probability of this particular defect, and when it is fully established, the legal irresponsibility of the person should be the same as that of an insane man.

CHAPTER XXXI.

MEDICO-LEGAL QUESTIONS OF INEBRIETY.

Synopsis.—New field of study. Suddenly forced upon medical attention. Great numbers of questions await legal solution. Three views held. The ethical and moral view. The legal view. The scientific and medical view. Assumption of knowledge that does not exist. Urgency for a clearer view. Confusion noted in two cases. Errors of medical men. It is a question of facts and their meaning. Was the person an inebriate? What was his mental condition at the time of the act? A study of the answer to these questions necessary. Object of the legal treatment of inebriates. Its failure. The reasons for it. The victims made worse. The action of alcohol on the brain explains this. An inebriate witness dangerous on the witness stand. He is not in touch with the surroundings. His mind is confused and halting. He is a paralytic. Automatic acts cover up this condition. His disability seen when called to do new work. A mental waif subject to the surroundings. A superstition to hold such a person accountable. A question of facts not theories or rulings of judges.

The jurisprudence of inebriety is practically a new territory, without boundaries and unexplored. The question of the possible mental unsoundness and incapacity of the inebriate to reason normally and act rationally, is asked with increasing frequency in a great variety of criminal and civil cases, where the question of motive and purpose is raised.

The rapid advances in psychological study sustains the wisdom and necessity for scientific inquiry in this field. The medical profession has been suddenly called to determine the facts and their meanings concerning the acts of an inebriate and give advice as to his responsibility and the means for prevention, and all this without precedent, and the medical theories are often opposed by public opinion and doctors are frequently forced into great discredit and confusion.

As a result of lack of knowledge many wild and impossible theories prevail as to what inebriety is and is not.

Statements are made of moral and legal accountability and responsibility, that presuppose a degree of psychological knowledge which is utterly impossible in the present state of the study, and could only be acquired by long years of accumulation and comparison of facts.

There are to-day many persons awaiting trial or sentence for crime committed while under the influence of alcohol. There are hundreds of business contracts disputed and contested in law courts, contracts made when the parties were intoxicated. There are many hundreds of wills whose validity is questioned for the same reason. Also there are innumerable divorce suits where the inebriety of the parties is the vital question on which the issue of the case turns. Grave questions concerning pauperism, idiocy, criminality, degeneracy, all center on the exact knowledge of the meaning and extent of inebriety.

These are some of the topics in this new medico-legal field which must not be ignored by the profession, or be answered by vague theories or dogmatic assertions. Every year these questions become more urgent and the profession must answer them on rational scientific grounds. Already the attempts to answer them, although complicated with vague opinions and wild superstitions have divided into three distinct theories or points of view. First, the ethical and moral view which finds a full explanation of inebriety from the teaching of Scripture and the opinions of theologians and moralists. This view affirms that inebriety is a phase of moral depravity found in some measure in every life, and one that is susceptible of great growth and development by willful neglect and gratification of passion and instinct. Theologically the remedy is punishment, prayer, conversion and the application of moral suasion and measures to awaken the spiritual life.

A crime committed while under the influence of spirits is a moral defect, a vice in which the victim is fully responsible and always conscious of the nature and quality of his act.

The second is the legal view which is literally a materialization of the moral theory. It assumes that inebriety is a phase of savagery and inborn tendency to lawlessness, and the indulgence of the lower passions, regardless of law or order or the interests of others. The remedy for this is punishment, suffering, on the principle that indulgence of the lower nature followed by pain and suffering will rouse the higher brain to take control and throw off the influence of passion and instinct.

If every act of drinking was followed by pain it would be repelled and controlled. Three hundred years ago Lord Coke, of England, held that inebriety was always an aggravation of any offense committed, and this fact should lead to greater punishment and never be considered an excuse. This has been the corner-stone of the legal view of inebriety up to very recent times.

The third theory is the scientific and medical view. This affirms inebriety to be a physical condition, both acquired and inherited. This physical condition is always a disease and an obscure or pronounced form of insanity. The use of alcohol is a symptom and not a cause in many cases.

This theory asserts that degeneration and disease is the basis, and the use of alcohol, by disturbing the brain circulation, causing congestion and paralysis, brings on a degree of incapacity which should be realized and understood. The inebriate is always defective in judgment. The nature and character of his act is abnormal. His power of control is enfeebled. Legally this theory regards the inebriate as diseased and incapacitated to act sanely, that his consciousness and control of his acts are

enfeebled and that he should not be regarded as competent and sane.

The first two theories assume sanity and consciousness in all cases of inebriety, and affirm that the only remedy is punishment and strict accountability and suffering, to enforce it. The third theory calls inebriety a physical condition requiring scientific study and physical and psychical remedies before the proper treatment can be determined.

A compromise theory is urged, in which inebriety is first regarded as a vice or a vicious phase and then later a disease. At first prayer, pledges and punishment can be used, and later medical care and treatment. It is difficult to understand the degree of psychological knowledge and ability necessary to discern where vice and disease join, and where to apply punishment and suffering, and where to use medical means and measures.

Such a theory defended on the witness stand is a sad reflection on the intelligence of the witness, particularly if he is a medical man. The pressing character of these cases frequently brings these different views into prominence, but only end in confusion and injustice to all concerned.

Lawyers and judges seek to clear up this confusion by assuming that the law is absolutely accurate and just in its basis and dictum. Curiously enough many medical men form impressions from these dogmatic assertions and re-echo them in the court room. This was very apparent in a contested will case where five medical men testified that a chronic inebriate who made a strange unusual will was sane and knew what he was about, notwithstanding the fact of his continuous intoxication.

The judge declared that he should act on his own judgment, and decided the man was unsound and incapable of knowing his condition.

In another case a man set fire to a church. Three physicians swore to his sanity; notwithstanding the fact that he was a chronic inebriate and had had delirium tremens recently. The jury decided otherwise. In this the medical men sought to determine the mentality of inebriates, on previous theories of moral causation. This was an error, for irrespective of all theories such facts can only be determined from a physical point of view.

In disputed cases it should always be a question of facts and their meanings. Facts of heredity, facts of culture, training, development or dissolution. Facts of disease, injuries, degenerations, surroundings, mentality and so on covering the entire history of the case, physiological, psychological and pathological.

It is only from this standpoint that any clear conception of inebriety, and the degree of responsibility can be obtained. The general problems presented in all these medico-legal cases, are, first, Was the person an inebriate or one who drank spirits to excess at all times, or at intervals? If this fact is established beyond question then the basis for further studies into the degree of sanity and mental capacity is formed from which comparisons and conclusions can be drawn. A reasonable doubt or suspicion of the sanity and mental capacity may be entertained.

Second. What was the mental condition and the circumstances of the person and his surroundings at the time of commission of the act in question? Was the act reasonable and just in its effects, consequences and execution? If not, the suspicion of insanity is strengthened and insanity and mental feebleness must be assumed. The legal theory should be reversed. The sanity must be proved and not the insanity.

Third, the medical man must be acquainted with the facts and have a reasonable assurance of their accuracy,

before he can point out conclusions which are naturally sustained by them. The question is often one of preponderance of evidence, which if it indicates the excessive use of spirits with irregular conduct and evident inability of control is most naturally the act of an impaired mind and a degree of insanity.

The efforts medico-legally are to check and prevent the illegal acts of inebriates. Practical experience in courts both in this country and in Europe agree that capital punishment for murder never deters similar crime. Notwithstanding this fact, inebriates are tried as sane and responsible, and executed. In the lower courts fines and imprisonment for illegal and criminal acts proves to be not only worthless as deterrents, but to increase the very condition which it aims to check. The physiological reason which explains this is that legal penalties make no impression on the intellect or higher judgment of the man, because that part of the brain is palsied and so far impaired as not to recognize the danger of, or be impressed by, punishment. This will be made clear from a brief restatement of the effects of alcohol on the brain and body.

The increase of the heart's action directly due to spirits produces alternate exhilaration and depression and this interferes with the uniform nutritional and functional activities and gives unsteadiness to the development, and direction of the energy and course of the brain with lessened energy, and obscuration of the power of discrimination.

The senses become impaired and impressions are obscured and this darkens knowledge and misleads judgment. The facts from the outer world are imperfectly communicated to the brain and imperfectly understood, and the brain is weakened in its power to recognize and correct the errors.

The constant repetition of the convulsive flow of the blood to the brain, rising and falling, not only weakens perception, but judgment and discrimination. Thus, the fine shadows, the uncertainties, and the recognitions of the value of conduct, acts and motives, escape the notice of the inebriate because of his impaired senses and judgment.

This he does not recognize. Often the more spirits are taken, the less doubt and more confidence he has in his judgment and ability to discern the actual conditions. Delusions, delirium, egotism, and the idea of strength, cover up the actual weakness. The false impressions conveyed to the brain seem realities because of the inability to discriminate. Thus, a man under the influence of spirits is a dangerous witness of facts observed in this condition, because of his impaired ability to see a reason clearly, or a sequence and has a delusive idea of the accuracy of his observations.

Dr. Wright wrote, that an inebriate witness testifying to events and facts observed while sober is more reliable than a sober witness testifying to facts and events observed while intoxicated. We have elsewhere indicated the anæsthetic condition of an inebriate manifested in the voice and exaggerations of manner, also the sight, hearing and smell and muscular disturbances. This is literally paralysis extending all the way from the profound stupor of intoxication back to the flushed face from the first glass of spirits.

The irresponsibility of persons in this condition is very evident in the extreme toxic stages, but the point where the impairment of the judgment and consciousness begins is impossible to determine. In much the same way no one can determine where twilight begins, and where it ends in night. Hence the responsibility of the inebriate is impaired from the first glass of spirits and the first

paralyzing effect of alcohol and its increase and growth is by stages differing widely in individuals, but always present.

There can be no question of the inability of the mind, and functional activities of the brain, to take cognizance of facts and events exterior to it when the senses are obscured and abnormal. Also when the higher operations of the reason are impaired by faulty nutrition and toxins. In this case both the sense impressions and their recognition are lowered and enfeebled and their value lost.

Alcohol, of all other drugs, lowers the consciousness of right and wrong. Its paralyzing action obscures the capacity to discriminate on questions of ethics, in brief, the morale of the man is damaged first, and most permanently. The inebriate, when intoxicated, exhibits confused obscure ideas, and false beliefs of morals and duties, and all his ethical sensibilities undergo a progressive degeneration.

The coarser automatic and organic operations of the mind and body may be but little disturbed, and the prominence of the lower, more brutish and animal instincts result simply from the palsy of the higher co-ordinating centers of control. This is confirmed in so many ways and yet the impression has been created that the use of alcohol reveals the real man which has been covered up before. In periodic drinkers the inebriate, when sober, is often amazed at the wild insane conduct during his drink attack, but in the continuous drinker there is no clear interval by which he is able to review his previous thought and conduct.

The condition is one of continuous and uniform paralysis and dissolution. He may, before the use of alcohol, have formed correct habits and rational conceptions of life, which influence him automatically after the use of

spirits; and thus he is able to act and appear along normal and rational lines of conduct.

He may, as a professional man or a mechanic, or farmer or merchant, follow an accustomed line of business while using spirits and appear to be normal and sane. But should any supreme crisis intervene and drive him out of his automatic range of life and thought, the palsied state of the brain will appear. Such men are literally waifs, subject to the surroundings and changing conditions of life. The unexpected crimes and unusual acts and insane confusions of motive and purpose appearing in persons who have previously appeared rational, but have been noted as spirit drinkers, furnish ample illustrations of this condition.

The conclusion which must be drawn from these facts is that all persons who use spirits are more or less unsound, and have entered into that penumbral region of irresponsibility and incompetence, and so are unable to act rationally and normally; also that it is grave superstition to assume that the use of alcohol is not only a voluntary act, but that it does not in any way impair the judgment and power of control, and from this theory to insist on a full measure of accountability where the question of crime and illegal acts are raised.

CHAPTER XXXII.

PREMEDITATION IN CRIMINAL INEBRIATES.

Synopsis.—Premeditation considered proof of responsibility. Where reason and judgment are evident, sanity is assumed beyond all question. In reality this is not true. Many persons exhibit judgment, premeditation and reason who are literally maniacs. This is sustained by a clinical history of cases. Drink paroxysms, such as in periodic cases, furnish striking examples. Criminal instincts very often follow from the paralysis of spirits, and disappear when spirits are banished. Examples of such cases. No question of responsibility should be based on these symptoms alone. The continuous drinker is very dangerous as a criminal, and is always more or less unconscious of the nature and results of his conduct. Concealed delusions are very common. The present methods of punishment are destructive in many instances, increasing the conditions which they are supposed to correct. The use of spirits to give courage to execute crime is not common, and always exhibits mental feebleness, which suggests insanity. No apparent judgment and motives are safe criterions from which to judge the mental condition of the criminal. Morbid impulses, obsessions, concealed delusions are all more or less common in inebriates who commit crime.

In the question of the sanity of inebriates who are on trial for crime, evidence of premeditation is considered strong proof of the responsibility of the prisoner. It is assumed that there must be a degree of judgment where purpose and motive are apparent, and this is normal.

If the motive be of sufficient magnitude and the facts indicate distinct premeditation and design, there must be some sanity in the prisoner, and the courts take this view of it. When this reasoning is applied to inebriates there are many exceptions, and it is very evident that it is not true and can not be used as a general principle.

Many men obviously insane are capable of premeditation and often display distinct motives and purposes. The ordinary inebriate, who at the beginning has no intention of carrying out any plan becomes obsessed the more he drinks until he is profoundly intoxicated.

He does not anticipate the final result, and is confident that he will always be able to control himself and stop short of the toxic stage. In the periodic drinker, premeditation and motive has no other purpose except to provide for full gratification of the drink impulse. That is the central thought, to gratify this impulse. This is so overwhelming as to destroy all other motives and be unnatural and insane.

Elsewhere instances have been noted of elaborate reasoning and preparation to conceal and cover up the drink attacks and provide for any possible emergency that might follow. Such persons may appear normal and sane in other matters, but in this they are reasoning maniacs without power of control and possessed by an impulse which dominates all other thought or motive.

A typical case is that of a banker of excellent judgment in all business and social matters. He would prepare for a drink paroxysm for a week in advance, and display great cunning to explain his absence. He would send letters to be mailed to his family in the future, as to his location, giving explanations that were reasonable, so as to prevent any unusual efforts to verify or discover his real condition. Then he would go on this imaginary business and disappear for a week or two. On returning he showed great activity to take up charity and temperance work, and help others. On several occasions these attacks were broken up by active treatment at home.

These periodic inebriates show such pronounced mental unsoundness in these mysterious obsessions that it is difficult to understand how they can be considered responsible. Should a crime be committed during this period, with evidence of premeditation, the courts will not consider the question of insanity other than efforts to escape the punishment for the crime.

The following case brings out this fact in a very vivid light: A business man, after a period of moderate drinking lasting several years, became a periodic drinker. These periods were ushered in by one or two weeks of continuous drinking then several days of profound intoxication, followed by recovery and intense remorse.

During the time of continuous drinking he carried on his business in a sane and natural way, but to his confidential clerk he displayed delusions of revenge. He elaborated the most skillful plans to injure a rival in business by burning his property and exploding dynamite under his office. These plans were remarkable for motive, premeditation, cunning and judgment of the situation and surroundings.

His clerk advised delay and urged objections, pointing out the possibilities of failure, and in this way prevented their materialization. After he became fully intoxicated, these plans grew indistinct, and finally faded away. He regarded them as crazy notions and seemed ashamed to think that he had planned or talked about them.

The next drink period the same impressions came back, and were more intense and his plans were more cunning and skillful. Fearing that they might be put into execution he was given narcotics and made stupid, and in this way the impulse was broken up. This delusion with the slightest encouragement would have developed into a criminal act, and in the court room no evidence of insanity would have been considered.

The reasoning would have been that the act grew up in his sane moments, and that the use of spirits was for the purpose of giving him strength to execute it.

Another similar case was that of a moderate and continuous drinker, who planned a bank robbery, and spent much time considering and providing for any possible failures which might happen. He would visit dif-

ferent banks, observe narrowly the conditions, make notes of the position of the safe, counter, and the means of exit. Then, by comparison with other banks, determine that which promised the least risk.

He made a confidant of his partner, who with him conducted a grocery business, and gave him the notes and papers on which all the plans and records were stated. His partner considered them as mere drunken whims, and advised him to stop drinking. He would abstain for a while and then begin again.

Naturally, he was a very careful, sober, methodical man of good judgment and was honest. The delusion was very unusual, and foreign to his previous conduct and thought, and yet he displayed most unusual skill in calculation of possibilities and efforts to execute the crime and conceal all traces of its author.

Here again was the same probability that with the slightest encouragement he would have executed it. There was undoubted insanity, notwithstanding the acute reasoning, judgment and apparent consciousness of the act. To hold such a man responsible and judge him by other standards of sanity would have been fallacious.

Some of these curious obsessions done under the influence of alcoholic narcotism show extraordinary judgment and wisdom. In one instance a lawyer wrote a will at a certain period when drinking. Later, under similar circumstances, another will was executed, and so on for several years. Each will was filed away with care as to all the minutæ and details. He seemed to have no consciousness of having written other wills, but clearly stated his property and its conditions.

A man of wealth left a large fortune to an obscure school for colored people in the South. This was written on the eve of, or during, a drink paroxysm. The act was a surprise to his friends, who had never heard him

express any interest in, or knowledge of, the work of any Southern school before.

In the lower courts a great variety of criminal acts by inebriates present degrees of reasoning, premeditation and sanity that is unusual. In the evidence such persons are not stupidly intoxicated and seem to be in possession of their normal reasoning. The impression is that spirits were taken to lessen the punishment of the acts, but this is not confirmed by a careful study.

A number of persons who have been sober, free from spirits, living normal honest lives, commenced to drink moderately and enter upon a criminal career. Commonly they are sneak thieves, appropriating everything near them, whether needed or not, robbing intoxicated men, snatching parcels from boys and women, then running away, showing very little cunning in the concealment or effort to escape, but showing much skill and boldness in the acts. They are kleptomaniacs, and in all probability this is produced by the paralysis from spirits.

When such persons are about to be arrested, or are discovered, they not unfrequently drink to great excess, and the motive is not clear. The physical condition of this is very evident in the history of a number of such persons, who, after serving a sentence in prison, recover and come out, leading correct lives afterwards.

Such persons have been known to act normally and rationally for some time, but after some sickness or disaster commence to drink and go back to crime again. In all the criminal courts, person of this class appear from time to time and are called "repeaters" of a high grade.

No question of responsibility or mental feebleness is ever raised. Their crime and intoxication are considered as vicious and culpable, and the courts never recognize the moral palsies, morbid impulses or concealed delusions,

and hence continue to resentence them, fixing their criminal status more pronounced than ever.

In this way the effort to prevent crime by fines and imprisonments is destructive, and literally destroys the sanity and normal mentality of such persons, training them into criminal careers as well as increasing their mental degeneration and disease.

A very common theory prevails that crime is often planned and spirits are used to give courage to execute it. This is confirmed by criminals themselves, but there is much doubt about its reality. A criminal by training and instinct seldom takes spirits for the purpose of committing a crime. Experience has shown that spirits unfits him for the execution of the act, and that he needs all the capacity and efficiency that he possesses, to be successful and escape punishment. In reality, spirits confuse and weaken the mind, and prevent the judgment necessary.

Low brutal crimes committed by persons under the influence of alcohol rarely show any motive or purpose other than that of a demented person. Where the use of spirits has been continuous and the brain is in a semi-paralyzed state, criminal impulses may start at any time, and materialize into acts that are clearly insane.

The very fact that the person has been using spirits continuously is the clearest possible evidence of unsoundness. A theory prevails in the court room that when a crime is committed by a drinking person and the consequence and magnitude of the act are partially realized, spirits are used to conceal the motive and lessen the consequences.

It is very doubtful if this can be confirmed, for in reality the general confused condition of the mind and its control is so uncertain that any preconcerted action is unlikely to occur. It would seem in certain cases

where persons drink to great excess after the execution of a criminal act that there must be some motive, but it is more likely to be a morbid impulse and delusional obsession of the same nature as suicide, and altogether additional evidence of unsoundness and irresponsibility.

In all criminal acts committed by inebriates, it is safe to assume that ethical notions of obligations, duties and consequences are greatly confused or lost altogether. No man under the influence of spirits can be normal and have full self-control. Kleptomania, or the desire for appropriating anything that the mind may fancy, is only another phase of insanity, particularly when associated with the use of spirits. There may be motive in this, and evidence of reason and judgment, and yet the mind is obviously unsound. We have noted in previous pages some striking examples of this.

A continuous drinker is more likely to develop criminal acts and conduct and be the subject of morbid impulses, and concealed delusions, and when the fact of his drinking is made clear, the mental impairment and limited responsibility is of necessity present. The apparent possession of judgment and sanity in inebriates who are charged with crime should be made the subject of careful study, and no evidence of premeditation should be regarded as sanity or a safe guide upon which to base degrees of responsibility and forms of punishment.

CHAPTER XXXIII.

DISEASES AND NEUROSES ASSOCIATED WITH INEBRIETY.

Synopsis.—Both the inebriate and alcoholic turn to drugs for relief. Drugs preceded the spirit taking and often follow it. Very common in the history. Drugs taken for other purposes. Examples. Drugs cover up the symptoms, giving false impressions. Opium most commonly used. Morphia very pleasing in its effects. Complicated symptoms. Cannabis Indica, hyoscyamus and concaine are used. For symptoms that indicate this condition. Hydrate of Chloral a common drug, combined with bromide in proprietary medicines. Cocaine very fascinating for this purpose. Some curious symptoms which follow. Belladonna another drug used. Cannabis Indica with its peculiar symptoms. Chloroform and paraldehyde, to produce sleep, also gelsemine is used. These drugs dangerous. Where spirits are prohibited, drug sales are increased. Persons who recover without any suffering, to be suspected. Medico-legal cases, in which persons are using drugs secretly, to be recognized. Nicotine poisoning. Coffee and tea are all to be recognized. Rapid recovery of persons supposed to be incurable point to secret drug habit. Examples. Inebriates are very susceptible to narcotic drugs. Their use should be recognized as dangerous. Possibility of producing a new addiction more dangerous than the first. A new field to be studied.

The frequent references to drug addictions associated with, and complicating inebriety, will naturally call for a more detailed study of some of the more common forms. This will enable the student to discriminate and in many ways to more thoroughly understand the conditions preceding the use of spirits, and be better able to treat them. Many of these conditions have been outlined in previous chapters.

Both the inebriate and alcoholic very commonly turn for relief to various narcotic drugs, either in regular prescriptions or proprietary forms. When the effects of these drugs are pleasant, they are used in the place of spirits, and not unfrequently become a distinct addiction. This may be for a brief time, until some disturbing element occurs, or may become more or less permanent.

In the history of drug addicts a period of alcohol taking, which has preceded the use of drugs, is very common. This fact in itself will materially modify both the diagnosis and prognosis, and should be considered in the question of treatment. The history of these cases show that alcohol has been used in various forms, particularly beer or wine, for a long period. Then the patient begins to suffer from some nutrient or nerve disturbance, or insomnia. The family physician may be called in and prescribe some drug containing a narcotic, that is particularly agreeable and soothing in its effects, or the patient may resort to some proprietary drug and receive the same relief. In either case the drug will be repeated, without any thought of its danger, and then finally, for various reasons, an effort will be made to discontinue it, which will be unsuccessful.

This is a very common history of a great many drug addicts, and often in the struggle to escape from the use of the drug, they will take up alcohol again, and be astonished to find a peculiar susceptibility to it, which did not exist before. The drug addict becomes quickly intoxicated from alcohol, does strange things, and then finally comes back to the drug from which he is trying to escape.

This period is not unfrequently without the counsel or advice of the physician and has been an accidental circumstance of turning from one thing to another until some drug is found that would apparently diminish the pain and discomfort from which he suffers.

The physician who is called at this period, unless he makes an exhaustive study of the patient, is very likely to make mistakes and fail to recognize the original alcoholic addiction, and the subsequent drug substitutions.

The patient will very likely mislead him by giving a history of malaria or rheumatism or some disorder of the past, which in his mind has been responsible.

Thus a man, living in a southern country, who drank spirits consecutively in so-called moderation, may have had chills and fever, which to him was the unmistakable evidence of malaria, but in reality it was a toxic disturbance, generated in the system by alcohol. Acting on his own supposition, he may have used large quantities of quinine, with or without the advice of his physician. This with alcohol has still farther increased the toxæmic states, and culminated in some specific disorder, and to cover up and conceal this, narcotics are particularly valuable.

Other cases occur where obstinate constipation and supposed congestion of the liver have been treated for a long time with mercury, the alcohol being taken as usual. The result is still greater disturbance and a variety of symptoms which are relieved by narcotics, either in the regular form or in some proprietary drug.

Other persons of this class occupying responsible positions, using spirits for their supposed tonic and stimulant effects, have become insomniac, or have suffered from some disturbing nutrient symptoms which have resisted all treatment. Narcotics prove most attractive and they become addicts. Then they give up the use of alcohol and make great efforts to escape from their narcotic addiction, but finally return to the use of both alcohol and narcotics.

The number of persons in this condition is so large as to attract attention, and require special study and treatment. They are all practically inebriates and alcoholics who have added to their troubles drug addictions. The presence of extreme susceptibility to the use of drugs, particularly narcotics and anæsthetics, can often

be determined with much certainty, and this fact is of great importance in the study of the cases.

If the patients are neurotic by inheritance or from neglect and exhaustion, the conditions are graver. These facts should always be considered in the study of cases. Quite a large number of persons will have a history of wine drinking, beginning in college; then beer drinking, with the result that fatigue and unusual exhaustion follow. With this there will be associated gormandizing, high living, neglect of sleep and continuous excitement.

This is the condition that narcotic drugs will effectually cover up, giving the impression of cure; and if the drug is resorted to repeatedly, its use becomes an addiction. Opium, morphia and its other forms are the most common narcotics taken, and sooner or later, become, of all drugs, the most attractive and fascinating.

Opium, in the form of a tincture, is the most agreeable of all and many alcoholics and inebriates boast of giving up all spirits, but later are found to be dependent on this drug. Often they are unaware of this. The ordinary alcoholic cannot use the tincture of opium long without producing some irritant effects on the stomach, and while the narcotism is very pleasing, the nausea and vomiting which follows are distressing. This occurs in many cases, but not in all.

For this, not unfrequently, hyperdermics of morphia are substituted. The stomach regains its original vigor and the patient has simply changed the form of the drug. Many of the proprietary remedies contain opium and its alkaloids. Hence it is safe to assume that the pleasing narcotic action of drugs of this class are most likely due to opium.

Many very interesting cases come under medical care in which the patient has a variety of complex symptoms and gives a history of having taken some proprietary

medicines for a long time, with increasing derangement of the stomach and nutrient system, but with distinct periods of rest and comfort. An early history of alcoholic taking is not considered, and yet it is the beginning and the present addiction is only another stage of the same degeneration.

The patient asserts that opium was very irritating at first; that hyperdermics caused vomiting and nausea, and that the drug which he has taken was originally distressing, but finally it acted with great satisfaction and comfort. In reality his system has come to tolerate the drug which was nauseating at first. What he is taking is simply opium or its alkaloids. The attempt to withdraw this drug is followed by grave depressions.

A case of considerable interest was that of a prominent man who was said to have been very wild in his early life, meaning that he drank a great deal of spirits, then reformed and later became addicted to a certain remedy which he used in large quantities. An attempt was made to give up the remedy, but the effects were so distressing that it was resumed again.

In early life, when recovering from alcoholic effects morphine produced great depression and vomiting, and the impression prevailed in his mind that this drug could not be opium or its alkaloids, or it would have produced the same effects which it did years before.

He became an invalid, and the remedy he was addicted to was found to be morphia, combined with Cannabis Indica. The physicians considered it wise to continue this drug until his death, and also permitted him to use alcohol for the supposed purpose of keeping up his heart's action. Then came a very interesting question in the contest over his will, whether he was able to sanely dispose of his property. A great variety of medical testimony was introduced, and the will was sustained, but

it was proven that his first use of alcohol and later that of proprietary drugs which contained opium, had evidently impaired his brain, and this with the blundering effort to withdraw the drug, made him still more irrational. The physicians in attendance and the experts failed to realize the actual conditions, and the possibility of help.

The diagnosis is a matter of considerable importance. When an alcoholic or an inebriate suddenly stops all use of spirits and has no symptoms of irritation or depression, but on the contrary rather boasts of his great strength of will and ability to control himself, it may safely be inferred that he is taking some concealed drugs of which morphia or other forms of opium are the most common.

Cannabis Indica, *hyoscyamus*, cocaine and other drugs may be used in the place of spirits, but they cannot be depended upon and are more or less uncertain. Morphia in small doses is more likely to be taken secretly for long periods without exposure than any other, and this can seldom be discovered except by experts and critical examinations.

Cases like the following are to be expected. An alcoholic or an inebriate suddenly recovers and goes on for a period of years, claiming to be a total abstainer. During this time he will seldom call for a physician and then only for some transient troubles. His manner and air may become secretive as he grows older. His face paler, and his eyes contracted and his sleep irregular, broken but profound. Then suddenly he will drink again, and the degree of depression and poisoning which follows will be unusual and hardly explainable by the amount of spirits taken.

Death will follow either from hemorrhage or acute inflammatory conditions. In reality the man has been a

secret drug taker from the time of giving up the spirits, until they were resumed again. He was able by the use of some form of opium, to appear normal and healthy and yet all this time he is becoming more and more degenerate. Then on resuming alcohol his real condition appeared which terminated in death.

It not unfrequently happens that an inebriate, at the beginning or close of the drink paroxysm, finds pleasing relief from the action of morphia, either by the needle or by the mouth. This experience will be repeated and the time will come when this drug will be taken to prevent the obsession of spirits from controlling him. This may be done secretly, although thoughtless physicians not unfrequently give this drug at the beginning of the paroxysm, telling the patient what they are doing and thinking in this way they are breaking up the drink craze. In reality they are cultivating another addiction which is as toxic and dangerous as that from alcohol.

The efforts of quacks to cure such persons by opium and its compounds and then attempt to withdraw these drugs by substituting other narcotics is a vicious circle from which there is little prospect of permanent restoration. Irregular and thoughtless physicians lead spirit drinkers on a round of different forms of opium and other narcotics, and not unfrequently alternating with spirits, claiming great results from each change, and yet leaving the patient more and more incurable.

Frequently some irregular physician will attempt to cure an inebriate by continuous use of morphia or some of the alkaloids of opium. Then suddenly a collapse follows and death, which is called heart disease, but has really been toxic states overwhelming the vital forces.

Pneumonia is a very common sequela, is likely to occur any time and is literally paresis of the pneumogastric nerves. Opium smoking is another form of obtaining

relief, and this has perils peculiar to itself. In all this there are unknown dangers and extreme liability to produce a more serious addiction, than that for which the cure is attempted, and with it all the possibility of heart failure or some unknown condition of collapse that is given some name.

Instances are more or less common where the two narcotics given both openly and secretly have resulted fatally. The use of the needle, either with morphia or cocaine, or other drugs, is both physically and psychically dangerous; first because the relief is very rapid and pleasing, second, it creates an impression of perfect and permanent cure, the memory of which remains. In reality the derangement and depression is intensified and the causes are not removed, but other causes are created. There is no safety in the attempt to treat the alcoholic or inebriate by narcotics. In many instances it is simply changing the form of addiction and disease, leaving the patient more seriously crippled than before.

Chloral is a drug that is frequently used in inebriety, by itself or in compounds. In the ordinary inebriate and alcoholic, where profound stupor and changing deliriums occur, there are many reasons to believe that hydrate of chloral is responsible for this. Numerous persons have been observed in which, after the immediate effects of drink, a peculiar delirium appeared. This did not resemble the ordinary alcoholic delirium or delirium tremens, but while being transient, was followed by curious intervals of stupor.

A person who drank at intervals on public occasions would the next day have very confusing states of delirium with extreme depression. This was the subject of a great deal of comment; finally it was found that it was due largely to hydrate of chloral, which was taken for the purpose of producing sleep. It appears from a number

of histories that chloral taken after the stupor of alcohol has subsided, will not only produce a short period of sleep, but will leave the brain in a confused delirious condition, which may be checked temporarily by another dose. The subsequent symptoms will be increased and more confused delirium will result.

Compounds of chloral and bromide in the form of proprietary drugs is a frequent remedy given after the use of spirits, and often results in symptoms that are more or less confusing. While these associated disorders are not very common they should be recognized and understood.

Cocaine is another drug that has a peculiar fascination in covering up the effects from spirits. The narcotism from cocaine seems to fall on the higher mental processes and not only cover up the irritation, but give an extreme confidence in one's ability to overcome the physical disabilities which naturally follow. The cocaine taker has mental exaltations which rise above all remorse and chagrin and consciousness of loss. All discomfort and irritation passes away and the relief and consciousness of health is so perfect and complete as to leave no doubt in his mind.

The inebriate who after a drink excess shows great serenity and confidence in himself and has no suffering is very likely to be under the influence of cocaine. Not unfrequently there will appear a certain garrulity and word delirium in which the patient will talk on all subjects and be perfectly happy and pleased. This suggests cocainism more than any other drug. Later after this period of delirium there will be a strange seclusion, abstractness and period of suspicion. This also suggests the same drug.

Another curious symptom pointing to cocainism is intense literary activity. Persons will show an intense

desire to write and compose all sorts of literary products. This occurs in quite a large number of cocaine addicts. An example was that of a village doctor who after a drink period would become a very voluminous contributor to the village paper; writing letters, poetry, giving advice on all kinds of general and hygienic matters. After a time this would subside and then a drink paroxysm would occur again. Not unfrequently the alcoholic or inebriate will exhibit very aggressive dogmatism, and a delirious sort of reasoning, consisting of condemnation, strange assertions and peculiar theories. Occasionally this culminates in some overt act, which points unmistakably to some other drugs and spirits.

Belladonna and hyoscyamus are found to be taken very freely at this period. The narcotic effect is in some way manifest in these peculiar symptoms. *Cannabis Indica* is another drug whose peculiar effects are often very marked after the first period of narcotism. Some curious instances have occurred of inebriates who after the use of *Cannabis Indica* became disoriented. Such persons will fail to recognize the street on which they live and make mistakes as to the location of their home or office. This will be termed faults of memory, but in reality it is the poisonous action of this particular drug.

A very good clergyman who had been a wine drinker for years exhibited this fault to the alarm of his friends and physicians. Finally it was discovered that he was taking *Cannabis Indica* every night. The withdrawal of this drug and the wine was followed by recovery. Many persons suffer from insomnia, both preceding and following the drink paroxysm, and often while using spirits continuously. This symptom is sometimes very distressing and is not easily overcome by increased doses of spirits. Narcotics are often used.

A few cases are reported in which chloroform has been given, and the results are most pleasing. In this way an addiction is established. Fortunately this cannot continue long, owing to the peculiar odor which betrays the victim. Chloroform addiction following the use of alcohol is very serious. There are profound degenerations of both sensory and motor nerves and the withdrawal of chloroform is followed by obsessions that are frequently suicidal. Many of the suicidal alcoholics have used chloroform and the peculiar derangement which follows from its use lowers the vital resources and brings with it a dread of suffering that seeks to avoid it through death.

Chloroform by inhalation produces a sense of relief, the memory of which is very fascinating and vivid. Like the effects of cocaine on the psychic centers, this impression is never forgotten, and no matter what the conditions are, the temptation to secure it again is almost irresistible.

Paraldehyde is another drug used to produce sleep, but its peculiar odor and taste makes it repellent. Some cases have been reported of paraldehyde addiction, following the use of alcohol.

Gelsemin frequently has pleasing effects in such cases, and has been used in proprietary compounds for the relief of after symptoms from spirit taking. Quite a number of drugs containing combinations of chloral, gelsemin nux-vomica, atropia and opium are sold in Europe to overcome the pain and depression following from the excessive use of spirits. They are not very common in this country. The peculiar effects following from them have been noted in many instances. Coal tar derivatives and opium compounds are more extensively used in this country, together with strychnine and atropia. It should always be remembered that the effects of these drugs are to be considered from a study of these cases, and

their removal will reveal their special influence and presence.

Many of the obscure medical and surgical cases occurring in inebriates have been traced to specific drugs or narcotic prescriptions used to overcome the toxæmias. Some investigations have indicated that in certain sections of the country where the use of alcohol has been prohibited, the demand for anæsthetics and narcotics is greatly increased. Proprietary drugs of this class have had increased sales in these sections. This is a clear indication of the physical causation of alcoholism and inebriety, beyond that of alcohol.

While the facts are not yet clear, it is altogether probable that the withdrawal of alcohol as a beverage will create a demand for drugs of the anæsthetic class, and this will continue for some time. The effects of these drugs constitute a distinct phase or class of symptoms which the physician should be competent to determine.

Reference should be made to medico-legal cases, occurring in persons who have used spirits at some previous time and whose symptoms are so confusing as to cause wide differences of opinions. Usually inebriety or alcoholism has existed previously, and the patient has recovered and claims to be a total abstainer. While his symptoms of ill health have not attracted particular attention or question, he suddenly commits an overt act, or does some strange things which is called into legal question. A study of the symptoms shows considerable variation of strange conduct and reasoning, following the withdrawal of spirits. This can not be called insanity nor is it sane and normal in many ways. Alienists draw different conclusions and usually assume that the statement of the person that he has been a total abstainer is true, but how to account for the irregularities both men-

tal and physical which follow is open to various theories and explanations.

In all probability the withdrawal of alcohol was followed by the secret use of some narcotic drugs for a long period of time, and the extraordinary conduct and criminal acts were due entirely to the degeneration of the brain, which began with alcohol and was intensified by drugs that were concealed.

The derangement has not reached the point of being open and recognizable. Too much emphasis can not be placed on this possible and probable fact, which is liable to occur in a great many cases of criminal and insane conduct. Tobacco when associated with and following the drink addiction, is a poison that should be recognized. The withdrawal of spirits is frequently followed by the excessive use of tobacco and the result, nicotine poisoning and its allied neurosis, is a prominent factor, which should not be overlooked.

A number of cases have been noted where very prominent physical and mental symptoms have appeared after the spirits were withdrawn, that were interpreted as serious organic derangements. A later study proved them to be due to nicotine poisoning.

Statistics of the cure of patients sent to insane asylums as paretics and demented bring out this fact very clearly. Hospital treatment with abstinence of spirits and drugs and with the ordinary limited measures, have restored many persons that under any other circumstances were supposed to be incurable.

A very pronounced case of general paresis was permanently restored in the New York Hospital in the course of a few months. Both the family physician and the alienist had failed to discover the use of chloral, cocaine and bromides which the patient had taken for a long time, following an alcoholic addiction.

Hyoscine is another drug used to quiet the mental disturbances from alcoholism and inebriety that is very likely to produce far more serious symptoms and degenerations than it is intended to correct. A periodic drinker was given large doses of this drug which produced sleep and finally terminated in a low form of delusion. He was sent to an insane asylum and recovered after a few months. A year later, he drank again, and this time he was treated hydropathically. His recovery was complete. This and other instances suggest that hyoscine on a highly sensitive irritant brain may produce disturbances and mental conditions of most serious character. Like chloral the pleasing narcotism and sleep which follow may develop congestions and irritations of a very serious nature afterwards. It certainly is a very toxic drug, and its peculiar action should be recognized in all confused cases.

It is the opinion of many persons that tea and coffee in excess after the withdrawal of alcohol are very likely to predispose to states of exhaustion and toxæmia, that will greatly retard the final recovery. There are many reasons for believing that there are certain persons susceptible to various drugs; of which caffeine and their should be noted as complicating and encouraging diseases following the use of spirits.

The associated diseases from drug narcotics in alcoholics and inebriates are very numerous and complex and we have scarcely indicated the principal ones and their psychic influences. In reality, they constitute an unknown field, that must be explored in the future.

The great fact should be remembered that the effects of the use of spirits in inebriates and alcoholics prepare a field for the growth, cultivation and development of a great variety of neuroses and psychoses which should be studied and traced in the questions of diagnosis and treatment.

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