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A

# PRACTICAL MANUAL

OF

# INSANITY

FOR THE

MEDICAL STUDENT AND
GENERAL PRACTITIONER

BY

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# PREFACE.

It is the aim of this work to present to the medical student and the general practitioner the essential aspects of mental disease as they have appeared to the authors. It is hoped that it will be found to give an intelligible, up-to-date statement of the leading facts, and one that will be serviceable to those who may not be able to give the time for any more exhaustive study. Psychiatry is a large subject, and it is impossible for every one even approximately to master its details; but no graduate in medicine should be unacquainted with its rudimentary data as a part of his professional equipment.

The work is intended as a handy manual for students; therefore elaborate case records and pathologic details, as well as discussions of speculative and controverted questions, are necessarily omitted. To make it the more practical and useful, certain special features are included, such as the mention of the forms of insanity not usually met with in hospitals for the insane, a comparative table of classification, and a chapter on some of the ethical questions relating to insanity as they may arise in the practice of medicine. It is believed that these features will be found to add to the value of the work to the student and general practitioner.

We are under obligations to Drs. James C. Gill and Geo. W. Hall for valuable assistance in proofreading and otherwise.

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## CHAPTER I.

### DEFINITION; PREVALENCE.

In beginning the discussion of any subject it is customary, first, to define it—that is, to lay down its limits and to state in concise terms its special and essential features as a definition. In some of the more recent treatises on insanity, however, this custom has apparently come to be recognized as more honored in the breach than in the observance, as in them no attempt is made at a special preliminary definition. To give a perfectly satisfactory definition of insanity —one that gives in small compass all its salient features and omits no important details—is practically impossible. In a most elaborate attempt at defining insanity, Spitzka, who may be considered as most competent, gives half a page to the definition alone, the necessary glosses and qualifications taking up over another page. This can hardly be called a brief or concise definition. The shorter ones that have been offered are all open to criticism in one respect or another.

The difficulty in defining insanity lies, in the first place, in the fact that it is a negative proposition, the

prefix *in* making it so; negatives are usually difficult of demonstration. Insanity is opposed to sanity. In order to define insanity it is necessary, first, to determine the standard of sanity; this is not a fixed quantity, but depends upon many conditions—first, upon what may be called the standard of the environment, which varies not only with every stage of civilization and barbarism, but also with each social station and each grade or phase of education. What would be natural and commonplace in one state of society or in one community, would be altogether aberrant and unusual in another, and this difference exists even in the same persons under various circumstances. This environmental standard varies in time as well as in place, in peoples or races, or in differing social ranks—for example, what might have been considered normal a century or two ago, might be evidence of mental failure now. Further, as helping to make up this problem of the definition of sanity and insanity, there is what might be called the standard of the individual, the shaping of which is begun even before birth—in inheritance—and is not completed until the end of life. Every one thinks and acts in his own way, and thus there is formed a special standard of normality, which is made up of habits, social instincts, education, training, and more especially by those moral traits that constitute what we call character. In these respects the individual must be compared with himself—he must be tested by what he ought to be and by what he was in his normal condition—before an accurate decision can be arrived at in any case of suspected mental disease. As a rule, this is not difficult, the variations from the standard of environment and the individual's normal self being usually so patent that insanity can be recognized almost at a glance. It is only in doubtful cases that comparisons must be made even in minute details before one can positively assert that mental

derangement exists; such cases occur sufficiently often to make the recognition of these factors of alienation most important. There are no hard-and-fast lines separating sanity and insanity, and it is this that renders a precise definition almost, if not quite, an impossibility.

Notwithstanding this, it is of some importance to establish a clearly stated, albeit an imperfect, definition of insanity, if only for legal purposes. When examining a medical witness, it is a common practice for lawyers to ask him to define insanity; his inability to do this may affect the value of his testimony. Although, as has been said, a rigidly correct medical definition is impossible, one that will fairly, if not completely, meet the legal requirements, which is its principal utility, may still be offered. The medical concept cannot well be narrowed down to the limits of a brief statement and yet include all the possibilities of mental derangement. Even if we follow certain French authors, who, like Marcé and Regis, make a distinction between mental alienation and insanity, including in the former the congenital teratologic defects and the transient deliriums and intoxications, and confine the term insanity to the acquired, more or less permanent, disordered mental conditions, the task is but little lightened, and the ground is still too extensive to be easily covered. All definitions heretofore attempted, even the elaborate one of Spitzka, are open to many objections: they are inevitably incomplete, imperfect, and therefore to a certain extent misleading. Insanity is especially a disease or derangement of the functions of the cerebral cortex, and this is so intimately connected with every other bodily organ and function that it is easy to see that the range of its symptoms is practically infinite. Its definition, being of necessity incomplete, must be, therefore, somewhat indefinite; it is useless to attempt to make

it comprehensive or exact. We cannot specify particular pathognomonic symptoms; we cannot say with Esquirol that it is afebrile, or with Griesinger that it is a condition in which a true appreciation of the facts that come before the consciousness is impossible, or with a much more recent author that it is a disorder characterized by a more or less permanent accidental and unconscious disturbance of the reason. All these are but partial definitions; there are at present markedly febrile forms of insanity recognized, there are many of the insane who fairly appreciate the facts within their experience, and there are many others who are more or less fully conscious of the morbid character of their feelings and of the fact that they are mentally deranged. There is no one feature that is pathognomonic; insanity is a general and a protean derangement of the mind. A definition must therefore be a general one; it must not go into particulars, but must merely broadly outline the condition. As already stated, its chief value is for forensic purposes; the law demands a definition, and the partial ones that have satisfied lawyers have been responsible for many judicial murders and mistakes. The simplest and clearest possible definition is therefore the best, and perhaps the following will as nearly meet the demands as any: "Insanity is a disease, derangement, or defect of the brain, causing disordered action of the mind." This has the advantage of stating nothing that can be disputed, but it is indefinite and covers certain conditions that are not always included in the popular or possibly the legal conception of insanity. If it is desired to make the distinction between mental alienation in general and insanity proper that is made by some authorities,—notably Marcé and Regis,—excluding from the latter certain aberrant mental conditions, idiocy, and temporary intoxications and delirium that are not commonly included in the con-

cept, this definition may be modified by inserting the words "more or less permanent," making it read, "Insanity is a more or less permanent disease or derangement of the brain producing disordered action of the mind." If it is thought advantageous to carry the definition a little further, and to indicate how the mental disorder affects the individual and his conduct, it may be supplemented by the statement that it puts the subject into a condition aberrant to his normal self and out of relation to his environment. An imbecile is a subject of mental alienation, but he may fit into a niche in society and to a certain extent harmonize with his surroundings. But he may also, as Regis says, be the victim of an attack of mania superimposed upon his existing mental deficiencies, and then he is in the restricted sense of the word a lunatic. In the same way we make a distinction between the effects of intoxicants, which practically derange the cerebral function as much as does an attack of insanity, and the insanity itself, on account of their transitory and generally voluntary character. The sympathetic delirium of febrile diseases is also excluded for similar reasons. Practically they all fall under the general category of mental derangement or defect, but the customary and the legal distinctions must be borne in mind.

As a definition of insanity, therefore, we may offer: "*Insanity is a more or less permanent disease or derangement of the brain producing disordered action of the mind in such a way as to put the subject in a condition varying from his normal self and out of relation with his environment,*" and we may add generally "*in such a way as to render him dangerous or inconvenient to himself or others.*" Understanding by the words "dangerous or inconvenient" all the moral and legal disabilities of the insane, of every kind and degree, this definition fairly fills the requirements of the law, and will not

often be disputed. In a medical point of view it is vague and incomplete, but, as stated, a satisfactory medical definition of insanity is an impossibility.

The increase of insanity is one of the living questions in modern civilization. The statistics of countries where a reliable system of registration exists show this increase. In Great Britain the figures of the English commissioners in lunacy show that in 1860 one in every 523 of the population was insane; in 1870, one to 411; in 1880, one to 360; and in 1890 the ratio had risen to one in 320. In thirty years insanity had therefore increased from one in 523 to one in 320, or had come unpleasantly near to doubling the ratio to population in that period. The figures may be accepted as accurate, and a similar increase has been noted in nearly every civilized country where registration of the insane exists. In our own country we cannot go back so far with perfect confidence in our figures, but the general facts are very nearly the same, allowing for the difference of conditions. The ratio of insane to the general population, according to the latest figures, in the State of New York is one to 340, and in the State of Illinois it is about one in 400; rather less than the figures given for Great Britain. The older the country, within certain limits, the greater the proportion of insanity as a general rule. This is notable in the comparative figures of New York and Illinois; and if we take some other Western States with a less proportion of their population living in great cities than is the case in New York or Illinois, the difference would be still more striking. Insanity is a disorder that thrives in urban populations; great cities are hotbeds of degeneracy, and this is one of the forms in which it manifests itself most prominently.

It is possible that there is a certain fallacy in these figures of the increase of insanity, but not enough to vitiate them to any great extent. The better and

more reliable the statistics, the less liable are they to underestimate the proportion, and it is highly probable that their accuracy has been increasing with each decade. Any probable error, in any case, would be in favor of a better proportion, and of fewer insane. Another point to be considered is that with modern philanthropic methods and appliances the death-rate of the insane decreases, and the actual number alive and under care is increased. The proper method of estimating the actual increase would be not to take the actual proportion, but the number of new cases occurring each year, and this would probably give us somewhat better figures. There is little question, however, of the actuality of a certain steady increase up to a point where the equilibrium between cause and effect is established, and this is the more difficult under the conditions of change and stress of modern life.

Still another consideration is due in any American estimate of the increase of lunacy: it is that of the disturbing factor of immigration. This alone is enough to disturb the natural equilibrium to such a degree as to make statistics hardly an exponent of the real condition of things. In some parts of our country half or more of the insane under public care are foreign born, and while this is the case it cannot be said that the conditions are equivalent or parallel to those existing in an old and long-settled community, like some of the European nations, whose figures are available and are often utilized for comparison. The problem is a complex one, and the most we can say is that there is no question but that insanity is increasing to some extent in civilized nations, and those coming under the influence of civilization. The reasons for this fact and the exact ratio of increase are as yet unsettled questions.

## CHAPTER II.

## ETIOLOGY.

In considering the etiology of insanity one fact is predominant, that in the vast majority of cases, whatever be its immediate exciting cause, it is more remotely the result of a predisposition or favoring weakness, without which the direct and obvious cause would have been ineffective. This predisposition is found when sought in nearly every case, and when not found may often be inferred from the inadequacy of the apparent factors in the causation of the mental disorder. As Spitzka remarks, the sane are equally liable to the exciting causes of insanity, which are ineffective in them; it is only those that are especially vulnerable that suffer from such influences.

**Heredity.**—First among all predisposing factors of insanity must be reckoned heredity, or the hereditary transmission of a liability to mental breakdown or failure. It has been said in courts of law by prominent alienists that there is no such thing as hereditary insanity, but such an assertion is far less justifiable in this case than in that of many other disorders. Insanity as a result of imperfections of brain structures that are transmissible may be directly hereditary. It may appear at the same period of life in parent and child, and may even, as in the case of suicidal impulses, be photographically similar in type as well as chronologically equivalent. In certain extreme forms, such as idiocy and imbecility and original paranoia, the derangement is congenital, and it is in these especially that heredity is often the most manifest.

The part played by heredity has been somewhat

differently estimated by different authorities, largely on account of special views held as to what heredity is, and in part also owing to the use and dependence upon imperfect statistics. A family history of insanity is often concealed, and in the poorer classes, who largely fill the asylums from which the statistics are obtained, there is a very general lack of data in this regard. This fact is noted by some of the earlier writers, notably by Esquirol, and alienists generally recognize this possibility of error, though they may differ in their estimate of its importance. Confining the heredity to that of mental disorder, however, some of the latest statistics * give a percentage of from 30 to 35 in which there is a family record of direct or collateral heredity of insanity, which figure is undoubtedly rather under than above the truth. We can probably say that nearly 40%, at least, of the insane have some family history of mental disease, could all the facts be known. If recent theories of heredity are accepted,—that of Galton, for example,—ancestral defects may be manifested even in the fourth generation, and there are comparatively few who are able to trace their family record back to their great grandparents, as regards mental health or disease; there are few, therefore, who can give a clean bill of health in this regard. If the range of inquiry is extended to cover eccentricity or neurotic manifestations of one kind or the other, the probabilities of finding defects are vastly increased.

There is, however, as is well known, no fatal certainty of the transmission of mental or other defect; the children of insane parents may escape altogether, or it may appear in only one or two members of a family, or may skip one or two generations. Insanity, however, is as little liable to these examples as other disorders, and, in fact, it may be considered as one

*W. C. Krauss: "Medicine," Nov., 1897.

of the most hereditary of diseases, bearing in mind, at the same time, that the insanity of the parent is no insurance of that of the child, and that if it has occurred after the birth of the latter, there is a better chance of its escape. In that case the offspring inherits only the general weakness that caused the breakdown of the parent, not the added injury to the brain from the parental insanity itself.

Of the two parents, the mother is, according to the almost universal authority of alienists, the one whose insanity is most liable to be transmitted to the child. According to some authors, this maternal transmission is twice as frequent as that from the father, and the severer types of insanity are more likely to be thus inherited. Dagonet* suggests that as the mental development of the female predisposes her more to the essential or simple types of mental alienation than does that of the male, this fact may serve to account for the predominance of female heredity.

If besides the heredity of mental disease itself we take account of other neurotic and degenerative conditions, we greatly enlarge the scope of hereditary influence in the causation of insanity. Eccentricity, epilepsy, hysteria, "nervousness," intemperance, vagabondage, and criminality, as well as various organic and functional (so-called) neurotic disorders, are very often met with in the family histories of the insane, and there are certain disorders, the liability to which is inherited, that may alternate in the generations with mental disorder; among these may be named tuberculosis, and especially gout, and what the French call the arthritic diathesis, which is often a manifestation of a liability to neuroses of various kinds, insanity being included amongst their number. These conditions do not necessarily imply their being followed by insanity, for the reverse is generally the case, but

* "Maladies Mentales," Paris, 1894. p. 120.

they are sufficiently often its antecedent as to show a probable connection between them.

Alcoholism of parents is, on the other hand, so common an element in the family history of the mentally defective or deranged as to be justly counted as a predisposing cause, and one of the most important. It is especially manifest in the causes of idiocy, imbecility, and epileptic insanity, a very large proportion of the victims of these afflictions having a history of parental intemperance. The habit of drinking is, in a sense of the term, itself inheritable; the children of drunkards are often themselves more liable to become drunkards. These are matters of common popular belief, but they have also the authority of the experience of alienists and the medical profession. If intemperance were as common in the female as in the male sex, it would, as a cause of insanity, be much more important than it is at present.

Bourneville * found amongst 1000 idiots admitted to the Bicêtre in the decennium 1880 to 1890, alcoholism on the paternal side in 471; on the maternal side in 84; and on both paternal and maternal sides in 65. It was denied in 209, and facts were not obtained in 171. In 57 cases it was learned that conception occurred during paternal intoxication, and this was probably the case in 24 more.

Hysteria, epilepsy, and other neuroses in the parent have been already mentioned. It is not infrequently observed that the parents of the insane on one side or the other are themselves on the borderland of insanity; while not exactly over the boundary-line, they are erratic, peculiar, "nervous," or otherwise manifest a degenerative neurotic tendency. We have in these cases what has been called the insane diathesis; a condition that tends to insanity, if not in the individual himself, at least in his descendants. This is so common

* "Le Progres Med.," 1897. 21.

that it is a matter of popular faith that a cranky parent is liable to be a progenitor of insane offspring.

Syphilis in the parent needs to be mentioned here in connection with the occurrence of juvenile general paralysis, a disorder which is being more and more frequently reported. It is probable, however, that a syphilitic taint inherited from the parent may be also the cause of other forms of mental defectiveness, idiocy, epilepsy, etc.

Consanguinity of parents, as a source of intensified heredity, is a commonly accepted cause of insanity, but more especially of idiocy, deaf-mutism, etc. It is worthy of mention here that there appears to be sometimes a tendency of neurotics and defectives to intermarry, and thus produce this concentration of morbid heredity. This has not been very extensively noticed in the literature, but some striking instances of it have been observed and recorded.

There are no constant signs of a transmitted insanity, but the victims of this misfortune often exhibit characteristics that in a general way accord with their unfortunate inheritance. They are recognized often as peculiar, passionate, unbalanced, sometimes brilliant in some particular directions, from childhood, and long before actual mental disease appears. In other cases they present no special peculiarities, and only the family history seems to show the inherited predisposition. All types of insanity may be thus consecutive to this bad heredity, but the degenerative types in particular, paranoia, circular or periodic insanity, etc., are most characteristic as regards the prognosis of the attack itself. It is not necessarily bad in the so-called curable forms, but relapses are more apt to recur, and indeed are to be expected. As regards the especially degenerative types, original paranoia, circular insanity of short cycle, etc., the prognosis is decidedly bad.

As illustrating the heredity of insanity with types of morbid antecedents, the following analysis of a study by Koller * of the asylum statistics at Zürich is of service: In a total of 1850 patients, 78.2% were found hereditarily predisposed, and this heredity was slightly greater (6.8%) in the females than in the males. The greatest percentage of hereditary predisposition, as might have been expected, was found in the congenital types of derangement, and the least in epileptic insanity, which is to a certain extent due to accidental traumatisms. The percentages of heredity for the chief divisions of mental alienations are given as follows:

| | |
|---|---|
| Congenital insanities | 86.3 |
| Epileptic insanities | 65.2 |
| Paralysis, senile and organic | 70.9 |
| Simple idiopathic psychoses | 81.9 |
| Alcoholic insanity (females) | 79.2 |
| " " (males) | 69.1 |

As regards the types of parental disorder that are most liable to become transmitted as insanity in the children, Dr. Koller reckons the simple idiopathic psychoses in the first rank (49%), intemperance of parents next (20%), psychopathies (19%) and other conditions, such as apoplexy, nervous disorders, organic and senile insanities, etc., in a slighter percentage. Idiopathic insanity in the mother was found to be much more perilous to the offspring than that of the father; thus, with maternal insanity of this type the percentage of mental disorder was in sons, 48.9; in daughters, 48.6. With paternal insanity, on the other hand, the percentage was for the sons, 23.5; for the daughters, 28.3. Psychopathies in the mother were also more influential in transmission, but the case was reversed in case of parental intemperance, that of the father transmitting mental disorder to the sons

* "Archiv f. Psychiatrie," 1895. 268–294.

in the percentage of 44.7, and to the daughters of 33.9, while maternal intemperance gave a percentage of only 10.0 for the sons and 5.7 for the daughters.

These findings are not by themselves so conclusive as would be those from more extensive statistics, but they agree in the main with experience and observations elsewhere, and illustrate the general laws governing the hereditary transmissions of insanity, or, if it be considered better, hereditary predisposition to insanity

**Other Predisposing Causes.** — *Civilization.* — After hereditary defect, the conditions of modern life are perhaps more largely responsible than any other factors for the increase and extension of insanity. While lunatics are not unknown amongst primitive peoples, and are probably more frequent than appearances would indicate, inasmuch as there is little care given to their survival, and therefore any accumulation of insanity is improbable among them, it is in civilized countries that the frequency of insanity is incomparably the greatest. It is especially in those countries where civilization has made the greatest advances and life is more intense that we find mental aberration most frequent. In urban communities, also, rather than in the country, this tendency is seen most plainly; it is our great cities that fill our asylums and that furnish the majority of suicides and other evidences of unbalanced and disordered mind. This is in part due to the effects of stress, and the competition of modern life, upon minds that under other conditions might have remained sound, and in part to the tendency of these human agglomerations to produce degenerates and defectives. Men live in crowded cities under unnatural conditions, and perfect mental or moral development cannot be the rule so much as in the healthier surroundings of village or country life. In these latter, too, the average mediocre intellect can

find its medium, in which it can safely thrive, while it would be much more likely to succumb if transplanted into the hurry and bustle and the fierce struggle for existence of city life. Even savages suffer mentally by contact with a higher civilization and in the presence of conditions that tax and confuse their intellects, and they succumb to civilized vices without taking advantage of the better gifts of civilization. In the same way the foreigners, who are so numerous in our asylums, are largely the result of the change from a quiet peasant life to new and more trying conditions. The blacks in the Southern States, when in slavery, furnished fewer cases of mental disorder than since they have had to assume the responsibilities of freedom. Modern civilization in its intense form may be said to render every mind below a certain grade that is brought fully under its influence more or less predisposed to insanity.

It is a fact we have observed, and we believe that statistics will bear us out, that in the more highly civilized communities the depressive types are more frequent, and that their proportion to the whole number is increasing. Just what other causes are active in producing this is not certain, but we believe that civilization is one factor. This change of type has been specially noticed of late years in certain special types of mental derangement, but it exists also in other insanities to a certain extent.

A good instance of this tendency is found in paresis, a disease generally remotely due to an acquired constitutional vice that has, in all probability, existed in past centuries even more extensively than at present. Under the added conditions of worry, stress, etc., of modern life, this has of late years made paresis the special disease of the nineteenth century.

Modern educational methods, so far as they are responsible for mental breakdown, are so as they are a feature of modern civilization. The effects in this

way of vicious education, lack of proper training, etc., fall rather under the head of direct exciting causes.

We do not find in our experience the statement entirely correct that brain-workers are specially subject to mental breakdown, although there is sometimes an appearance of this. It may be different in some other countries, Scotland, for example;* but in this country the great mass of insanity is recruited from the ignorant or imperfectly educated, and those of higher or more thorough education are hardly represented in due proportion, at least in our public asylums in some portions of the country.

*Age.*—As a predisposing cause of insanity, age has an important part, as certain types are directly connected with the different stages of life. Insanity, apart from idiocy or imbecility, is rare in childhood, becomes more common at puberty, is most frequent in early manhood, and slightly declines in frequency as age advances, though this is partly due to the lesser expectancy of life at these ages. The victims of insanity die much more rapidly than the sane, hence the smaller percentage of lunatics past middle life. It is true, however, that the onset of insanity is slightly less frequent between forty and sixty than between thirty and forty, so that the smaller percentage of lunatics between these ages may be partly thus accounted for. Dagonet gives the following as the averages for each period of life, after puberty:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| From 15 to 20 | 7 | in | 100 | insane, | or | 1 | to | 14. |
| " 20 to 30 | 21 | " | " | " | " | 1 | to | 5. |
| " 30 to 40 | 29 | " | " | " | " | 1 | to | 3. |
| " 40 to 50 | 24 | " | " | " | " | 1 | to | 4. |
| " 50 to 60 | 11 | " | " | " | " | 1 | to | 9. |
| After 60 | 7 | " | " | " | " | 1 | to | 14. |

These figures of Dagonet seem high for the earlier period of life,—from fifteen to twenty,—but they

*McPherson: "Mental Affections," p. 40.

probably fairly represent the facts for the other ages. By far the largest proportion of cases occurs between the ages of twenty and fifty, and each extreme of this period approximates a critical vital period, the close of adolescence and the change of life.

The infrequency of insanity here in old age is only apparent; the senile changes in the brain are especially favorable to certain forms of mental failure, which, however, are not always accounted as actual insanity. It is at this period also that relapses occur of former mental diseases, and it is generally held that the climacteric period in women is an especially critical one in this respect. On the other hand, it is occasionally observed that old cases of long duration make a recovery or pronounced betterment at this period. Puberty is also another critical period that gives its particular type to the mental disorder.

*Sex.*—The relation of the climacteric in women to insanity has just been mentioned. Sex has, in other respects, also, an influence in the causation of the disorder. Certain causes, such as child-birth, lactation, pregnancy, are peculiar to the female sex; others, like alcoholism, traumatisms, etc., affect more particularly the male sex. Aside from insanity due to alcoholism and the ever-increasing paresis, there are probably more insane women than men, the difference being due largely to the more fatal character of the disorder in the male sex.

*Civil Condition.*—It is a generally recognized fact that marriage is conducive to sanity as compared to celibacy. The causes of this are doubtless to be sought for in the more natural and healthful life of the married than in the unmarried, the lesser temptations to immorality, and, in females at least, the natural fulfilment of their physiologic destiny. In the widowed insanity is somewhat more frequent than in the married state, but far less so than in celibates. According to

French statistics (Dagonet), the relative liability is in celibates nearly three times and in the widowed nearly twice as great as in the married.

*Professions and Occupations.*—But little need be said on this point. It is easy to see how certain occupations favor the occurrence of insanity more than others. Such are those which involve exposure to toxic agents, or special temptations to vicious habits, those that require irregular or unnatural habits of life, like those of sailors, soldiers, railroad employees, commercial travelers, liquor dealers, and, to a certain extent, those engaged in speculative pursuits, where there is always a degree of mental strain and abrupt changes. Prisoners, aside from the fact that they are already largely degenerates, are liable, from the confinement and monotony of their condition, to become subjects of mental disorder. In short, any occupation that is physically unhealthful or exposes to special temptations may be considered as conducive or predisposing to mental disease.

*Climate, Race, Political Conditions, etc.*—Climate can hardly be considered as affecting the chances of the occurrence of mental disorder, though it is possible it may have its effect upon the other factors, the time of its appearance and its type. The relations of race to insanity have been studied by some authors, and there is a general agreement in their findings, but the data are incomplete and imperfect. The Jews appear to be especially liable to insanity, though they are apparently less liable to certain forms, like general paresis. The northern races, the Scandinavians and Germans, according to the statistics, seem more liable than the southern ones to the depressive types of insanity, and this is apparently true to some extent in the northern sections of the same race. The northern Slavs, in Russia, give a predominance of melancholic type, while the southern Slavs, in Austria, are more generally

of the excited type. Whether this is a matter of race or climate, or of other conditions, political or otherwise, it is impossible to say with our present knowledge, and, as stated, the data are too imperfect for positive generalizations.

## EXCITING CAUSES OF INSANITY.

From what has been said it will be understood that with an existing predisposition admitted, almost anything that could sufficiently disturb the normal healthy action of the brain may give rise to more or less lasting mental derangement. The exciting causes of insanity are, therefore, infinitely numerous, and it is possible to enumerate only those that are most frequent and permanent among them.

**Moral Causes.**—The so-called moral or emotional causes of insanity are, for the most part, only evidences of a strong predisposition, or pronounced mental instability, that requires only the slightest touch to disturb its balance. In a certain proportion of cases, however, they represent actually efficient factors sufficient to break down even a normal mental constitution. Taken altogether, they account, at least ostensibly, for nearly or quite one-half of all cases of mental disorder.

*Mental Shock.*—It happens occasionally that the apparent beginning of an attack of insanity dates from a mental shock, fright, the hearing of bad news, the death of a dear friend, or some other strong or sudden cause of emotional excitement or disturbance. The psychic effects of such are so well known that it is needless to dilate upon them, and it is therefore the more easy to conceive how they can produce mental derangement. It is possible that this cause is, as some have suggested, more common than is generally supposed.

*Domestic Troubles.*—Among the alleged causes of

insanity in reports of hospitals and asylums, domestic troubles have a rather prominent position. In the reports of two New York asylums (Utica and Binghampton) for the nine years ending in 1896, this cause was alleged as responsible for the insanity of 377 out of a total of 6842, or 5.4%. If we add financial worry and trouble to this, the proportion is decidedly greater. It is these that are in all probability the direct exciting causes of paresis in a large proportion, at least, of all the cases. Their importance is therefore an increasing one.

*Disappointments in Love.*—These are also popularly considered as frequent causes of insanity, but are probably seriously effective only in strongly predisposed individuals. They furnish at best only a very small percentage of the cases of insanity from moral causes.

*Religious Excitement.*—This is another probably overrated cause of insanity. It does not follow because insanity has a religious tinge that it originated from religious emotional disturbances; the exact reverse of this is sometimes the case. It occurs, however, sometimes that in revivals or on other occasions predisposed and neurotic individuals occasionally break down mentally, either temporarily, or, it may be, occasionally into lasting insanity. In religions that demand excessive bodily austerities, in the way of fastings, penances, etc., it is not improbable that they may often be the cause of mental disease.

The other possible moral causes of mental disorder hardly require notice. Anything that can intensely excite the emotions may under certain circumstances cause mental breakdown. It is possible that some of the cases of post-connubial insanities reported may have been thus caused by the shock to virgin modesty, or the realization of virile incapacity, at least in part.

**Physical Exciting Causes.**—These include the great

mass of etiologic factors of insanity, and cover the widest possible range; a large proportion of them may be roughly classified into traumatic, toxic, exhaustive, and organic causes. Of these, the first-named class is the least frequent and important; the other three often cooperate in the same case or individual. To these should be added developmental factors which have an important part in the production of certain forms of insanity, sometimes even independently of the three previously named.

*Developmental and Critical Periods.*—There are several important periods in human life that have a more or less pronounced influence upon mental development and health, and that may so affect it as to produce idiocy, imbecility, or insanity. The first of these, when acquired, originates in the earliest critical period, that of infancy. The early exposures, the infectious diseases affecting development, and traumatisms, all have their part in these changes. In the second important developmental period, that of puberty and adolescence, we have the beginning of certain degenerative or quasi-degenerative forms of insanity, to which the victims sometimes seem to have been predestined from birth, or, as the heredity in these cases is generally manifest, from generations before. At the close of the reproductive period of life, especially in females, there is another change, the importance of which as a cause of mental disorder, though probably overrated, is yet a considerable one. The insanity of old age has been already mentioned, but so far as it is due to the natural changes of age, it also falls to some extent under this head, which includes not only the incidents of the evolution of the individual, but also those of his gradual dissolution or decay.

*Traumatic Causes.*—Under this head are included not only traumatisms that can directly or indirectly affect the central nervous system, but also insolation,

physical or surgical shock, and whatever else may in the way of accidental or purposed injury disturb the intellectual or emotional life in such a way and to such a degree as to cause what we may call insanity. Traumatisms themselves, apart from those of the brain, are probably less liable to give rise to actual insanity than to neurasthenic or hysteric symptoms, such as are not infrequently observed from railway injuries and similar accidents. Sunstroke, in this country, is a well-known cause of mental disorder, which may possibly be manifested, however, at a date rather remote from the accident itself. Surgical operations, especially those upon the genital organs and the eyes, have been credited with the origination of mental disorder, and considerable has been written of late years upon this special point. It seems not improbable from what we know of the effects of castration in man and animals that there is truth in this reference, but recent acquisitions as to the effects of ablation of the internally secreting glands, to which class the ovaries and testicles probably in part belong, suggest that there may be an autotoxic element also in the insanity thus produced. The possible effect of powerful narcotics, such as the anesthesias employed, is a factor not to be neglected in this connection, and leads to the consideration of the next class.

The effects of gynecologic disorders in the production of mental disease is insisted upon by a school of alienists in this country, and especially in Canada, at the present time, but the general consensus of opinion amongst alienists and neurologists scarcely agrees with them. It is quite possible that in some cases operative interference for diseased conditions of the female organs of generation may have good effects, but this does not prove that they were the sole cause of the mental disease. As a cooperating cause they may very well be of importance in many cases.

*Toxic Causes.*—As usually understood, these include the toxic substances or agencies that may give rise to mental disorder, such as alcohol, morphia, cocain, absinthe, lead, chloral, etc., and also paludal, syphilitic, etc., infections. To these may also be properly added the auto-intoxications from the retention of products that should normally be eliminated, or their overproduction in the system. Of late years the auto-intoxications have been more and more invoked for numerous ailments, and insanity is one of these that gives a wide range for this possible action. Many cases of insanity that were formerly attributed to sympathetic or reflex influences are now considered to be due to an auto-intoxication, it may be from the digestive tract, or possibly from the over- or under-functionings of some one of the important internal secretions.

The most notable perhaps of mental defects from deficient gland secretion is seen in cretinism, and the mental symptoms of myxedema are a milder manifestation of the same morbid state. Other forms of mental disorder from special gland disease are not so clearly established, at least so far as the direct relation of cause and effect is concerned. It is easy to conceive, however, of mental disorder from deficient action of the liver in excluding toxins from the circulation or from impaired renal functions, etc. In these last cases the question often arises, nevertheless, as to whether the insanity itself may not directly or indirectly give rise to the organic disease, or whether both may not have a common cause. Imperfectly functioning kidneys are almost a normal occurrence at times, but the disordered action may not extend to a pronounced morbidity, though it is probable that an absolutely sound kidney in advanced or even in adult life is almost the exception rather than the rule. In insanity the chances of kidney derangement are increased in many ways, and it is not remarkable that

disease of these organs should be very frequently met with in the insane. The direct etiologic relation of these conditions therefore, though often probable, is not always clearly demonstrable.

Auto-intoxication from the digestive tract, and especially intestinal auto-intoxication, is one of the best-established etiologic factors of insanity, and its practical importance will be noted later on. Its importance is not always as much emphasized in this relation as it should be. As regards derangements of general metabolism in various diseased conditions much might also be said, as well also in regard to the effects of bacterial and other organic toxins in the production of mental affections. It would probably be possible to find cases of insanity occurring after every form of serious bodily disease, and we might make an etiologic species for each. In the severer infectious disorders mental derangement is a comparatively frequent sequence, and is in many cases and to a large extent due to the toxins of the disease. There is no reason why special bacterial toxins may not have their own special effects, and in some cases color the mental disorder as do the special neurotic poisons that are so commonly the cause of temporary or lasting mental derangement. It has not seemed necessary, however, to us to recognize all the different etiologic forms that have been proposed, and we do not believe the clinical syndromes are so constant or pronounced as to justify the distinctions.

*Drug, etc., Intoxications.*—Of these, alcohol certainly takes the lead as a cause of mental disease. It is itself directly the cause of many cases of insanity and indirectly is responsible for even a much larger proportion. Acute alcoholism—delirium tremens—is itself a sort of insanity, but this is not usually reckoned when estimating the proportion of mental disorders caused by alcohol. The estimates vary from 8 or 10

to 20 or even 40%. Some years ago one of us made as careful a study of this subject of the alcoholic etiology of insanity as appeared possible at the time, and came to the conclusion from his inquiries and observations that about 10 or 12% of all cases could be directly attributed to this cause; *i. e.*, that it was the chief if not the sole agent in the causation of that percentage of cases. This agrees fairly with other estimates by alienists who have studied the subject. Indirectly and as a cooperating cause its action has a much wider range, and it may thus even have its part in as much as 50% of all cases. Any estimate, however, can be only an approximate one, but the main fact remains that it is one of the most important causes of mental derangement. As a direct cause it is effective chiefly in the male sex; women are much less frequently its victims. Kraepelin, who is a careful observer, finds only about 6% of his alcoholic cases in women in Germany, where a certain amount of alcoholic indulgence is more common in females than in this country. It is not likely that the figure would be exceeded here. Indirectly, however, they suffer as much or more than men from this cause, and the amount of insanity in women due to the poverty, abuse, domestic troubles, and hardships caused by intemperance is probably greater than that in men. As regards abuse, it is often given as a cause of derangement in women, but we have never seen but once the cause given as abuse by a drunken wife. According to Clouston, the percentage of insanity due to alcohol is increasing, it having reached 24 in his own institution.

The *modus operandi* of alcohol in causing mental disease is through its direct action on the nervous system, which has been studied to a certain extent by Kraepelin and others, but which will be more particularly noticed when we come to describe alcoholic insanity. Mention has already been given to the

effects of alcohol on heredity and the production of mental disease in the offspring of its victims.

Morphin and cocain are other powerful drugs that produce insanity of special types, and are, like that from alcohol, noticed more particularly in the special portion of this work. Other drug intoxications worthy of mention are those from lead, which may produce paretic symptoms, and which we have observed as of an obstinately suicidal depression, chloral, mercury, the toxin of pellagra from diseased corn, etc.; these are all of interest, but their frequency in this country is slight, and they are hardly appreciable as causing any proportion of the aggregate of insane cases.

Lastly, we may notice the toxins of certain diseases, and the only one calling for very special remark on account of its importance as a cause is that of syphilis. This, through its direct action on the nerve-centers, may be an immediate exciting cause, or it may so prepare the system for the action of other exciting causes as to be a very important factor in the etiology. In the first case we have the lesions of syphilis, the gummata, the meningeal and vascular inflammations, the general cachexia of the disease, etc. In the latter the action is more mysterious; it would seem as if there was a toxin lying latent in the system, but called out into action by some other condition or cause, such as worry or overwork. This parasyphilitic insanity is chiefly seen in the form of paresis or paretic dementia, which is now generally recognized as a toxic insanity, and almost, if not quite, always with syphilis as an antecedent. It may perhaps be rightly considered as a sort of late syphilitic manifestation, a quaternary form of the disease. We have only recently come to accept its syphilitic nature, and there is much yet in its etiology to be studied and worked out.

An insanity of tuberculosis is recognized by some

as a toxic insanity, and it is such through the disorders of the general metabolism it induces in its later stages, when the mental disease usually appears. The evidence that it is directly due to any bacterial toxin, like the virus of syphilis, seems to us, however, to be lacking.

*Exhaustion.*—It is difficult often to separate the insanities of nervous exhaustion from those due to toxins, either of internal or external origin. The post-febrile insanities, which are typical in their phases of nervous weakness, may be due to one cause as much as to the other, and even in those cases from overstrain and stress acting directly upon the nerve elements it is not always possible to exclude a toxic factor. We know, however, with tolerable certainty that there is a nervous exhaustion from fatigue, and from lack of balance between waste and nutrition, that may go to the length of destroying mental equilibrium, and often does so, thus producing what may be called a pure exhaustive psychosis. This may occur after wasting diseases, after overwork, physical or mental, after hardships and starvation, masturbation and sexual excesses, and whatever depresses nutrition and fatigues the nerve-cells without allowing proper restoration for sufficient periods.

*Organic Causes.*—These include gross diseases of the brain, such as occur from arterial disease, sclerotic changes, hemorrhages, embolism, etc. Under this head we have apoplexies, softenings, senile wasting, neuritis, morbid growths, etc.

In conclusion, it should be said that in perhaps a majority of instances the attack of insanity has more than one of these classes of causes in play in its origination. Thus, in the case of paresis which is directly excited by worries and mental stress there must be, as a rule, a system prepared by the toxins of specific disease. In many cases, also, of exhaustive insanity,

some toxic agency, mental shock, or some other disturbing factor enters into the production of the attack. The causes of any attack of insanity are not always obvious, and often require close study; sometimes the alleged or supposed causes—for example, masturbation or religious excitement—are found to be mere early symptoms, and to have no etiologic connection whatever with the disease. On account of these facts hospital statistics are unreliable to a large extent, as they give, as a rule, only the alleged causes as stated in the paper of commitment, which are very often erroneous.

In every case the remote as well as the apparent immediate causes should be taken into consideration, and questions of hereditary taint, neurotic personal antecedents, previous habits, etc., be thoroughly investigated. It must be remembered, also, that in most cases the causal factors are multiple; it is not the rule for any one to be the sole agency in producing the insanity. This is true of the exciting causes by themselves, and still back of these we have to reckon with the great predisposing influences which are in action in nearly every case.

In conclusion, something should be said of the contagion of insanity. It is popularly believed that those who have to do with and care for the insane are themselves specially liable to be similarly afflicted. This is true only when predisposition exists; the contagion is purely mental, the influence of association, and generally implies a pre-existing mental weakness on the part of the recipient. *Folie a deux*, or communicated or imposed insanity, is the imposition by a stronger mind on a weaker one of its own delusions. It is generally observed in cases of very close association and relationship, as between parent and child, brothers and sisters; and the communicated insanity is very generally cured by removal from contact or association

with the imposing agent. Only when both are alike seized with similar delusions, and neither one is the passive party rather than the other,—the so-called simultaneous insanity,—is the prognosis alike unfavorable for both.

It is not well, as a rule, for children or young persons in the formative stage of mind or character to too intimately associate with the insane, though the danger is probably not so great as is popularly supposed. This is especially the case when insanity is in the family, as then a predisposition may be assumed to exist. This has an important practical bearing on the question of the home treatment of insanity, that hardly requires any explanation.

## CHAPTER III.

## PATHOLOGY.

In the definition of insanity adopted here the pathology of insanity is expressed; it is a disease or defect of the brain. Speaking more exactly, it may be said to be a derangement of the functions of those parts of the brain, the centers of the cerebral cortex and their connections, that are concerned in the intellectual and emotional life of the individual. Taking all forms of mental alienation into consideration, we have in the extreme types of idiocy a very obvious cerebral defect; the organ of the mind is insufficiently developed to permit the performance of its normal functions, and the defect is often a gross macroscopic one, intelligible even to the ordinary observer in the microcephalism and the misshapen cranium which correspond to the expressionless visage and the purely animal propensities and behavior. From this extreme we have every gradation in the more or less pronounced type of partial idiocy and imbecility down through the various degenerative forms of alienation to the intellectual paranoiac or cyclic case, in whom only careful measurements and the observation of an expert can detect the stigmata. In all of these there is a more or less pronounced cerebral defect; the mental alienation is the result of arrested or misdirected development, due either to fatal congenital defects, or to those that, existing, lacked the counteracting influences of training or environment. Not every case of cerebral degeneration tends inevitably to insanity, but such structural deficiencies seriously handicap their bearers in the difficult struggle for existence, and very often lead to

mental disorder when not obviated by care and training, especially through the critical developmental epochs of life. If we were to examine the inmates of any large asylum and compare them with an equal number of individuals of like social position outside its walls, we would probably be struck with the excessive proportion of misshapen crania, facial, aural, and other deformities in the one class as compared to the other, taking each as a whole. If we take a special group of insanities, the degenerative types, the paranoiacs, the hysteric and neuropathic cases generally, only for the comparison, the difference will be still more marked. According to Knecht,* these degenerative stigmata are four or five times as frequent in the chronic insane as in normal individuals. They are the external signs of the insane predisposition, and, as Spiller † says, "they are related to still further abnormalities in the finer structure of the brain that cannot be detected by the microscope." It does not follow, however, that the reverse of this is true, that the finer structural defects connected with mental alienation are necessarily connected with macroscopic signs. The grosser abnormalities, either in external physical stigmata or aberration in the cerebral convolutions, may be absent or so inconspicuous as not to be characteristic. This, it is true, is only the case in a minority of the insane, and more especially in those in whom no predisposition is known to exist. In the not very common cases where there is opportunity for an autopsy of acute insanity, there is usually, beyond a congestion and the conditions referable to the disorder that directly carried off the patient, nothing in the naked-eye findings that accounts for the mental disorder. Until within a few years it was certainly true,

*Verein deutscher Irrenärzte, Hannover, 1897, "Neurol. Centralbl.," 1897, No. 20.

†"Philadelphia Med. Jour.," Mar. 12, 1898.

as Spitzka has said, that in at least 40% of the insane we could find no characteristic lesions of their disease, and in half the remainder only such as might also be due to other morbid conditions. The more recent acquisitions in the anatomy and physiology of the nervous centers have nevertheless opened up a field for rational speculation, at least, if they have not fully demonstrated the basis of all forms of insanity. The changes in the nerve-cell from fatigue, and toxins, demonstrated by Hodge, Barker, and others, are suggestive of the conditions in certain psychoses; and the same is particularly true of the theories of Flechsig, who finds the cerebral cortex chiefly composed of associational or intellectual centers that develop gradually after birth and are only complete at full maturity. Their disorder, or that of their infinitely ramifying and complex connections, can readily be supposed to account for mental derangements, and it is possible to build up elaborate theoretic explanations of the various symptoms on the basis of these findings and their probable extensions. Flechsig's ideas are, however, yet *sub judice*, and are not accepted as final by all neurologists, and any theory based upon them must be taken simply as theory—not as established fact. This is true, also, of the theory of Dercum, that all types of cerebral derangement may be caused by imperfect or failing contact of the neurons, which are supposed by him to be movable in their dendritic extensions.

It is possible, and perhaps one might say probable, that one or both of these theoretic explanations of mental disorder may be true; but at present they are imagined, not demonstrated, explanations.

When we come to enumerate the actual lesions that have been met with in chronic insanity, we find ourselves in the presence of an infinite variety of morbid conditions, such as might be expected when we con-

sider that insanity is itself a disorder of functions, and that it may therefore be the result of whatever can affect the normal action of the intellectual and emotional cerebral centers. The fact, also, that lost or perverted function must have its effects on the organ is also to be borne in mind, and that the lesions found may be as well the results as the causes of the insanity. Some of the appearances are, moreover, only the exaggeration of what is often seen in normal brains, due to the more excessive and ill-regulated excitations of the insane—and such, for example, may be the thickening and opacity of the arachnoid, and the extent and abundance of the Pacchionian granulations. Others, again, may be a persistence, and exaggeration perhaps, of an infantile condition,* such as the extensive craniodural attachment sometimes met with that is not apparently connected with acute inflammatory processes. These latter also leave traces in adhesions that are especially notable in certain organic insanities, and general paresis in particular. They are also often met with in old cases of secondary dementia, but are less numerous and extensive. Arachnoid cysts and ecchymoses, ossifications of the dura, miliary sclerosis of the cortex, are also conditions claimed to be rather frequent in old cases of insanity, and atrophy of the brain is a common result of long-existing terminal dementia. Edema and anemia are also noted in certain cases. In organic and senile insanities, including under these heads the traumatic forms, we have, of course, every possible lesion that can derange the normal functioning of the brain. The condition of the vascular system is largely the starting-point of these, and arterial disease, either as atheromatous degeneration or sclerosis, or direct in-

*This does not refer to inflammatory adhesions, nor in this class of lesions do we include those arrests of development such as we found in idiocy or imbecility, but simply to local anomalies that are not always incompatible with normal cerebral action, but which afford points of weakness under favoring conditions.

flammatory conditions of the vessels are often observed. The lesions also indicate at times a direct toxic or bacterial origin, as in acute delirium, which seems to be sometimes, at least, an infectious and usually rapidly fatal disorder. Alzheimer has called attention to a morbid proliferation of the glia cells and fibers as a common finding in different forms of acute and chronic mental disorder, and holds that this is the more marked the older and more hopeless the case.

In estimating the value of any of the pathologic findings in insanity a number of points have to be considered. The fact that a large proportion of the lesions found are secondary to the disorder, and not its cause, has already been noted. This is particularly true of the microscopic findings, and one has, moreover, to sometimes question the methods, and query whether some of the apparent lesions may not be due to reagents employed. Then the fact must also be kept in mind that has been mentioned in a preceding chapter, that with many of the subjects of mental disorder there has existed a predisposition; they had already unstable brains, ready for disordered function on any provocation. It may be said, indeed, that in acute insanities, as a rule, the more minute and microscopic lesions are practically unknown, or at least that they have not yet been fully and satisfactorily demonstrated, except possibly in intensely toxemic types, such as acute delirium and paresis; and that in the chronic forms they are multiform, and, except in certain special types that can be better described later in the special pathologic portion of this work, they are hardly characteristic. This, of course, excepts those cases where there are pronounced anomalies of the brain, as in idiots, and other defectives, and the gross appearances that have been mentioned as common in a large number of the insane, the evidences of causal organic disease, traumatisms, tumors, etc.

## CHAPTER IV.

## GENERAL SYMPTOMATOLOGY.

The symptoms of mental disorder that especially mark it as such are chiefly psychic, and this is so commonly recognized that to the average public they are the only and exclusive ones. There are, it is true, a large number of physical phenomena accompanying insanity, and some of these are so characteristic of and peculiar to the condition of mental derangement that they cannot well be overlooked in discussing their semeiology. There are also many others that are shared in common by various nervous disturbances, and their connection with insanity is, as it were, only incidental; these may in part also receive notice here. When the brain is diseased, the whole body suffers; and this suffering may be through a direct trophic or other influence exerted from the great nerve-center, or it may occur simply as a secondary result of the mental derangement, of the want of the conscious or the subconscious care that the normal individual constantly exercises over his physical welfare. We can hardly agree with Kraepelin when he says that all these do not belong to the phenomena of insanity as such, for it is impossible to completely sever the mental from the bodily symptoms, especially in the disorders of perception which are so closely related to our physical sensations. There are also a large number of bodily symptoms that are almost, if not quite, peculiar to insanity; they only occur in cases of mental disorder. While some of these are more or less restricted to certain forms or types of insanity, others are so generally met with or so eccentric in their occurrence as to well

deserve notice in the general as well as the special symptomatology of these disorders.

Without committing one's self to any special psychologic theories, we can divide the manifestations of mind into four great heads: viz., the sensations, the judgment or intellect, the emotions, and the will. Under the sensations must necessarily be included their conscious appreciation, and the term perception might have been used, though it would be in some respects undesirable for the purpose, as it has a wider application and can be equally associated with the feelings or emotions which for convenience are here separately considered.

Sensations, and to some extent emotions, are the starting-point of all mental activity. An individual born without any sensory organs, were it possible for him to survive, could have no mental development whatever. The essentials of a sensation, with its consequent perception, are an end-organ, a connecting nerve, and a group of perceptive ganglia or cells. In considering mental symptoms we can neglect lower ganglionic or spinal centers, and confine our consideration exclusively to those of the cerebral cortex, where the mind, so to speak, takes cognizance of the message from the periphery. Any of these organs may be deranged, but in insanity it is the alterations of the sense perceptions rather than their suppression that has a symptomatic importance, and then chiefly only when the sensation is not only disordered or perverted, but is so received by the mind as to affect or falsify the judgment. In insanity the judgment must be involved in perceptive or sensory disorders, and practically therefore the mental division is threefold, though for convenience a fourfold division is here adopted.

Growing out of this fourfold division of mind we have, as characteristic derangements of the perceptions

and the judgment, delusions, illusions, and hallucinations.

**Delusions.**—A delusion is simply a belief in the truth of that which is not true; it is a false belief. Delusions have been and are still considered as the essential characteristic of insanity, but this can hardly be said to be true in the sense that they are at all peculiar to insanity. In fact, it is one of the most difficult of all possible definitions to define just what an insane delusion is. Beliefs of all kinds depend so much upon training or education and environment that it is almost impossible to say what may not be an individual or general faith at any one time. There are a few delusions that seem intrinsically insane, such as a man's believing himself the Deity, or thinking that he is pregnant and about to give birth to a child; but even these by themselves alone, under certain conditions, would hardly be evidence of mental disease. It is less important to the physician than the jurist to have an exact definition. We recognize insanity by the consensus of symptoms, but in courts and for legal purposes it is often necessary to be able to say in at least a general way which is an insane delusion. The following will perhaps serve as well as any other, though its defects are obvious: An insane delusion is a false belief that is incompatible with the training, education, and general environment of the individual; and moreover should be as to a matter of fact or should be contrary to the usual habit of thought of the individual.

Each case must be judged by itself, and what would be evidence of insanity in one would be of no value in another.

There are certain characteristic types of delusions in insanity, however, and these when recognized have, in connection with other signs, an almost pathognomonic value. Such are the persecutory delusions of the paranoiac, the self-accusatory ones of the melancholiac,

and the exalted and optimistic notions of paresis and some other forms of insanity. The fixed and permanent nature of some and the changeable and unsystematized character of others are also characteristic. The whole subject of delusions is one that can be best treated in connection with the separate forms in which they appear in the special pathology of insanity.

The origin of insane delusions may be in many ways, according as the original impression is made upon the disordered and defective judgment. Some delusions are simply the result of simple suggestion acting on exalted emotional conditions when judgment is in abeyance. Such, for example, are the flighty delusions of the acute maniac and the exalted paretic. Illusions are responsible for some, hallucinations for others, and in many cases, no doubt, they have their origin in dreams or the dreamy states of consciousness of many forms of insanity. In other cases they arise from excessive dwelling of the mind on single ideas and suspicions; they take their start from an egotistic misinterpretation of facts, a sort of mental illusion; such, for example, are often the persecutory delusions of systematized paranoia. In still other cases they are simply the result of day-dreams of an ill-organized intellect, as in the partial delusions of original paranoia. Whatever their origin, they are symptoms of defect of intellectual discrimination or judgment; they are the symptoms of disordered intellect *par excellence*.

**Illusions.**—An illusion is a false perception of a real impression. The object sensed is not recognized in its real character, but is perceived as something else. A familiar example would be the mistake of taking a crooked stick or a piece of rope on the ground for a snake, and in this case the natural dread of the reptile aids in producing the deception. An illusion is not always or even commonly an indication of insanity;

we are all of us liable to be deceived with these common everyday impressions, but these false perceptions of real sensorial impressions are vastly more common in the insane than in the sane; they are in all cases errors of judgment of true sensorial impressions, and, as has been said, they are delusional phenomena, false beliefs based upon correct premises. The disordered condition of the brain does not permit its intellectual center to exercise correct judgment on what the senses normally bring to it.

Illusions of sight are the most common in the insane, and one of the most striking examples of this is the very frequent illusion of identity. The insane person sees an acquaintance and mistakes him for an entirely different individual, or vice versa. In conditions of great excitement almost everything that happens about the maniac and of which he is rendered cognizant by his senses is thus misinterpreted, and this is, if we consider it, readily seen to be only an exaggeration of what occurs with those who are not insane. Beard has pointed out very strikingly how no one in sudden panic or in other conditions of intense excitement is a competent witness as to what he sees, and the active maniac is in a constant state of mental excitation that vitiates his perception as well as his judgment.

Next to illusions of sight come probably those of hearing, and all the senses may be thus subject to misinterpretations in states of mental disease. A very striking class of illusions is that of the internal or visceral sensations; a vague bodily sensation is attributed to some special cause altogether different from the reality. These are sometimes indicative of local visceral disease; a patient may complain of having a snake or some other living thing in his abdomen from the sensation aroused, let us say by a colonic stricture, or some other diseased condition.

It is often extremely difficult to separate illusions

from delusions, on the one hand, and from the conditions next to be described—namely, hallucinations. An insane illusion is in fact associated so universally with a delusion that they can hardly be considered separately; and, on the other hand, it is often impossible to say where illusion ends and hallucination begins.

**Hallucinations.**—A hallucination is a false perception without a material basis, not, like an illusion, merely a misinterpretation of a message conveyed to the perceptive centers by the sense organs. The whole message is, we may say, a forgery; the consciousness is deceived into accepting as true what does not exist. The pathology of hallucinations is a difficult subject in some respects; the problems it involves are complex ones, but the best explanation of them is probably that they are symptoms of excitability of cortical perceptive centers, that reveals itself by the external projection of combinations of the images that have been stored up from former impressions. A very apt illustration of a hallucination and its explanation as given here is the well-known fact that persons who have had limbs amputated still have at times sensations which they refer to the absent member. The limb is gone, and therefore they cannot really feel it, but its cortical sensory center remains, and cannot be altogether put out of action; hence the sensation of the lost member. The illustration also shows that hallucinations are not necessarily a symptom of insanity; in fact, hallucinations are not infrequently met with in the sane, and can be readily produced under certain circumstances. They are, however, always a sign of central disturbance, of disorder in the cerebral cortex, and have therefore a special pathologic importance; and while they may, and often do, occur with perfect intellectual integrity, their existence in those who in other ways also exhibit evidence of mental derangement is always a matter

for attention. Probably the most generally involved of the special senses, taking all forms of hallucination, sane and insane together, is that of sight; but any of the senses can be thus involved, and in the insane every possible form of hallucination is occasionally met with. As might be understood from their assumed pathology, hallucinations are commonly a reflex result of some peripheral irritation, sometimes a disease of the peripheral organ of the sense involved, or its central conductors; but in other cases it may be from an entirely different source—some other special sense, for example. Hallucinations may also be unilateral, and connected with disease of the corresponding sense organ of that side; and if bilateral, they may be different on the two sides. Whether there are hallucinations of purely central origin is a question that has been disputed. There is no good reason, however, to assume it impossible for excitations to arise in the cortical centers themselves, especially when one takes into consideration the usual effects of long-continued use. Habit alone will be sufficient to account for such, and there are cases enough where no exciting impressions can be detected. Local cortical disease of irritative nature may also be invoked as producing central hallucinations in some cases, the center itself being naturally involved in the irritation.

*Auditory Hallucinations.*—The most important class of hallucinations in the insane are those of hearing. They are important not only on account of their frequency, but also because of their association with especially dangerous types of mental disease and their relation to the prognosis. They are not very often met with in the sane, and when they do occur, are generally of rather evil significance. A patient may for a time realize their unreality, but their persistence tends somewhat more than is the case with those of sight to finally impress themselves upon his conscious-

ness as real and not fictitious, and to affect his ideas and acts accordingly. They may occur simply as subjective sensations of noise, little differing from the tinnitus aurium in the sane, which is hardly recognized as an hallucination. They are apt, however, to take on a special character, and to be referred to some external cause, though the patient may be unable to state just what this is, and can only describe them by imitation or onomatopeia. The typical auditory hallucination, and the one that is most commonly recognized, is a verbal one. The patient hears voices, and generally words expressing definite ideas, though he is often unable to properly refer them to any speaking person. Their utterances may be agreeable, but it is more often the case that they are abusive, threatening, or commanding, and annoying or absolutely distressing to the patient. The belief in their reality is so general that they are a positive source of danger, and some experienced alienists have maintained that every patient with hallucinations of hearing must be considered a dangerous lunatic. That this is invariably the case may be questioned, but as a general rule it may be said that they are an indication of possible dangerous tendencies, and that as a class the patients thus hallucinated are to be considered untrustworthy. The reason of this is obvious: These voices are direct incentives to acts, and as their general character is abusive or malignant, in one way or another it is easy to see how they may give rise to assaults or crimes. This is more particularly the case when they are referred by the patients to individuals about them, as is sometimes the case. A rather rational epileptic patient, who was subject to these hallucinations, in some of his post-epileptic states feelingly expressed his fear of their affecting his actions. He was to a certain extent conscious of their falsity, but he said they came upon him so unexpectedly at times, and when he was

irritably weakened, that he feared he might even commit a crime at their dictation or provocation.

There is a curious phenomenon closely related to these hallucinations that may be considered here. Instead of external sounds or voices, the patient may have a consciousness of an internal voice that may be as real to him as any external auditory perception. In this case the word-center in the brain is involved, and Séglas has given to this phenomenon the name of psychomotor hallucination.

Auditory hallucinations are not confined to those who are sound in hearing; the deaf insane often have them, and also the corresponding inner hallucinations. It is said that Beethoven in his later days still composed music, and though his hearing was lost, he had, as it were, a perfect subjective sensation of hearing his own works. It is quite possible to believe that this power of auditory mental imagery was so great that it might culminate in an actual hallucination of hearing his own music.

Patients sometimes complain of mind readers repeating their thoughts which they believe they hear uttered immediately as they arise, and this has been called the "echo of thought."

The chief characteristic of auditory hallucinations is the faith in their reality on the part of the subjects, and the consequent effects on conduct. It is said by Regis that the subjects of these have a special physiognomy, showing itself in a wider-open, brilliant eye, and a general expression as if they are not taking note of things directly about them. Be this as it may, there is usually, at least to long observation, some peculiarity of manner that will betray them—a listening attitude, sometimes a movement of the lips as if talking to some one, or some other sign of attention to these subjective but externally projected sensations.

*Visual Hallucinations.*—Hallucinations of sight,

while less common in the insane than those of hearing, rank next to them in frequency. They are especially characteristic of certain toxic forms of mental derangement; acute alcoholism, for example, and hashisch intoxication, which is often a continued series of visual hallucinations. They occur also very largely in post-febrile insanity with other sensory hallucinations, and are common in pre- and post-epileptic conditions and other neuropathic forms of mental disorder.

They are sometimes of an agreeable character, especially in the milder delusions, and in some chronic cases, but in pronounced insanity of the acute type they are more apt to be disagreeable and terrifying. This is their character, as is well known, in delirium tremens, while in hashisch intoxication the reverse is apt to be the case.

The significance of visual hallucinations is much less serious than that of those of hearing. They occur more generally in acute and curable forms of derangement, and while they may give rise to excitement and agitation, they are not, as a rule, incitants to dangerous acts.

*Hallucinations of Smell and Taste.*—These are also frequently met with, though less common than those already mentioned. Patients frequently complain of foul odors, of gases being forced into their sleeping apartments; and such complaints are not uncommon with certain forms of persecutory delusions, which are largely based upon them. They think they taste poison or defilements in their food, and base whole persecutory delusions on these symptoms. They are therefore more commonly associated with the dangerous forms of insanity, and in this regard their significance is like that of auditory hallucinations. A patient with gustatory or olfactory hallucinations is liable to commit violence, and is therefore to be generally considered dangerous.

*Genital Hallucinations.*—In considering the sexual feeling as a sixth special sense, we find it also subject to hallucinations, especially in insane females, who often have delusions of being violated or sexually abused, based on these false sensations. They are rarely of a pleasant nature, it would seem, and they may be the basis of dangerous delusions.

*Hallucinations of Other Senses.*—The general tactile sense is not infrequently involved in insane hallucinations. The patients complain of various uncomfortable sensations, of insects crawling over them, of electricity, etc. It is not an uncommon thing in asylums to hear complaints of electric shocks and batteries placed under the bed, or so arranged as to play upon the patients in their rooms at night. Sometimes they experience a feeling of defilement, and think they cannot too frequently cleanse themselves, their persons, their clothing, and their rooms. Occasionally also we meet with cases of hallucinations of pain and heat senses; patients complain of being burned and otherwise injured, and have full faith in their false sensations. In fact, there is no possible modification of the special or general sensibility that may not be affected in this way.

**Disturbances in the Emotional Sphere.**—The most commonly met with emotional disturbances in insanity are melancholy, or emotional depression, and the reverse condition of hilariousness or exaltation. The latter is met with in maniacal conditions as an incident to the general exaltation of feeling and intellection in those states. Melancholy, or emotional depression, is a very important symptom in insanity; the most prominent one, in fact, in several forms of mental disease. It may be simple mild depression; the patient feels bad, and cannot explain the reason or divest himself of the feeling. In other cases it becomes more intense, and amounts to actual agony, and shows itself

not only in the patient's manner and physiognomy, but in his actions, producing the so-called *raptus melancholicus*, or agitated melancholia. All of the special emotional excitations can also be produced in a more or less exaggerated form; the feelings of love, anger, jealousy, fear, with their accompanying symptoms, are frequently experienced and revealed to observation.

The opposite state to melancholia, exaltation, is also frequent in insanity, and is more strikingly apparent in maniacal conditions, in which it may range in degree from mild emotional and intellectual erethism to complete mania with absolute incoordination of all the psychic functions. Again, we have in some forms of insanity every degree of mental suppression or inhibition; in some cases the patient may have apparently no feelings good or bad, and no intellectual action whatever. Mental inhibition of every grade from simple inability to fix attention (aprosexia) to complete intellectual and emotional eclipse may exist.

There is a special class of symptoms sometimes associated and classed with these emotional disturbances that calls for special mention here; such are the so-called instinctive insanities, in which the patient shows aberrations in the moral or ethical side of his nature, or in the sense of propriety and decency. The patient may apparently lose all the check of conscience and deliberately violate moral law in every possible way. He may, and this is the common rule, become abnormally egoistic, or much more rarely the altruistic feeling may predominate. Another common aberration is apathy or indifference without positive tendencies either good or bad. Under this head may be included the phenomena of what is called the insanity of acts or conduct in which the patient seems, while reasoning correctly, to be incapable of so directing his behavior as to make it consistent with what should be

expected of him in his condition and circumstances of life.

The instinct of self-preservation is often lost or modified, and many self-mutilations and suicides in the insane are due to indifference or apathy in this regard instead of intense depression and dread of life. The nutritional instinct is very frequently lost or perverted; there is a complete paralysis of appetite and indifference to food, and many striking perversions of appetite are extremely common in the insane. The reproductive instinct also suffers; it may be lost or suppressed, as in many depressed conditions, or it may be exalted, as is commonly the case to some extent in the opposite states of mind. Its perversions form a whole class of aberrations, mostly on the borderland of insanity, that have received special attention of later years by Krafft-Ebing, Tarnowsky, Moll, Ellis, and others. In the actually insane, especially in asylum inmates, these are, if anything, less noticeable than amongst sexual perverts outside.

These special forms will be more fully considered in the special part of this work when treating of certain types of moral and emotional insanity.

There may be also an insanity of speech, entirely out of proportion to the evidences of mental derangement as shown in actions; an absolute incoherence, that can best be explained theoretically by a special derangement of the speech centers to a greater extent than is shared by the rest of the brain.

**Disorders of the Will.**—The will may be affected in insanity either by exaggeration or diminution in the power of willing or by its complete abolition. The weakness of will-power is noticeable in many depressive states. The patient feels a lack of energy, is unable to do what he ought to do, either through a painful sense of weakness or, it may be, an inability to resist what he may know to be illusional conceptions.

Absolute aboulia or lack of will-power is common also in certain depressed conditions, especially those due to exhaustion and certain neurasthenic forms of insanity. This special form of defect is best seen in the lack of resistance to what are called morbid impulses, or impulsiveness, and to imperative conceptions or delusive ideas which the patient may recognize as such but cannot resist. One of the most noticeable instances of this form of mental defect in what is perhaps considered as absolute insanity is seen in the so-called *tics*, the "latah" of the Malays or the "myriachit" of the Siberians. In these conditions at the mere suggestion of an act the individual is irresistibly impelled to its execution, even though it may be strongly against his will. Sudden impulses occur in normal individuals, and often these are of an insane character; they are tempted or it is suggested to them to do something ridiculous, immoral, or improper, but with a normally constituted person it goes no further. With the weakened will-power, however, of insanity of certain types, to suggest the act is to insure its execution; and many of these strange performances are simply the result of the auto-suggestion that might occur to any one. A delusion or hallucination may also be the suggestion of these acts of the patient, and that is the reason largely why they are so dangerous. A fixed idea or imperative conception is one, generally more or less delusive, that the patient cannot banish from his mind, let him will it ever so strongly. This idea controls their actions and thoughts and tyrannizes over them. They sometimes occur suddenly without any direct connection with the line of thought then going on. They seem to be something like spontaneous explosions in the nervous system concerned in intellection. While they may occur in persons not actually insane, in that case they are resisted; the will-power of the individual, though it may be somewhat dimin-

ished to let them make any impression whatever, is still sufficient to prevent their controlling him.

A large number of so-called forms of insanity have been based upon these morbid impulsions, which are now recognized as only symptoms of a general condition of weakened will-power; such, for example, are the well-known kleptomania or tendency to steal, which is so common a text for certain medicolegal writers; pyromania, or tendency to incendiarism, etc.; and the various phobias, such as agorophobia, or fear of open spaces; claustrophobia, or fear of confinement or close spaces, and many others. All these are neurasthenic symptoms, which may occur to some extent amongst the sane, but are still more frequent and formidable when the will-power has been reduced by actual insanity.

**Disorders of the Cenesthesis.**—Before closing this chapter on the psychic symptoms of insanity a word should be said on the alterations of the general feeling, or cenesthesis. This may be affected chiefly in two ways, either by exaltation or depression. It may be an increase of the intensity of consciousness or sense of being, the patient feels himself to be peculiarly alive and the intellect much more active, emotions more excited, and yet this is different entirely from the hilarious excitement which has already been mentioned under the name of exaltation, though it is frequently its accompaniment. The condition is one that is characteristic of acutely maniacal states, and in the simple or milder form of mania may be almost the only symptom. The patient is intellectually excited; thinks more rapidly and clearly, but probably less consecutively; the inhibition is somewhat lessened, and the moral sentiments generally suffer accordingly. The condition will be more fully described in treating of that special syndrome of insanity.

Depression, on the other hand, as distinguished from

the emotional depression of melancholia, consists in a lowering of the sense of conscious being, of intellectual activity, and the intensity of the feelings. It is the characteristic type of certain forms of acute dementia, and is often confounded with melancholic depression, which it externally often strongly resembles. The mental condition, however, is rather one of indifference than of emotional depression.

The disorders of memory are closely allied to those of intellection, and where thought-power fails, memory is apt to fail also. There may be, of course, a complete loss of memory, amnesia affecting limited periods or the total past, and there is apt to be loss of memory of periods of excessive excitement, though this is not invariably the case. A very profound degree of apparent dementia is not inconsistent with an almost perfect retentional recollection of events. There are patients who appear to be unable to utter a rational sentence, who yet have almost perfect remembrance of events. These, however, are exceptional cases. In stuporous conditions there is apt to be a loss of recollection, and the same is true to some extent in agitated melancholia. The recollections of patients of their insanity are apt to be perverted even after a complete recovery, and many cases occur in which events that never happened are remembered as realities. Cases of temporary amnesia are common in epileptic insanity, and this has been the basis of a very generally accepted opinion that unconsciousness exists in these conditions; in fact, neither unconsciousness nor amnesia is an essential characteristic of any epileptic condition.

A complete loss of memory for even most recent occurrences, with apparently unimpaired intellection as far as it is compatible with such a state, is sometimes observed in asylums, but such cases are very rare, and have not been specially classified. A loss of the sense of personal identity is an occasional symptom of in-

sanity. We sometimes meet in asylums with patients who speak of themselves invariably in the third person, and who may be considered to be suffering from a defect of consciousness that disables them from properly appreciating their own existence. It is a rather complex psychic state, and might be considered as a delusion on a mere superficial view; but it appears on closer observation, generally at least, to be somewhat different from a mere belief; it has its grounding in the self-feeling, or rather lack of it, of the individual. The unconscious logical processes that form the basis of consciousness are at fault. This symptom is not very frequent, and has not been fully studied by alienists, but it occurs, and is interesting and suggestive, and should be mentioned in this place. This is not what is commonly called double consciousness, which consists in the occurrence of non-synchronous separate psychic states with more or less complete amnesia of each other. The subject of this condition appears to be, and is, subjectively two different persons at different times, and while in one may have no recollection of the other. These conditions are curious, but are not so commonly observed in actual insanity as in certain not perfectly understood pathologic states that are not usually reckoned as full-fledged mental derangement.

It may be said that the insane, much more largely than is generally supposed to be the case, have a certain appreciation of their mental condition, and a knowledge of this fact judiciously used is very important in their examination.

## CHAPTER V.

### GENERAL SYMPTOMATOLOGY (Continued).

The bodily symptoms associated with insanity are naturally exceedingly numerous, and many of them are so incidental and non-characteristic as to only require mention most appropriately in connection with the special type of mental disease in which they occur. Others, however, are so important, or so characteristic, that they well deserve a chapter on general symptomatology for their description.

We will take up, mainly in the order of their importance, the most prominent of these, without regard to their direct relations to each other or to pathologic processes.

**Disorders of Sleep.**—The disturbances of sleep take first rank in the physical phenomena of mental disorders. They are, (*1*) *insomnia*, which is a characteristic symptom in by far the larger proportion of cases of acute insanity. It is met with especially in maniacal conditions, hardly less frequently in melancholic states, and is a specially characteristic feature of the excited period of the circular insanities. The insomnia may be due to the irritability of these conditions, and thus afford a valuable therapeutic indication, but inasmuch as we do not know very perfectly the exact physiology of sleep, it is impossible to say what the mechanism of the symptom is in some of these disorders. It is very common in the prodromal periods of acute insanity, and may be considered a threatening symptom, especially in those who are predisposed, by heredity or otherwise, to mental disorders. It is remarkable to what extent sleeplessness is sometimes

endured by the insane. In acutely maniacal conditions they sometimes pass a number of days without any apparent sleep whatever, and in certain circular cases it is hard to say when the patient sleeps at all during the excited stage. In one particular case the patient was constantly active for nearly six weeks, and in another, which came under the observation of one of the writers, about ten days of apparent complete sleeplessness alternated with an equal period of stupor. There are probably in such extreme cases momentary relapses into slumber, which are overlooked, but the amount of sleep obtained must be exceedingly small.

With lack of sleep there seems to be little comparative deterioration of the general physical condition; the patients often keep well nourished, and show no serious symptoms of exhaustion. In fact, they seem to become accustomed, or acclimated, to this condition, and to make up, at least in some cases, by a prolonged period of stupor, or somnolence, for the lack of slumber which they have experienced.

2. *Somnolence.*—A tendency to sleep, aside from the cases just described, is often noticed in some conditions of general paralysis, and occasionally in other forms of insanity. Its diagnostic or pathologic importance is, however, very much less prominent, and it need not be further mentioned here.

3. *Disturbances of sleep*, in the way of restlessness, dreams, and somnambulism, are frequently met with. Many patients especially have frightful or alarming dreams, which are often the basis of a delusion. Others are readily affected in their sleep by external conditions of which they are apparently not aware. Thunder-storms, changes of the weather, etc., sometimes are causes of later disturbance, when they have occurred during the patient's slumber. We have known a number of insane patients who were decidedly worse after a thunder-storm which occurred during the night,

of which they were unconscious, probably through some disturbance of their sleep, without its having been completely destroyed.

**Disorders of Nutrition.**—Nutrition generally suffers in acute insanity, but not always to the extent that might be looked for. The absence of the instinct of nutrition has already been mentioned, but besides this there are many other ways in which it is disturbed. In conditions of great excitement, intellectual and motor, the waste is necessarily large, and is rarely fully made up for by the assimilation. There is, therefore, in such conditions a decrease of weight, and sooner or later a gradual failure of the vital powers, which, if long enough continued, must lead to the final exhaustion of the patient. With convalescence there is generally an increase in nutrition. The patient takes on flesh to make up for what he has lost. When this occurs, however, without corresponding mental improvement, it is an indication that the case is passing into the chronic stage, therefore an unhopeful sign. Patients refuse food not only from a lack of the instinct of nutrition, but from a complete loss of appetite, and often from delusions, fears of poisoning, etc.

In connection with this should be mentioned the disorders of digestion, which are very common, especially in depressed conditions, and the very general and exceedingly important symptom of *constipation*, which is one of the most serious of the conditions, and goes to an extent which would hardly be realized by those unacquainted with these cases. This reacts badly on the nervous system, not only through the mechanical overloading and sympathetic disturbance that is induced, as suggested by Schroeder van der Kolk, but also through the reabsorption of intestinal poisons and ptomains. The relief of this condition has often a vital effect on the mental condition, which will be more fully described in the chapter on general therapeutics.

**Secretions.**—The secretions are liable to be more or less extensively altered in mental diseases, and in some of them the changes are rather characteristic. The perspiration is apt to be suppressed in many forms of insanity; a hard, dry skin in many cases of melancholia is especially noticeable. It is apt to be excessive in certain other forms, like acute rheumatic insanity. It is said that the insane have often a peculiar sour smell, which is distinctly recognized as a symptom of the condition, but this is not so true as is generally supposed. Personal neglect and dirty habits have more to do with the odor of the insane than any special character of the secretions, in most cases. In acute melancholia the lachrymal secretion is often lacking, the patients are not able to weep, and its reappearance is sometimes a sign of improvement. The salivary secretion is apparently very much affected in many forms of insanity. The patients sit and drool from the mouth a continuous stream of saliva, so that sometimes in inactive cases a large quantity could be collected in a short time. This is especially true in some forms of dementia, and in certain types of chronic insanity. Whether there is an actual increase to the extent that is apparent is not always beyond question, for the natural flow of saliva is large; but that it is very markedly increased in some cases is certainly undeniable, and this forms a very striking symptom, though not particularly important in regard to its significance in very many cases.

Menstruation is usually disordered in insanity, and quite commonly suppressed. This is particularly true in the acute cases; in chronic insanity it may not be affected.

The condition of the blood, the urine, and other fluids of the body have been more or less studied in the insane, but the importance of the changes observed is

not altogether satisfactorily determined. Many of them are clearly symptomatic of the condition, and would occur with equal states of motor activity and nutrition. The epileptics have possibly been the most carefully studied in this regard, the toxicity of the urine and perspiration, condition of the blood, etc.

The conditions of the urine should always be investigated in cases of insanity, as this excretion is so apt to be an index of bodily disorders that may have an influence on the mental disease. The changes it shows may be entirely secondary and unimportant, but, on the other hand, one may at times be able to obtain important indications for treatment. Klein * found in some two hundred insane, six cases with depressed symptoms with excess of oxalates in the urine, and treatment directed to this symptom appeared to be in two the starting-point of recovery. As a rule, the changes from the normal will be unimportant, but in some cases they may be usefully significant. Albumin is not often found in ordinary cases of insanity, notwithstanding the fact that some degree or form of kidney derangement is almost the rule.

The study of the blood is also of value, as it may also reveal metabolic conditions calling for or guiding treatment. The exact relation between the blood changes observed—solvent resistance of red globules (isotony), reductions of hemoglobin, alkalinity, etc.—and the insanity is not always clear; but anemic and chlorotic conditions may have a practical significance.

**Reflexes.**—The condition of the reflexes in insanity largely depends on coarse organic disease accompanying or causing it, or upon a general hyperexcitability that may exist. Thus we have the various alterations of the ocular muscular reflexes in general paralysis of the insane, and in organic insanity from various causes. We have exaggerated reflexes in certain neurasthenic

* "N. Y. Med. Jour.," Mar. 18, 1899.

types of mental disorder, and have them retarded or suppressed in certain forms of depressed mental conditions. Some of the deep reflexes, like that of the knee, have been extensively tested and written upon; their importance is more in relation to the accompanying organic disease than to the insanity. The pupillary reflexes have been also much studied, especially in paresis, where the Argyll-Robertson pupil is common, though not so invariably met with as some have held. They are of value, like the knee reflex, as indications of the organic disease. We have seen in a few cases a paralysis of the accommodation to convergence in paresis; and a similar observation has been made by Dotto.

**Trophic Changes.**—Trophic disorders of a peculiar type have long been recognized as occurring in certain forms of insanity; the most prominent one of these is probably othematoma, or the so-called insane ear. This consists of a blood tumor of the external ear, as its name would imply, and is usually credited with being the result of traumatism, and therefore an indication of violence or bad treatment. There is little doubt that the exciting cause is often a slight traumatism, but back of this is always the depraved physical condition of the patient that renders the production of such a tumor possible, and this is almost exclusively seen in certain forms of insanity with profound systemic disturbance. Epilepsy, acute mania of the more pronounced type, chronic mania, melancholia with excitement, and general paralysis are the forms in which it is most commonly observed. The left ear seems to be more usually affected than the right, and there are reasons to believe that it may occur entirely independent of any actual traumatism whatever. It is not peculiar to the insane, but it is so rare in other conditions that its existence has even been denied. It occurs frequently in idiots, and in all cases

its occurrence is considered as an unfavorable sign, though it is by no means correct to say that it cannot occur with subsequent perfect recovery. It sometimes has been observed in both ears in patients who have made apparently a good recovery. As far as the tumor itself is concerned, it almost invariably subsides, but leaves a very marked deformity.

Another peculiar trophic disturbance which is met with not only in insanity with serious organic disease, but also in conditions where such cannot be proved to exist, is the so-called decubitus, or bed-sore. These are most common, it is true, in paretics, but they may occur in very acute cases of mania or melancholia, where there is a profoundly depressed condition of nutrition. They have been known to occur among the very earliest symptoms in an exhaustive delirious melancholia, and to continue through the course of the disease, and to be one of the most formidable of the physical symptoms to be combated in the exhausted condition of the patient. The ordinary type of bed-sore in paresis, for example, is a simple slough, which may later become a deep ulcer; but in these acute cases it may form a deep abscess as well. The cause of the condition, however, is probably alike in both, the depraved state of the local nutrition of the part rendering its breakdown easy under slight irritation or pressure. Bed-sores are of bad significance generally, on account of this low condition of the system which they indicate, but they are not invariably signs of hopeless deterioration or rapid failure from exhaustion.

Other trophic alterations that are met with in advanced cases are blue edema of the lower limbs and asphyxias of the extremities; the former is not uncommon in old demented cases, and in those in which there is organic disease of the nervous centers. The limb becomes swollen, pits readily on pressure, is of a dull lead color, or deadly bluish, and the swelling usually is

confined to the part below the knee. It is probable that in many of these cases kidney disorder also exists, but in some cases no albuminuria can be detected. Local asphyxias or vasomotor spasms of the part more or less affected are also not infrequent, and may be permanent, especially in the lower limb in some old cases of chronic dementia, more especially those with depression. The circulation of the lower limbs is very commonly poor, and this may go so far as to produce local gangrene.

A striking trophic change in the insane is the fragility of the bones sometimes observed, especially the ribs, which break under very inadequate provocation. Campbell * found that while the normal breaking strains of ribs is from 62 to 65 pounds, in paretics it averages only about 44 pounds, and in female senile dements it may be as low as 11 or 12 pounds. In paresis the other long bones may be similarly fragile, and probably from the same pathologic conditions that have produced the like condition in some tabetics. In old dements, where this symptom is also common, it is probably due, as Meyer † suggests, to a vice of nutrition causing deficiency of lime salts or some other important element in the bones.

Another prominent vasomotor symptom also noted in depressed conditions is the so-called dermography, in which a line drawn on the skin remains for some little time visible as a red mark, or as a white pale mark bordered with red. It is possible sometimes to write whole sentences before they fade out completely. This is an exaggeration of a symptom which is much more commonly met with, even in the sane under certain conditions of temperature and exposure, than is generally supposed to be the case.

The cause of the dermography is a local paralysis and spasm combined, as is shown by the pale line in

*"Jour. Ment. Sci.," April, 1895. †"Arch. f. Psych.," xxix.

the center bordered with red. In less complete cases only the red mark appears.

The pulse in insanity has been much studied. It is decreased in frequency in many forms of melancholia and in old cases of chronic depressive insanity; it is also decreased in frequency in certain forms of organic dementia. In many of these cases its tension is high. This is especially so in the more profound melancholiacs. A low-tension pulse in this condition is said to have a worse prognosis than the opposite. In stuporous insanity it is also apt to be slow, with generally a lower tension, but this is not always the case. In fact, a high-tension pulse is rather common in these cases. In acute mania there is apt to be a quick, active pulse, due to the general excitement attendant on the condition, and in acute delirious mania it is exceedingly rapid and febrile in its character. The pulse in general paralysis has been very much studied, and a rather typical series of sphygmograms have been described. In the early stages the arterial tension is likely to be low, increasing in the second stage, and sometimes continuing thus even to its latest period. The pulse in epilepsy varies very much according to the numerous conditions which may exist. There is apt to be a more or less hypertrophied heart, which will show itself in the pulse tracings.

As a rule, it may be stated that a high-tension pulse, though common in some curable conditions, is not so favorable a symptom in insanity as is the opposite, since it indicates a loss of arterial elasticity, which, if permanent, is not a favorable symptom as regards recovery from the disease. The blood-pressure has been held to be of much significance in depressed insanity and its reduction an important therapeutic indication.

The temperature in insanity varies; while, as a rule, mental disorders are considered to be afebrile, yet

there are many cases in which a more or less marked elevation of temperature occurs. In acute delirium especially is this true. The temperature may rise to a very great height, and it is usually decidedly pyretic. In general paralysis, also, there is a rise in temperature which is more marked in the evening, and is aggravated after the epileptiform and apoplectiform attacks to which paretics are liable. In ordinary acute mania the temperature sometimes rises with the excitement a degree or two above the normal, and in ordinary forms of acute melancholia the reverse is true. We may say that, as a rule, the temperature of the acutely insane is higher than that of the normal individual, though the difference is not very pronounced. Naturally, in cases with serious bodily complications, such as the insanity attending certain chronic diseases like tuberculosis, the temperature will follow the rule of the disease to a greater or less extent. The use of the thermometer is especially important in insanity, as by it diseased conditions can frequently be detected when the rational signs have been more or less obscured by the mental condition of the subject. Insane patients frequently go through very serious diseased conditions without showing the ordinary symptoms. They may be suffering from pneumonia, without cough, sputum, or apparent disability, and even the physical signs may be at times somewhat obscured or apparently absent. On the other hand, diseases which ordinarily pursue an actively febrile course occur, in mental diseases, without such symptoms, and both these facts must be kept in mind when treating these disorders in the insane. In epilepsy the temperature sometimes takes very decided oscillations in connection with the attack, and epileptics are especially liable to aberrant temperature under other conditions, possibly owing to a hysteric element that very commonly exists in this disorder.

Subnormal temperature is met with in extreme depressed conditions, and also in certain stages of acutely agitated insanity, especially those which expose themselves to the cold, and thus reduce the bodily temperature. It has been reported as low as 88°, or even lower in some cases, and it is probable that these are more common than has been recorded. A very low temperature is naturally a bad symptom, but in many of these cases it must occur in patients afterward making a good physical recovery.

The normal slight evening rise of temperature may be absent or it may be lower than that of the morning, thus reversing the normal conditions. Holm * has found this *typus inversus* occurring in 30% to 35% of the insane examined by him, and considers it an important temperature characteristic of insanity that may have some diagnostic importance.

Local variations of bodily temperature are not infrequent in the insane, and are especially marked in some hysteric cases, and sometimes in epileptics.

The sensory symptoms of insanity are manifold. The general sensibility may be exalted, as in some forms of acute excitement, and there are occasionally observed signs of hyperalgesia, neuralgias, etc. The connection between these and the mental disorder is sometimes striking. We have seen a ferocious trigeminal neuralgia alternate with mania, being entirely absent during the mental derangement. Angina pectoris is sometimes an alternative to epileptic mania and convulsions. A peculiar neuralgic symptom is characteristic of melancholia; it is the so-called precordial anguish, and is probably a neurosis of the vagus, possibly a central irritation causing bronchial spasm and cardiac distress.† It is present in some stages in

* "Norsk. Mag. p. Laegervidensk," Jan., 1900.

† Ziertmann, "Münch. med. Wochenschr.," 1894, Nos. 38 and 39.

a very large proportion of melancholiacs. Anesthesia or analgesia to temperature and pain is still more frequent; insane patients endure exposure to cold and severe burns apparently without showing the least discomfort, and they may wound or seriously mutilate themselves and seemingly take pleasure in so doing.

**Motor Symptoms.**—Motor excitation has been already referred to in connection with the mental symptoms, but an additional word or two will not be amiss. In extreme cases of mania the patient is in almost constant action, and seems unable to sit still for a moment, and this continues until sometimes the patient is carried off by absolute physical exhaustion. Other motor symptoms, more special in their character, that are frequently noticed in insanity are, besides epilepsy and epileptiform convulsions, which are common in many organic cases, the grinding of the teeth, which is a characteristic symptom in some of the advanced stages of paresis; the contractures, which sometimes are voluntary in the beginning, but become permanent later in certain stages of dementia. Neglected patients will sometimes place their limbs in positions and maintain them there until it seems almost impossible to reduce them to their former flexibility. Sometimes they will close their fists in such a way as to make the nails go into the palms, and create a very offensive condition from the retained perspiration. Actual contractures are met with, of course, in organic cases, and hysteric contractures are not uncommon. Tremor is a characteristic symptom of paresis, and one of the earliest. It also occurs in states of weakness in many other forms of insanity. A very peculiar form of motor disturbance that has given a name to a so-called species of mental disease is general muscular rigidity, the so-called catalepsy. In typical cases the limbs and body retain the position in which they are placed for an indefinite period or until gravitation has brought

about a change. The body is sometimes like a jointed lay figure, easily placed in any position, which it retains. This is what has been called waxy flexibility. This muscular tension varies in degree; in some cases it only produces a certain awkwardness of movement, that is especially noticeable in certain stages of this so-called catatonia, but never reaches the full degree described above. The patient has a tendency to retain his arms or limbs in certain positions, but overcomes it. Such cases, however, are not very frequent. Myoidema, a localized temporary spasm, produced by tapping a muscle, and causing a slight local swelling by contraction of the fibers underneath, lasting for a moment or more, has been observed. Bernstein found this symptom frequent in general paresis and adolescent insanity, but absent in the acute confusional types and some other forms. It is probably a symptom of morbid innervation affecting the muscles, connected with central abnormalities, and may be related to the more general motor irritability that produces the symptoms of catatonia.

Paralytic disorders are, of course, often observed in organic insanity due to disease of the brain, and in the course of paresis, which is characterized especially in its later stages by an advancing weakness of the muscular system. Hypochondriacal paralysis is also another form, which, however, belongs more to the mental symptoms than the physical. Hysteric paralysis is also frequent in insanity where the hysteric element is a prominent feature, and is sometimes difficult to distinguish from actual organic trouble. In hypochondriacal paralysis the diagnosis is easier, from the fact that there is no atrophy and that sudden excitation may sometimes bring about complete restoration of the function. In hysteria this is not so entirely true, and there may be atrophy in time, though its absence is usually characteristic.

Mention has been already made in a previous chapter of the physical stigmata of mental disease. A recapitulation of some of them, however, is appropriate in this place. Deformities of the cranium include all the various misshapen conditions that are known under the names of microcephaly, macrocephaly, scaphocephaly, plagiocephaly, platicephaly, acrocephaly, etc. In these the head is either too large or very notably small. It may be unequal in its size on the two sides, flat or steeple-shaped on top, etc. Inasmuch as no head is perfectly symmetric, these conditions have to be decidedly pronounced to be of importance as symptoms of mental deficiency. In the face we have various irregularities: asymmetry; deformities of the eyes, nose, mouth, and especially of the jaws, which may be projecting, and the upper jaw excessively arched or flat; the teeth may be deficient or excessive in development, as well as irregular. There may be palatal deficiencies, traces of branchial clefts in the neck or side. Special importance has been attributed to the shape of the ear, but all its deformities may exist in the mentally sound as well as in the insane; only in connection with other symptoms are its abnormalities of value. In the thorax we may have deformities known as flat chest, pigeon-breast, etc., and, what is probably more a degenerative sign than any of them, the funnel-shaped thorax. Deformities of the genital organs are especially important, and should be noted. Also any general defects, such as bodily asymmetry, either of the whole body or of special members; deformities such as club-foot, flat-foot, supernumerary toes or digits; —all these have more or less importance as indications of defective development, and consequently have a connection with mental disorders when they exist. The condition of the skin is also to be noted; its moisture or dryness, and any precocious wrinkles in the face which would seem to be signs of premature

senility. The growth of hair is also of some significance. A beardless man or a bearded woman are both of them abnormal. An unusual growth of hair is not uncommon in insane females, especially about the face. The general physiognomy of the insane is made up of a vast number of these peculiarities, but it is less characteristic in some respects than is generally believed by the public. In pronounced insanity, of course, there is no difficulty in recognizing the disturbance, and the difference in appearance of the same individual during the disorder and after recovery is sometimes most remarkable. Patients seen at their worst are often almost or quite unrecognizable after their insanity has left them. It is especially disfiguring in the case of females. In certain forms of chronic insanity, and in epilepsy and paretic dementia in its later stages, there is often a characteristic physiognomy which can hardly be mistaken by any one accustomed to observing these cases.

## CHAPTER VI.

## COURSE AND TERMINATIONS.

The beginnings of insanity are often insidious; especially is this the case with forms that take from the start a chronic course. The prodromata are very commonly overlooked in acute cases, and it often happens that only a retrospective study of the history of the case very carefully made will give any idea of the conditions that preceded the attack. We may say, in a general way, that the beginnings of insanity vary, and divide into two great classes of cases—those in which there is a pronounced neuropathic or psychopathic predisposition, and those in which the mental disease occurs in a normally or nearly normally constituted individual. In the first class the outbreak may be extremely sudden and have but little in the way of antecedents. The patient may be apparently in perfect health and without anything in his or her symptoms that leads to any anticipation of the outbreak. Generally, however, there are a few prodromata—some change in disposition, an unusual irritability or excitability, or some slight changes in manner or disposition that are remembered by the closest friends after the onset of the disorder. There are frequently, also, disturbance of sleep, sometimes amounting to decided insomnia, and a constipated condition of the bowels, with more or less digestive disorder. Patients who have suffered from acute attacks, and especially more than one, coming on suddenly while engaged in their ordinary occupations, have stated that if they could avoid constipation and sleeplessness, they could also avoid the attacks. Of

course, it generally happens that the causes of these conditions of which they complain lie still further back, and are ignored by them.

In cases where there is no hereditary or other predisposition to insanity, and where it occurs from known or suspected etiologic conditions of illness, overwork, mental trouble, etc., there is very commonly a preliminary period, where, besides the disorders of digestion and sleep, there is a more or less marked depression, some weakness of memory, and other intellectual disturbance that may excite the attention of those about them, and lasting for some days before the outbreak of actual acute insanity. This, in fact, is so common that it has been considered by some authors as a rule, and a prodromal period of depression has been described as the usual thing in cases of acute mania. In periodic insanity, which is usually a degenerative psychosis, the suddenness of the changes and of the onset of the attack is very marked, and the causal factors, immediate or otherwise, may be so slight as to be absolutely undetectable. The patient may break down at once into a state of acute melancholia, but more commonly there is an exalted condition of intellectual excitement, which may, in many cases, not exceed the normal condition of the individual to such an extent as to make those about him consider him actually insane. Many of these people have during the greater period of their lives been considered as simply eccentrics, subject to spells of uncommon vivacity of mind, alternating with those of depression.

In the more chronic forms of insanity the onset is more insidious, as already stated. The patient for a long time develops peculiarities which are at first unnoticed, but gradually begin to be remarked, and are particularly remembered when, by some act, the full-fledged mental disorder reveals itself. In a case of paranoia it may be months or years before the individual

is even suspected of being in any way wrong. There is a sort of conflict that sometimes exists between his correct judgment and his disease, and yet he is able to conceal his mental disorder to such an extent that he can go about his daily occupation unsuspected. Sooner or later, however, actions and words betray his condition, though in these cases it often happens that it is difficult to convince friends and relatives that there is anything wrong. Patients of this class have mingled with their fellows for years, always sources of danger, but with their condition suspected or recognized by but few. In profound organic dementia and in paresis there is generally sufficient change of habits and morals to make the condition recognizable or suspected, at least before it has progressed very far. What difficulties there are in this regard will be noticed more at length in the chapter on diagnosis. In certain cases the attack of insanity may be so transitory that its whole duration covers only a few hours or days. Transitory frenzy, though denied by some authors, is a recognizable and well-established form of mental disease. The pre- and post-epileptic conditions are, of course, so generally associated with the marked symptoms of the neurosis as not to require further remarks here in this regard.

The course of insanity, when it is once fairly established, may be continuous or intermittent. In acute cases, especially of mania, it is apt to be short, though relapses may occur. In certain forms of exhaustional and toxic insanity it is almost self-evident by the physical condition of the patient. Melancholia and depressed and stuporous conditions generally are apt to drag along over a greater length of time, and the changes that occur, excepting in the periodic cases, are apt to be more gradual.

It is customary, or has been so, in many asylums to consider a case that has continued without pronounced steps towards convalescence for a year or more as

chronic, but this is no absolute criterion. In the most acute forms of mania there is apt to be so much damage done to the brain after a certain period that this tendency to chronicity thus recognized has some basis of reality. Nevertheless, cases have been noted of acute mania lasting for much longer periods than one year, without apparent amelioration, and ending in a condition which might at least be considered as an approximate recovery. In melancholia there is no limit to the time when recovery may take place, though relapses are liable to occur in any form of acute insanity; and this should be especially held in mind, since the majority of cases, at least, of acute mania are based on a degenerate constitution, and may perhaps be considered, with Kraepelin, as forms or phases of periodic insanity. The lucid periods, however, in some of them are so long that, practically speaking, we may consider them as recovered. It is hardly fair to reckon a lucid interval of years in duration as anything else than at least a temporary recovery.

Remissions may occur in many forms of mental disease, and sometimes these may last for considerable periods, even in organic disease, like paresis. They are, in fact, common in this condition, and sometimes last so long as to lead to a suspicion of recovery, though this is generally disappointed sooner or later by a relapse to the former, or a worse, condition. In acute mania there are often short intervals in which the patient seems almost his normal self for a short period. Acute melancholia, not of the periodic type, is more continuous. We recognize a difference between these remissions and the periodic changes of cyclic insanity which occur with more or less regularity, while the others are altogether irregular in their occurrence and duration. It is not rare to see an intercurrent affection —some serious bodily disease, for example—produce a very decided remission of the symptoms, and some-

times a complete temporary restoration of the mental function. This is even observed in old chronic cases, though it is rare in such. The same phenomenon has been observed in the very low conditions that precede death. Sometimes moribund patients that may have appeared demented for months or years may, *in articulo mortis*, show surprising signs of mental clearness, though under the circumstances, it must be remembered, such symptoms impress themselves unduly upon observers and are easily exaggerated.

There may also be a change in the type of insanity, accompanied with decided mental improvement. A silly, demented patient has been known to become suddenly dangerous and violent, while, at the same time, his mental functions seemed greatly improved. Instead of being absolutely irrational, he was logical and consecutive in his talk, and appeared more as a surly, dangerous case than a demented one.

The duration of insanity is naturally variable, but it may be said that there is no limit to it except that of life. This is true in the chronic cases, many of whom live out a long life in a state of mental hebetude or dementia, and it is also the case in certain forms of delusional insanity. Cases that recover generally do so during the first year or eighteen months, but cases of recovery after many years have been often recorded.

**Terminations.**—The terminations of insanity may be classed as follows: First, recovery; second, recovery with defect, partial recovery, or improvement; third, passage into the chronic condition; fourth, death.

*Recovery.*—Recovery occurs in a certain proportion of cases, which has usually been estimated to be as high as 30% or 35%. It must be remembered, however, that the estimation of recovery largely depends on the point of view and the personal equation of the person making the estimate. In former times some asylum superintendents reported as high as 75, 80, 90, or 100% of

recoveries on admissions. At the present time the tendency is rather the other way amongst alienists, and they are cautious in reporting recoveries, so that the actual percentage is being reduced in many tables to a still lower figure than the one first mentioned.

The forms of insanity that may end in recovery, and in which we may even say it is to be expected, under favorable conditions, are the acute, toxic, and exhaustional conditions and the post-febrile insanities. Simple melancholia of the milder type, and mania, are also usually reckoned as hopeful forms of insanity. The fact, however, that simple mania, as Kraepelin has pointed out, is generally a degenerative psychosis, and that relapses or recurrences are almost inevitable, modifies the prognosis somewhat in these cases, and makes it a question whether we should consider them to be generally amongst the recoverable forms. The same is true, also, to some extent, of melancholia when it is not a disease of evolution or connected with the retrogressive changes of life. Many cases of melancholia, however, occur outside of institutions that are never recorded or properly observed, and it is difficult to get statistics as to the recurrence of the disorder in such cases. As regards mania, distinguishing it clearly from confusional and other forms that are sometimes included under this head, the case is somewhat different. In an analysis of 65 cases, Van Erp Tallman Kip found that there were only 4 in which it could be certainly said there had occurred only a single attack of mania, and he concludes that the tendency to recurrence should be considered the most important clinical feature of this special type of insanity. As already stated, however, it is hardly fair to consider insanity as continuing over a perfect intermission that may last for ten or fifteen years, or more, as happens in some of these cases. An attack of mania lasting only a few weeks might be considered as a recover-

able form of insanity, when it does not recur within a reasonable period of years.

Recovery usually takes place gradually. There are short remissions or intermissions; the patient gradually quiets down from his excitement, takes more natural and rational views of his surroundings, and finally is apparently restored to his normal self. During this period, however, there may be days in which the recurrence of the old symptoms, to a greater or less extent, is manifested, and it sometimes happens that an apparently complete recovery is followed by a quick relapse for a shorter or longer period. In some cases recovery is rapid; the patient comes almost instantaneously out of his frenzied condition, and is rational and quiet. In some cases, also, the relief of symptoms of insomnia and of constipation produces a very rapid and, as it were, instantaneous cure. The writer has seen a case which for months had been suicidal, depressed, and inactive, requiring artificial alimentation, and close attention in every way, apparently make a rapid recovery after a free injection which relieved an overloaded bowel. From being bed-ridden, almost helpless, acutely depressed and suicidal, and apparently without strength enough to attend to his natural wants, he immediately after the relief got up and dressed himself, made his escape in spite of long search, and the next thing was a perfectly rational letter received from him stating that he was well and asking that his clothes be sent home. The recovery was apparently complete, and, as far as observed, permanent. It is not uncommon in asylums to have cases brought there in a wildly maniacal condition who, after a warm bath and a good night's sleep secured by medication, together with relief of the constipation existing, have made an almost immediate recovery, which certainly persisted for a considerable length of time.

When recovery is sudden, without any special cause,

there is a suspicion, at least, of a degenerative predisposition, and the liability of recurrence must be kept in mind. In cases attended with severe bodily illness, such as in the post-febrile cases, recovery sometimes takes place directly in accordance with the physical improvement. In toxic cases the relief of the system from the toxic product is also sometimes attended with rapid recovery, and this is true, not only in such forms as the delirium from intoxicants like alcohol and other drugs, but also with the slower forms of mental disorder which persist after the system has apparently recovered from the immediate effects of the poison. In other cases, however, and perhaps these are the majority, the improvement is slow, the damage to the nervous system being such as to prevent or render difficult its repair and full restoration of function.

We can say a patient has completely recovered when he shows absolutely no change from his normal self after the subsidence of the attack. Such patients, as a rule, appreciate very fully their condition, and are grateful for the care and control that they have received. This gratitude, however, is not an especially important indication of recovery, as it may occur equally marked in the intermissions of periodic insanity, or in cases where there is a very pronounced mental defect remaining. In fact, the patients in a larger proportion than is generally supposed have more or less consciousness of their condition, even during the acme of the attack of insanity. As was remarked, also, in speaking of delusions, there may remain perverted recollections of events that happened during their disorder, together with a generally complete restoration to mental health.

It must be remembered, also, that in certain forms of insanity, notably in the paranoiac, and in melancholiac sometimes, there may be a wilful suppression of the symptoms, with the idea of creating the impression that recovery has taken place.

*Partial Recovery with Defect.*—It may be a question whether an acute attack of mental disorder does not invariably leave some traces on the organization, but these are sometimes so slight that they may be practically neglected. In a very large proportion of cases, however, recovery is only partial; the patient, while well enough to be discharged from care, is recognized by friends and every one who observes as not being exactly the same individual as before, and this defect may range from a mild general dementia up to merely a slight trace of mental abnormality. The question often arises in hospitals for the insane, whether a patient is to be considered as a case of chronic secondary dementia, and retained, or discharged as fit to take his part, under favorable conditions, in the general population. Hence we have a large list of cases in their published tables that are described "much improved," or "improved." These are patients who are supposed to no longer require hospital attention, but who are not considered as fully recovered. Sometimes the improvement continues after they are discharged until they are very little below their normal condition mentally. More often, however, they continue to show more or less traces of their disorder, and it is very important in such cases that the home conditions and surroundings should be such as not to aggravate their mental irritability, or to claim too much in the way of work or responsibility. They are still, to some extent, weaklings, and should be considered as such.

*Passage to the Chronic Condition.*—The difference between this termination and that of the last described form of acute mental disease is not a very definite one. In fact, many of the cases counted as partially recovered may also be considered as examples of mild chronic general mental impairment. In other cases, however, the disease passes over to the chronic

condition with only a slight abatement of its symptoms. The patients are still wildly disturbed, demented, or deluded. It is a bad sign in a case of acute insanity when marked physical improvement begins to appear without correspondent betterment in the mental condition. A very large proportion of asylum inmates have begun as acute cases, but instead of passing to recovery, they have relapsed or fallen into a chronic condition. As a rule, there is a modification of their symptoms from those of the acute stage. They are less pronounced; the patient is less wild; the bodily functions are more naturally carried on, but over the whole symptom-complex there is a peculiar change that marks its chronicity. The pronounced element of dementia is perhaps the most common type of this. This varies, of course, according to the mental constitution of the individual and the nature of the insanity. Some are agitated and maniacal; others depressed; others decidedly deluded, while others simply seem to show very pronounced mental weakness.

*Death.*—Death is a frequent termination of acute insanity. Of course, it is the final termination in nearly every case of chronic mental disease. The ratio of mortality in the best regulated asylums is hardly less than 7%, even under favorable conditions, which is about four times as great as should exist in well-regulated municipalities of the ordinary population. If, however, we take out certain forms of insanity, such as paresis and organic dementia, we have the ratio somewhat reduced. In any case, however, it will decidedly exceed that amongst the general population. The death-rate in asylums is less than that of the insane outside of these institutions, excluding the slight cases of melancholia and certain chronic degenerative forms that are largely permitted to be free from restraint. In acute insanity death may occur from various causes. In exhaustive conditions the patient may wear himself

out, and die from overstrain and lack of proper nutrition. In depressed cases there is also defective nutrition, and sometimes final exhaustion and death. Very commonly, however, this occurs from an intercurrent affection, such as pneumonia, to which these patients are, from their habits, specially liable; and we might add to this, also, other lung troubles, serious gastric disorders due to irritating substances taken into the system, acute bowel disorders, which are very frequent, and tuberculosis. This latter disease, which has been considered one of the most common causes of the fatal termination of insanity, is probably at the present time somewhat less frequent as such than was formerly the case. The facts, however, of the necessarily unfavorable conditions which surround these patients, their confinement, overcrowding of institutions, and thus increased liability to infection, make it still a very formidable disease in asylums.

Paresis, or general paralysis of the insane, which is increasing in frequency in all civilized countries, is an essentially fatal disorder, and generally runs its course within three years from its first recognition. The cause of death in this condition may be congestive or epileptiform attacks to which the patients are liable, any intercurrent disease, and very often the direct result of the brain lesions of this particular species of insanity. The patients wear out gradually, die with bed-sores, and general exhaustion. The same is true to some extent of some forms of organic insanity, especially in middle-aged or elderly persons, and these cases are often confounded with paresis from their symptoms. Epileptics, while, as a rule, they are robust patients, are also liable to be carried off by the incidental affections of their disorder, among which are status epilepticus, convulsions, etc. The disorder should be classed, of course, rather among the organic

than the neurotic insanities, as regards this feature of its termination.

The accidents to which the insane are liable are also to be considered, as they are not infrequent even in the best-regulated institutions. Suicide is always to be watched for in the depressed cases, and the most dangerous ones in this regard are often those who give but little warning of the tendency. A large list of minor accidents, some of which may be directly or indirectly fatal, might be made. They are common, and are not so often reported as causes of death as probably they should be. Death follows indirectly, often after a considerable time, but its remote cause, at least, might be considered as belonging in this category. In chronic insanities, tuberculosis is especially frequent as a cause of death, but when we remember how many different disorders have been considered as being the basis of the mental disorder, and many of these also, it must be presumed, continue throughout the course of the patient's life,—it will be seen that very few of the actively insane, whether acute or chronic, can be counted on as having an ordinary average expectation of life. Kidney disease is one of these conditions which may cause death, of which in late years much has been written. It is possible that this is overestimated. It is also more than probable that serious lesions of the kidneys are much more frequent in the insane than in those of sound mind.

## CHAPTER VII.

## GENERAL DIAGNOSIS AND PROGNOSIS OF MENTAL DISEASE.

The diagnosis of mental disease is a very important matter, which is liable to come before the general practitioner at any time. It is the more important inasmuch as, aside from involving the health and physical welfare, to a very large extent, of the patient, it also involves his freedom. The question whether a man is insane or not has, as is readily seen, very many important bearings upon his relations with those about him and the validity of, or his responsibility for, his acts. It is well, therefore, to have one's general ideas on this subject well prepared beforehand, and to be able to use the best methods in ascertaining the facts.

It has been said that the diagnosis of mental disease varies from the diagnosis of other disorders in that the patient's cooperation cannot be obtained. This is not altogether true. With a very large number of insane patients, a fair statement of the object of the investigation, and a request for the patient's cooperation as a sick man, will help to bring out important facts. When a patient is dissimulating, or, what is perhaps more rare, simulating insanity, this cooperation cannot be voluntarily obtained, but the resistance to the inquiry itself may be a very useful hint to the examining physician. Really insane people, as has been said elsewhere, often have a certain comprehension or appreciation of their own condition, and when treated as invalids, with the fullest confidence, will return this confidence often in very great measure.

In examining any case of insanity, the examiner

should first thoroughly coach himself as to the history of the patient and his family, so far as this is possible. Not merely direct heredity should be looked after, but collateral. Insanity and other diseases in uncles or aunts, cousins, or even distant relatives; eccentricities of ancestors, and, in fact, anything in the family history that can afford a possible suggestion to be followed up. The facts thus gained, properly weighed, form an excellent preface to the examination of the patient himself.

In examining the patient the previous illnesses, convulsions, injuries, especially of the head, etc., should, of course, be thoroughly inquired into. The physical examination should embrace, first of all, the general aspect and manner, which will often reveal something of importance. The shape of the head, abnormalities of the features, any degenerative stigmata of the jaws, face, ears, bodily asymmetry, and, if necessary, other physical peculiarities, such as can only be obtained by a close bodily examination, should be looked after. In pronounced insanity there is little difficulty in telling from the general physiognomy of the patient that mental disease exists; mania and melancholia, stupor, pronounced dementia, are all more or less characteristically shown by the manner and expression of the patient. It is only in certain forms of insanity where the emotional and cenesthetic states are not markedly involved that these signs fail. Paranoias, and a large number of conditions that are on the borderland, and are hardly as yet fully established mental disease, fall under this head. Mild melancholia may pass unrecognized, unless one is accustomed to give particular attention to the manifestations in this type, and there are no very conspicuous manifestations in the acts of the individual, as is likely to be the case with subacute mania, or most other types of mental disorder. All the special peculiarities mentioned in

the chapter on symptomatology should be looked after —the condition of the digestion, secretions, motor function, the skin, the sensibility, general and special, the vasomotor functions, etc. It is well to notice very particularly as to the condition of the patient's excretions, his reactions to temperature and to the weather generally, the state of his reflexes, both deep and superficial, and, in fact, as to everything that can have a bearing on the question of the existence of any serious organic or functional disease; since it is only in cases where the insanity is not self-apparent, or is supposed to be simulated, that the question of diagnosis arises, and all these facts as to physical condition, degenerative stigmata, etc., afford a certain presumption for or against the existence of insanity in cases where through acts or otherwise the suspicion has arisen.

It is well, when they are available, to use also the instruments of precision of medical diagnosis, the stethoscope, the thermometer, the sphygmograph, etc., remembering, however, that in certain cases the mental impression produced by the use of these instruments may have an effect upon the patient's mental state, and that in some cases it may be unfavorable to the bringing out of certain important facts. On the other hand, it may also aid to reveal peculiarities, insane suspicions, or delusions that might otherwise escape notice.

It is advisable, therefore, to employ all possible means, bearing in mind, of course, the question of their mental effect.

**Psychic Examination of the Patient.**—When organic disease or defect is proved or excluded, special attention should be given to the examination of the patient's mental condition. The peculiarities of physiognomy, etc., have already been noticed, but it may be said, in addition, that every possible alteration or modification of the features of expression, the gait, and peculiarities of acts should be carefully noted, as they may

give very valuable indications as to the mental condition. A little alteration of the features may suggest that the patient has hallucinations which he is dissimulating. There are also little signs, almost too numerous to mention, of habitual peculiarities directly connected with the patient's insanity. The habit of fingering certain portions of the body or of the dress, the movements of the hands, the little tricks of speech, unusual employment of certain words, hesitation as if memory were weakened in certain directions, or specially intensified, and most of the minor symptoms and acts varying from the normal, which together make up what has been called insanity of manner, all serve to aid in confirming or dispelling suspicions already aroused by the history and patient's testimony and assertions.

Hallucinations are not always easily discovered objectively; the patient may absolutely conceal the fact that he has such, and in suspicious cases, or those in which distrust is a strongly pronounced feature, this difficulty may be very great. As auditory hallucinations are the most frequent in the insane, our attention should be especially given to any evidence that may indicate their existence. A manner as if hearing sounds, or the habit of apparently talking to one's self, may point out or give rise to strong hints of the occurrence of hallucination in the subject. In spite of this, however, it is well to observe the patient when off his guard, when he thinks he is not being examined, as he is then more likely to betray himself. This can be done by questioning him on an entirely different subject, and when his mind is entirely diverted from the subject of the hallucination. However, it is better in most cases to carry on the examination, if possible, at different times, and observe the patient unawares to make sure of these facts. Any peculiarity, also, which would indicate hallucination of the other

senses, of taste or smell, which are not so important, may be sometimes recognized by a sniffling or spitting; and hallucinations of sight, which are most common in delirious cases, are, as a rule, easier to detect than those we have mentioned. It must not be understood that the patient is always, or even generally, averse to speaking of these facts, or what appear as such to him; and if his confidence can be gained, as it ought to be, the great majority of the genuinely insane, even though they may have a more or less suspicious tendency, can be prevailed upon to give valuable evidence on these points.

Delusions are even more difficult to ascertain than are hallucinations, and it may take weeks, or even months, of observation in an asylum to fully ascertain the patient's mental state in this regard. As a rule, they can be suspected by the patient's manner and acts, and it is these often that give the first grounds for suspicion of mental unsoundness in case of paranoiacs. Certain forms of delusions are, of course, readily recognized; a hypochondriacal patient is ready, as a rule, to publish his ailments; the subject of delusions of greatness is also disinclined to conceal them; the delusions of the melancholiac are sometimes concealed, but are more often revealed in the self-accusatory mood of the individual. The persecutory cases, on the other hand, are sometimes very difficult to study, as they successfully conceal their delusions, even for long periods. What are called fixed ideas are also possibly concealed, but this is rare, as they are generally early interpreted by the acts of the patient. Nevertheless, there may be a suicidal impulse or a homicidal impulse that remains entirely concealed, and therefore cannot be guarded against, and the subject is more important when such impulses as these are remittent, only occurring at intervals, and sometimes only for very short periods. They exist much

more generally amongst the insane than is sometimes stated, and are to be looked for even in apparent convalescence. Many of the suicides, and these are the most dangerous class, occur from sudden impulses of this kind.

The emotional condition of the patient is generally readily seen; it is only in certain mild forms of depressive insanity and in various light grades of mania that it is likely to be overlooked. Mental confusion also is usually readily recognizable, as are also the various degrees of dementia and stupor.

It is important, whenever practicable, to examine the writing of the individual suspected of being insane. It will very often afford evidence in manner or matter of his mental condition. Paranoiacs whose speech and general behavior give no signs in any short examination, and they may successfully dissemble for weeks, are often completely betrayed by their letters and other writing. The tremor, dropped letters, etc., of paresis are also often characteristic, and the florid style of the maniac and the often tremulous slow writing of the acutely depressed case are to be noted. There is a germ of truth in the pseudo-science of graphology in that penmanship is to a certain extent an index to the emotional state, and this is nowhere more marked than in some of the insane. It is important in this connection to avail one's self, if possible, of a comparison of the patient's normal writing, as it may indicate prior eccentricities as well as show the changes due to the disease.

A very important point in the diagnosis of mental disorder is the question where insanity begins and mental soundness ends. It is in these doubtful cases that the greatest difficulties are met, both from a medical and a forensic point of view. There are many people who are habitually on the borderland of mental disease, and yet who cannot be called actually insane;

it would be but a step between them and the active lunatic, and yet such is their ordinary condition that it is difficult to say when that step is taken. Here the past record and previous acquaintance with the patient's condition are of the greatest importance. What would be an indication of insanity in one man would be only a slight aggravation of his usual state in another. We must always compare the individual with his normal self, if that is possible; and where that cannot be done by personal observation and knowledge, we must utilize all available facts, not merely the testimony of friends who may be interested, but the consistency of his present condition with his former occupations and position. The habits of the individual, also, must be carefully considered, and no decision be made in any case on too brief an examination. It is not essential to say just what form of insanity the patient suffers from if evidence is sufficient to show that he or she is not his or her normal mental self.

From a legal point of view the individual should be given the benefit of the doubt in these uncertain cases, as a rule, according as the decision would or would not constrict his liberty of action. If charged with crime, a strong suspicion of insanity, though it be not clearly proved, would relieve him from legal responsibility; especially would this be the case if, in the physical examination, well-marked degenerative stigmata could be detected in such number as to place him below the average of those in his station of life. On the other hand, when it comes to a question of civil capacity, sanity is often presumed by the law, even against strong evidence of mental disturbance and degenerative signs.

There is a large class of cases which may or may not be insanity; cases, for instance, of sexual perversion, which may be due to pure depravity, and in such cases

as these, the legal question may sometimes be quite interesting. The same is true of habitual intoxication and its results. The form of mental degeneration which reveals itself in dipsomania is a well-marked instance of this class of cases, which sometimes may be acquired on a slightly defective mental basis, or may be congenital degeneracy. There are many insane who are never regarded as such, and a few so considered unjustly.

In examining a patient to ascertain whether or not he is insane it is not, as a rule, absolutely necessary to conceal one's object, provided the examiner is skilled and observant and uses due tact in his examination. It is better, however, to act as a physician inquiring after health, mental as well as physical, and the special object of determining the insanity need not be obtruded unnecessarily. An insane man, however suspicious he may be, will generally be better impressed with an apparent frankness than with anything that appears to him as artful attempts to draw him out. It is not always necessary to state to him that he is suspected of insanity, but it is seldom, if ever, advisable to use deception or appear before him in a false character. As a rule, a suspicious or dissimulating lunatic has enough of that practised upon him by the laity, and looks for it everywhere, so that he is more often taken off his guard by the opposite course. It is impossible, however, to lay down any specific rules to be followed, as each case is a study in itself, and very much depends upon the tact and knowledge of human nature of the physician. It must always be remembered that there are some exceptional cases that have deceived asylum physicians and attendants with all their opportunities for observation, at least for considerable periods, in regard to their mental state.

**Prognosis.**—From what has been said in the chapter on etiology as to the importance and frequency of

predisposition in the causation of mental disease, it may be readily inferred that the prognosis of insanity is not commonly altogether favorable. This is especially true if we consider the possibilities of relapses as well as the outcome of the actually existing attack. The number of forms of mental disorder that may occur as episodes in the life of a perfectly normally constituted individual is small, and modern studies are reducing rather than increasing the number. As the simplest form of mental affection, we may count febrile delirium, which occurs many times in the lives of a large proportion of the population. This is a simple exhaustive or toxic disturbance of cortical function, and is, as we all know, transient and slight in its after-effects. When especially severe, however, it may leave its traces, but then it is hardly to be considered as full-fledged insanity. The patient may have delirious recollections which are as real to him in after-life as actual recollections, but these are not to be considered as insane delusions. The prognosis, therefore, of simple ordinary delirium, alone, is always good.

When, however, the delirium follows a condition of profound toxemia or exhaustion, such as may occur in puerperal conditions and various febrile disorders, we have a genuine insanity, which, if not accompanied by, or due to, a marked predisposition, may be said to occur in normal individuals. The prognosis of these cases depends largely upon the restoration of their normal physical condition, and if the prospect of this is favorable, the prognosis of the mental disease is also reasonably so. In some cases, however, there is sufficient mental damage produced to make the case a tedious one in its recovery, and recovery sometimes only partial or even impossible.

Sometimes this form of disease may occur after intense overstrain or exhaustion in an otherwise healthy individual, but even then it is so connected

with the physical conditions, to a certain extent, as to depend upon them largely with regard to the prognosis. Certain forms of toxic insanity, also, are usually quickly recovered from, and, provided predisposition is absent, may be considered as recoverable. During the special developmental periods, also, mild forms of neurasthenic aberration may occur and yield readily to treatment, but care should be taken in estimating the future of these cases to consider all degenerative possibilities. The developmental insanities are not by any means those of which a favorable prognosis can be given.

Simple mania and melancholia have long been reckoned as the most curable forms of mental disorder. Of late years, however, there has been a tendency to adopt a slightly different view. According to Professor Kraepelin, mania and melancholia, excepting the latter in the aged, are generally, if not universally, based upon a degenerative taint, and their recurrence is almost inevitable. Their prognosis, therefore, as regards the future life of the individual, accepting these views as correct, can hardly be called a good one. As regards mania in its truest type, separating it from cases of confusional insanity, etc., with which it has been often confounded, there seems to be considerable reason in Professor Kraepelin's views. Melancholia, however, including all the milder forms which exist and hardly come under the observation of alienists, probably includes a certain number of cases that will not correctly fall under this category of degenerative insanities. The point is a new one, comparatively, and further and wider observation will be required before it is universally accepted.

Mania is certainly hopeful as regards the immediate attack; and the more acute the attack, as a rule, the better the prognosis. When periodic or circular insanity of a short period can be excluded, one may

generally give a hopeful opinion as regards the outcome of the attack. Melancholia, in the forms under which it comes in the care of asylum physicians, is also hopeful as regards recovery from the attack, and there is less reason to be discouraged, even after it has existed for a long period, than is the case with most other forms of insanity. Predisposition, of itself, does not necessarily affect the prospects of recovery from the immediate attack, and where there is no predisposition, it must be also borne in mind that the damage done the brain by the attack may conduce to a state of weakness that will favor future attacks. Insanity is least of all a self-protective disease.

When serious organic changes have occurred, and insanity depends upon them, as in the various forms of organic mental disease, the prognosis is necessarily bad. In toxic insanities, where brain damage has ensued, the prognosis naturally depends upon the degree of the latter, and may be favorable or otherwise. In alcoholism and alcoholic insanity, also that due to morphin, cocain, etc., the possibility of predisposition is always to be kept in mind. Certain forms of apparently acute insanity occurring in old age also sometimes undergo a cure, though, as a rule, their outcome is not favorable. In secondary dementia the prognosis is almost universally bad, but there are occasionally surprising recoveries—striking exceptions to the rule. In no case is it absolutely safe to say that recovery is impossible, unless we know that irreparable damage has been done to the mentally functioning portions of the brain.

## CHAPTER VIII.

## GENERAL THERAPEUTICS.

The first question that arises when a case of insanity is diagnosed is where it shall be treated, at home or in a public or private institution for the insane. In cases of acute maniacal excitement this question is usually readily answered, as there are few families that are in condition, financial or otherwise, to care for and have treated amongst them an acute maniac. For the great majority of the people the public institutions for the insane are an inestimable blessing, as they afford the means of caring for those who cannot be cared for by their relatives or treated to advantage by physicians at their homes. Cases of agitated melancholia, also, and generally in cases where there is decided mental or motor excitement the asylum is almost the only resource. To those who have unlimited means and when, through prejudice, family pride, or otherwise, the use of a public or private institution is objected to, home treatment is possible, but under disadvantages. The question of expense is, of course, the first one to be settled, but no amount of expenditure will make it possible to give the patient some of the advantages which can be had in a well-managed hospital for the insane. The mere fact that he is kept amongst his accustomed surroundings is a drawback by itself. The complete change from home life to hospital life, the discipline and routine of the latter, and the moral effect of judicious and kindly control which can be there obtained, are impossible to be provided in the patient's home, where distraction of various kinds, the old habits of authority and responsibility, and

the lack of judgment often shown by relatives and friends, all contribute to hinder and embarrass the treatment. It is also to be considered that when insanity exists in a family it means, to some extent at least, a family taint, and the disadvantages of the detention of an insane person amongst others of various ages and conditions of health, who may themselves be susceptible to mental disorders, cannot, in any case, be considered as altogether advisable. This same family predisposition often displays itself in a sort of unreasonableness that embarrasses the doctor, and prevents him from using the means that are most advantageous to his patient. With the best intentions for their afflicted relative, the family and friends of the patient are often capable of doing him infinite damage by their misdirected interference and sympathy.

In a very large class of cases, however, the question of asylum treatment as opposed to home treatment is a still more difficult one to settle. Among these we may include the milder cases of melancholia, a large proportion of which never go into any public or private institution, but are simply office cases of the family or specialist physician. In the majority of instances of this kind recovery probably occurs, and they are not included in any statistics of insanity. The disorder may be purely emotional, there may be no intellectual aberration whatever, the patient may continue his ordinary occupation without any serious interruption, and, while his depression is noticeable, no one thinks it serious enough to demand his sequestration. It is just these cases, however, that furnish the tragedies that we read of from time to time in the daily press; they are the suicides, or combined suicides and homicides, and it must be remembered that the successful cases probably form only a small proportion of the number of attempts. It is exceedingly difficult in some of these cases to say exactly what is to be done;

the patient is so rational, has such perfectly clear ideas in some respects as to his condition, and denies any suicidal tendency, that it would seem unjust to recommend any restriction of his liberty. In other cases, even where a suicidal tendency is admitted by the patient, the danger may be no greater. It does not follow because a person denies such intention that he may not under the influence make the attempt. The best plan probably in these doubtful cases is to advise the retirement to a sanitarium or hospital where the patient can go voluntarily without incurring the stigma, as it is popularly regarded, of insanity, have a certain degree of liberty, and yet be under close medical observation, and where a certain amount of restraint may be exercised should it prove absolutely necessary.

The general hospitals that are to be found in all cities and in many enterprising towns furnish admirable places for at least the temporary care and treatment of many cases. They furnish excellent medical attendance, good nursing, and can be promptly made use of without any legal formalities. There is a need of a larger number of this class of institutions for such cases as these, and it is a misfortune that there are not more of them, and that they are not within the means of a larger number of patients of this kind. Where this is not possible, it is well to advise the friends fully as to the patient's condition, so that they will be on their guard against any possible attempt at self-injury. In many cases the attacks are temporary, and are only indications of an insane predisposition, which is liable to crop out at any time.

Cases of stuporous insanity and of acute confusional insanity without violence, and a large class of cases attended with serious bodily weakness, can be treated at home. The same is true, to some extent, with organic dementia, certain stages of paresis, and some cases of epileptic insanity. The inconveniences, how-

ever, especially in organic and paretic insanities, are very great, and home treatment is not advisable unless good nursing facilities are attainable, and within the means of the patient or his friends. As a rule, all other cases are better cared for in some institution for the special treatment of insanity. Paranoia is a type of insanity which is often so insidious in its onset, and develops so gradually, that the question of asylum or home treatment does not arise until after the patient's delusions have induced him to commit some act of violence or impropriety that renders his insanity obvious. If the delusions are of the persecutory type, it is certainly advisable that the patient be sequestrated and placed where he can do no possible harm. There are many paranoiacs at large who ought to be under restraint, but the public seldom realizes this fact until after some tragedy has occurred, and then prejudice and passion are as liable to lead to the unjust punishment of the lunatic as they are to his rational treatment by commitment to an asylum. One danger in such cases is the influence of example; after one of these cranks, as they are popularly called, has committed some crime or act of violence, especially upon a conspicuous person, others are likely to follow his example, or make attempts to do so. This was especially noticeable about the country after the assassination of President Garfield by Guiteau, and of Mayor Harrison by Prendergast, both of whom were well-marked degenerative paranoiacs.

When home treatment seems unavoidable if not advisable, the measures to be taken depend mainly upon the special character of the case. In those cases where, through prejudice, fear, or family pride, keeping an acutely excited insane person at home is insisted upon, the first thing to be seen to is proper attendance. It is not always easy to obtain good attendants for the insane at home. If the patient is physically ill and

weak, good nursing and care by trained nurses may sometimes meet the requirements, especially if the condition is such that the patient can be confined to his bed. Trained nurses, however, have not, generally, all the qualifications required for the proper care of the insane, and require to be closely watched and elaborately instructed by the physician. Besides the mere nursing, the precautions in regard to possible attacks of violence, insane impulses toward suicide, etc., should be impressed upon their minds. They should leave no medicines within reach, and any object or article that may be dangerous should be carefully kept out of the patient's hands, and they should be selected, if possible, for their kindly and patient disposition, together with a certain power of control of others that can be exercised if needed. They should be impressed with the fact that the patient is something more than a sick person, and should be made to modify their management accordingly. The care of the insane is much more trying in many ways than that of the sick, and it is not every trained nurse, however competent in her special line, that is fit to undertake it. If the patient is a man, and especially if he has considerable muscular power, and is at all inclined to be violent, a male nurse should be at hand. All these things involve a large expense, and they also require special arrangements of rooms, which should be distant from the other inhabited portions of the house, if this is practicable.

Summing up, the home treatment of the insane is dependent both upon the character of the case and the means of the family or friends. When proper attendance can be secured and the needed arrangements be made at the home, it is possible to care for acutely insane individuals outside of an institution. When means are insufficient, it is impossible to give them the proper care, and this is true in the vast majority

of cases. Chronic insane of the milder type can be cared for in private families, and require generally no special medical treatment except for incidental ailments. Medical oversight, however, should be considered essential, and it is not safe to leave the patient entirely to the care of friends, however well intentioned, without this. An insane individual is always to some extent uncertain as to his conduct, and in many cases explosions of active insanity are liable to occur. In other cases their habits and tendencies are such as to make it necessary that some special oversight is given, and in the country and amongst persons ignorant as to this class of disorders severer measures than are necessary are liable to be employed. The family care of the chronic insane is largely practised in certain foreign countries, notably Belgium and Scotland, and with success, but in all cases under medical supervision. In this country it has not, as yet, been extensively tried, and it requires a special class of permanent population to whom this becomes a sort of natural employment, and who are in a measure specially trained to it. In this country we have, in most parts, at least, too fluctuating a population, and it will take time at least before we can establish proper systems of family care.

There is still another consideration to be borne in mind when discussing the home treatment of insanity: that is, the influence of the insane upon the other members of the family. In a very large proportion of cases, as has been already shown, the outbreak of mental disease in any member of the family is, to a certain extent, a result of a family taint, which is inherited not only by the afflicted individual, but by his near relatives. The effect of an insane member of the family living in close relations with the rest, who are themselves somewhat predisposed, and some of whom are of an impressible and receptive age, subject to various influences that may affect them, is not in

itself a desirable one, and may be at times disastrous. We have observed decided mental disturbance occurring in the members of a family in which an insane brother was retained at home instead of being sent to a public or private institution, and such instances are more common than are reported. This appears, at least, a consideration worthy of attention on the part of the physician when the question of home treatment is left to his decision.

Whether an insane patient is treated at home or in an institution for the insane, or in an ordinary hospital, the general indications for treatment are the same. We have to meet conditions of excitement or depression, special motor activity or stuporous passivity, refusal of food, deprivation of sleep and rest, and general derangement of the vegetative functions of the organism. Each of these conditions requires to be met and remedied. The most obvious indication at first sight in a case of acute mania is apparently to quell or modify the abnormal mental and physical excitement, which not only renders the patient difficult to manage, but seems liable, if continued, to exhaust his powers. It may be a question sometimes whether this is as necessary as it appears, especially in well-nourished, physically healthy individuals. The motor excitement may be in its way conservative, and assist in working off the mental excitability. It is expedient, however, in most of these cases, and will be found very generally necessary, in caring for these cases at home, to do something to quiet the individual, and at all events to secure the needed rest. Frequently this result can be obtained by giving the patient a warm bath just before retiring time, and continuing it for fifteen or twenty minutes. It is, in fact, a good treatment for any such case of insanity to use this means, especially the first night. The water should be warm, about 98° F., and if the excitement is very great, cold

applications may be applied to the head. Under the combined influence of these, together with a warm draught of milk, with sometimes a little alcohol added, a good night's sleep may be obtained and the patient be much better both physically and mentally in the morning. The necessity of sleep in these cases is very great. The patients sometimes keep abnormally wakeful for days unless something is done to relieve them. Commonly it will be found necessary, however, to supplement this with some hypnotic. Of these, the one that has been longest in favor, and is certainly reliable, though not without its dangers, is chloral, in doses of 10 to 20 grains. It is sometimes advantageous to combine this with bromid of sodium, the amount of 20 or 30 grains to the dose. The combined effect is somewhat better than that of the chloral alone. It is not desirable to exceed 20 grains of chloral at a dose, nor to repeat it, if this is found insufficient, as its action on the heart is sometimes unpleasant and dangerous, and the large doses that were formerly given of 30, 40, and 60 grains are often really perilous to life. In many cases 30 or 40 grains of sodium bromid alone is sufficiently quieting after the warm bath, especially if these are given at night when the patient is not likely to be disturbed by external sights or noises. Other remedies that may be combined with the bromid in some cases are ergot, in doses of half a dram, and in some rare instances, in mania, a moderate dose of opium may be combined, but, ordinarily, this is not needed or desirable in these cases. In anxious melancholia, however, where sleeplessness and agitation are prominent symptoms, opium is more useful; its value is manifested chiefly in cases where the element of pain exists, and this is a prominent feature in most cases of melancholia. Morphin given hypodermically is still better as a reducer of pain, especially in cases where that peculiar pneumogastric

neurosis called precordial anguish or distress is a prominent symptom. Opium, however, requires to be used with care, and its value as a simple sedative and sleep-producer is limited chiefly to these special cases. Other hypnotics that have been in common use are paraldehyd, which is a safer remedy, on the whole, than chloral, though less effective and not so permanent in its effect. It has also, with chloral, the disadvantage of a disagreeable taste, which is especially objected to by some, and also the effect of producing sometimes gastric irritation. Chloralamid is another remedy, transient in its action, but often effective in producing sleep, which may continue of itself if not disturbed. One of the most reliable, however, of modern hypnotics is sulphonal, which has also the advantage of being tasteless, and therefore more easily administered. It is slower in its effect than most of the other drugs mentioned, and should therefore be given a little while before the hour of retiring. As a rule, 10 grains may be found effective, but 15 or even 20 can be safely used for single doses. In some obstinate cases of sleeplessness a combination of bromid, sulphonal, and chloralamid, not in mixture, but given separately at different times, is effective. The sulphonal can be given about four or five o'clock in the afternoon; the bromids, preferably the bromid of sodium, between supper and bedtime; and the chloralamid directly on retiring; the latter exercises its hypnotic effect immediately, and the continuance of sleep is secured by the slower action of the other drugs. The disadvantages of sulphonal are the unpleasant symptoms that are sometimes produced, in the way of dizziness, ataxia, etc., and the drowsiness that sometimes follows on the day after its use, and its interference with digestion as well as its more serious damaging effects from long-continued use.

Trional, which is similar in its effects to sulphonal,

and has some of its advantages, may be substituted for it. In the cases of mania and agitated melancholia, hyoscin hydrobromate, either alone or in combination with sulphonal, will often produce sleep when other agents fail.

In some cases where simple irritability produces wakefulness, a slight stimulant will tide the patient over and produce healthful sleep. The well-known effect of an alcoholic night-cap is based on this fact, and in some cases of insanity where this kind of sleeplessness exists, a dram or two of alcohol in a glass of milk at bedtime will be sufficient to produce the desired effect. With alcohol, it is desirable to keep this within the physician's own hands, and avoid anything like the possibility of producing or exciting a dormant alcoholic habit.

The list of hypnotics within the last few years has become a rather long one, but those mentioned are the chief ones, and furnish sufficient resources to meet the needs in almost any case of actual insanity. One point must be remembered, that in the use of any of these remedies it is necessary to avoid a dependence upon them, and it is well, whatever drug is used, to intermit its employment from time to time and see if the patient cannot obtain sleep without it. Frequently one or two doses having produced their effects, nature will take care of itself, and the patient sleep without their use. It is not absolutely necessary to insure the patient's sleeping through the night continuously, and an occasional sleepless night in case of mania is not to be specially dreaded, though it should be avoided, if possible. It is well at times to change the remedy, so that the patient will not become too much accustomed to any one drug. In this way we avoid the evil of setting up a toleration which will require increased doses to produce the usual effect.

Hypnotics at best are only a makeshift to tide over a disagreeable symptom, for which nature herself provides the relief often in many cases.

What has been said in regard to hypnotics leads naturally to the discussion of the use of sedatives to quiet mental or motor excitement during the waking period. The drugs mostly employed for this purpose are the bromids, ergot, conium, hyoscin hydrobromate, and in late years the sulphate of duboisin. The bromids are a general sedative if only applied in quieting the less excited cases. For the extreme excitement something more powerful is generally required. For this purpose hydrobromate of hyoscin in very minute doses has been very largely employed; the amount given hypodermically should not exceed, at the very most, $\frac{1}{100}$ grain, and the same is true of duboisin. Caution should be observed against too great depression following the use of these drugs in every case. Conium, when the preparation is a reliable one, is an excellent motor sedative; a useful combination is 10 minims each of Squibb's fluid extract of conium and hyoscyamus, together with 10 grains of chloral in one dose. This is often exceedingly effective, though sometimes slightly larger quantities are required; the patients receiving it while in the most acute excitement often become quiet and tranquil, and sometimes its use is followed by a long period of sleep. It occasionally happens in acutely excited conditions that the patient is almost ready to break down from fatigue, and at such times a very much smaller dose than usual of any powerful sedative will produce unexpected effects. Nature sometimes reasserts herself without the use of drugs, and if we anticipate this by giving a powerful remedy, we may find ourselves in the presence of alarming, if not really dangerous, symptoms.

The use of sedatives has been somewhat discouraged

in times past, and there is no doubt but that they have been overused, there being so constant a temptation to relieve the very marked symptoms of excitement. They have no specially curative effect in themselves, and their real value is in preventing the patient's exhaustion, and in relieving the inconvenience to others which the excitement produces. They should be used with caution in any case, and not relied upon habitually. It is better to endure the noise, and to allow a certain amount of action, than to attempt to repress it unduly when the patient is in good physical condition.

Other medicines that are advised in insanity and that have their uses in special phases will be noticed more particularly in the special part of this work. It may be said here, however, that in a large number of these cases a tonic treatment is advisable, and for remedies of this kind the best are probably quinin, iron, strychnin, and arsenic. These can be given with profit in depressed conditions, and strychnin is particularly indicated in certain forms of depressed toxic insanities.

Aside from the strictly medical treatment, a large number of remedial measures are demanded in caring for the insane. One of the first things to be remembered is that it is an exhausting disease, especially in its acute form, and that the waste of the system must be made up. This is the more important since the voluntary cooperation of the patient is often out of the question, and that, too, in the cases where good nourishment is more particularly demanded by his condition. Melancholiacs, especially in the more marked type, almost habitually refuse food. They do this sometimes from a delusion, but very often there is a complete loss of appetite, and, more than this, an unconquerable repugnance to food of every kind. In acute mania the patient is often too excited to

think of his bodily wants, and will neglect his meals, and actually starve, if not attended to. In other forms of insanity, like certain delusional cases, whether accompanied with depression or agitation, everything that is offered is thought to be poison or repulsive, and is obstinately refused. In the milder forms of depression, as in confusional cases and exhaustion delirium, the appetite is weakened or lost, but there is not always the resistance to being fed that is met with in some of the other types. In these cases, however, more than almost any others, there is need of building up the system, and regular administration of food is almost the essential part of the cure. In acute delirium it is the only thing that will carry the patient through, notwithstanding the fact that it is seldom easy to administer it. In many cases food is simply refused, or is neglected by the patient, but will be taken if administered by the attendant. Sometimes there is a sort of passive resistance that is easily overcome. In other cases, still, the resistance is more active, and a certain degree of force is required. When the food cannot be given by a spoon, a feeding-cup with a short nozzle which is introduced into the mouth will be useful. With perseverance and tact many of these cases can be fed in this way, though at first it may seem impossible. When all other methods fail, however, artificial feeding, by means of the stomach-tube, must be resorted to, and in some cases this cannot be done too early, or, rather, it may easily be put off until too late. The methods of using the stomach-tube are two in number, either by the mouth or through the nostril. Feeding by the mouth is performed by forcing the mouth open and keeping it thus, while the esophageal tube is passed down through the pharynx into the stomach, the food itself being poured into a funnel or injected by means of a fountain syringe. This method often requires the use of much force in opening the

mouth, and sometimes there is danger of breaking teeth, or bruising the soft parts. Its advantage is that the esophageal tube, once that the passage is open, is easily introduced; it should, if of the ordinary linen construction, be well softened in warm water, so that it is perfectly flexible, and yet have it still possess enough rigidity to guide itself into the gullet. Its size is such that the danger of its engaging in the larynx is very slight, and the chances of the food being introduced into the lungs by accident are negligible. Any one can put down the esophageal tube, once the mouth is fixed in the open position, but this often requires constant use of force and struggle with the patient, and the use of some restraining apparatus or sufficient manual force is absolutely necessary in most cases. There is a disadvantage that in case the gag should slip out of the mouth, the patient may bite the tube in two, and this, with the apparent roughness which is required in its use, is a serious inconvenience.

The use of the nasal tube has many advantages over the other. The patient cannot stop the passage, and struggling and possible injury to the mouth and teeth need not be considered. Of course, restraining apparatus will be required, the same as with the other, to hold the patient, but this part of the operation is comparatively simple. The tube should be of the largest size that can be passed through the nostril, and should be perfectly flexible; soft rubber is the best material. Its disadvantages are that it requires some skill and practice to introduce it, and in some patients it is very difficult to guide it through the proper channel. The second disadvantage, and a serious one, is the possibility of its engaging in the vocal cords; and if care is not taken, there is danger of the introduction of the food into the trachea and lungs, with consequent production of an aspiration pneumonia.

If the tube is small and is not tightly grasped by

the muscular walls of the gullet, the liquid may be regurgitated, and in this way reach the air-passages, producing the same effect with equally disastrous consequences. When this happens, which can generally be told by symptoms of suffocation and coughing on the part of the patient, the tube should be immediately withdrawn, and the oral method of treatment adopted instead of the nasal tube.

The material used in forced feeding must necessarily be liquid, and there is no better to be had than milk and eggs; one or two eggs beaten up in a quart of milk and given twice or three times daily will suffice in most cases, though in some depressed cases overfeeding is a decidedly advantageous procedure, and Dr. Clouston mentions cases where as much as three quarts and sixteen eggs have been given daily, with great advantage to the patient. The fluid should be slightly warmed before introduction, and may be used as directed with a fountain syringe or funnel, or an ordinary bulb syringe may be employed. It is advisable, also, in case the latter is used, to have the tube well secured to the nozzle, as in case of any obstruction occurring it may easily slip off and be swallowed by the patient, an accident which has occasionally occurred, though without, so far as is known, any serious consequences. A rubber tube is probably in time decomposed or dissolved by the gastric fluids, and gives no permanent inconvenience, but the accident is not a desirable one nevertheless. Besides milk and eggs, other fluids may be used—broths, thin gruels, or whatever is thought desirable that is capable of being passed through the feeding-tube. One advantage of the oral tube not before mentioned is that with its larger caliber fluids or semi-fluids of greater consistence can be used, whereas with the nasal tube only those which flow readily through a small aperture can be employed.

Forced feeding is best given to the patient in the

recumbent position, and in this way he can be secured by a sheet or blanket passed over his body up to the neck, with an attendant sitting on the edge. With those, however, who are accustomed to this form of feeding, and who do not resist, it matters little in what position it is accomplished. The tube in all cases should be slightly lubricated, and the diet fluid itself will often answer for this purpose.

While the first attempts at feeding are apt to be very disagreeable, and are in many cases, for this reason, sufficient to induce the patient to return to taking his nourishment in a natural way, yet the pharynx soon loses its hypersensibility, and in many cases of obstinate refusal of food the operation becomes such an easy one that it can be attended to by an ordinary attendant. The patients in these cases voluntarily swallow the tube, and the danger of its entering the larynx is thus avoided. It is advisable, however, on account of the possibility of accident, that the forced feeding should always be administered by the physician, or at least under his direct supervision. It is only in these cases of long-continued feeding, where it has become almost a second nature to the patient, and in which he possibly cooperates, that it is at all safe to have it done out of the physician's sight. This point is an important one.

The forced feeding may sometimes be required to be continued for a long period—six and even nine years of this treatment have been reported in special cases. It is rarely, however, in acute insanity that it has to be kept up more than a few days, or a week at the most, and there should be a constant effort made to induce the patient to take his food in a more natural way. Sometimes only one or two applications are necessary, and other times, with constant trials, success will be attained in a few days or weeks. After the patient has once gotten to eating by himself, or from

the hand of an attendant, it is seldom necessary to return to the use of the tube.

The question as to how long the patient should be allowed to go without eating or forced feeding is to be answered according to his condition. If well nourished, active, or not seriously or rapidly deteriorating in his physical state, even a week may be allowed to elapse sometimes. It is a more serious mistake, however, to postpone artificial alimentation too long than to begin it too early. Generally, after three or four days of abstinence, it is perfectly justifiable to have recourse to the stomach- or nasal tube, both for the actual effect on the patient's physical condition, and, in many cases, for the moral effect, which is alone often sufficient to induce him to return to eating. In cases of paranoia, where the refusal of food is due to delusions, it is not often necessary to have recourse to artificial alimentation. In some hysteric cases the patient will refuse food, but if allowed to take it surreptitiously, will eat an ample allowance. All insane cases require to be carefully watched and studied as to their peculiarities in these respects, and their management varies accordingly.

One of the most important matters in any case of acute insanity is to watch and regulate the excretion. The urine may be suppressed or may be retained from pure mental inertia in some depressed cases, and its examination here, as in other morbid states, is of the highest importance as indicating the state of toxin excretion, etc., and as a possible guide to the detection of serious disease of important organs. As regards the immediate treatment, however, the alvine excretions are of still more importance. It is so common as to be the rule in acute insanity to find a sluggish condition of the bowels, and in the curable forms of depressive derangement and confusional insanity this is particularly the case. In some of these neglected patients

we find almost complete obstruction, and we have seen a case where long and tedious mining operations, so to speak, were required to remove the mass of impacted feces in the rectum and lower bowel. Sometimes there appears to be a sort of intestinal paralysis, and it is quite a while before the normal action of the bowels can be reinstated. It is well to look after this function in the very earliest treatment, and in nearly every case where it is practicable—and with suitable attendance this includes nearly all—to give an enema the first thing. The effect of this, combined with a warm bath and proper feeding, is sometimes most striking; recovery may date its beginning from this point. The mere unloading of the clogged and distended bowel has often itself a most happy effect to all appearance, and it seems probable that we cannot altogether reject the agency of a reflex action on the brain in these cases. We all know something of the feeling of relief when a costive condition is overcome, and part of this may be due to the removal of a mechanical clogging of the prima via; and it is not hard to assume that an excessive aggravation of this common irritation from costiveness may have a decided influence in the causation or continuance of a state of mental aberration. It is probable, however, that the modern notions of auto-intoxication have their application here, and that the condition may be largely influenced by the retention of toxic products with a sort of continuous absorption that is at once relieved by the evacuation and thorough cleansing of the lower bowel. As a practical fact, this matter of attention to the condition of the bowels is one of the most important of all in the treatment of insanity, and much will have to be said of it when speaking of the special therapeutics of the different forms of mental disease. It is a point, moreover, that has been to some extent neglected or not sufficiently emphasized by some

writers, and we therefore wish to call more particular attention to it here.

It is not generally advisable to use the more severely acting cathartics for the constipation of the insane; as a rule, the bowels are easily kept open after an enema has cleared out the rectum, by the cascara preparations or similar mild and unirritating laxatives. In some cases where the whole digestive tract is badly involved, as shown by a heavily coated tongue and a very torpid state of the bowel, small doses of calomel frequently repeated, $\frac{1}{10}$ of a grain every hour or half hour till eight or ten doses have been given, will be effective when other means fail. All that is wanted in any case is to have a free normal action, and after this has once been started there is usually not much difficulty in keeping it up. One point, however, must be attended to—the physician must satisfy himself that there is normal excretion. We have seen patients apparently regular in going to stool, who were nevertheless suffering from fecal accumulation; they were merely passing off small quantities at a time, while the masses were piling up in the rectum. An occasional colonic flushing with the normal saline solution, if the discharge is at all insufficient or if the patient's general symptoms suggest any intestinal intoxication or reflex irritation from this source, is often followed by marked general improvement for the time.

In mania and in some other conditions the bowels may be loose; but this symptom is to be met as the circumstances demand.

With the intestinal disorder the gastric functions are often more or less disturbed, and in certain cases call for treatment. In acute insanity it is not always practicable to use all the modern diagnostic methods for stomach disorder, and fortunately they are usually not necessary. It may often happen, however, that a careful study of the gastric condition will be of advan-

tage and a valuable guide to treatment. The use of gastric and intestinal antiseptics, especially the latter, may be indicated in some of these cases with pronounced derangement in the gastro-intestinal tract. Any possible complication or cause that may exist in any of the bodily organs should be watched for, and if need be, receive due attention. Hence the value of thorough examination in all cases, especially of recent or acute mental disease.

When the patient is capable of taking exercise, it is often well to so direct his activities that it may be in the direct line of his treatment. It has been long observed in asylums that when patients can be kept out-of-doors for a considerable part of the day they are generally much quieter and more tractable, especially at night, when their disturbance is apt to be more troublesome under other conditions. In the same way, with acute cases it is sometimes well to give them special care, and keep them out-of-doors to work off their activities by walking, or, if possible, by some light employment not beyond their strength, instead of allowing them to exert themselves unsystematically and uselessly in their own way. For chronic cases employment is almost a necessity, and absolutely so where there is no physical reason to contraindicate it. It helps the patient to forget his insane fancies or delusions, and, as far as anything can, aids in his mental improvement. The vicious sexual habits of patients are best remedied and counteracted by outdoor work carried to the limit of exhaustion, so that rest and sleep are secured for the whole period necessary for reparation.

While it is not always desirable, and perhaps not often so, to entirely check the activities in the very acutely maniacal cases, where the physical condition is good, the case is somewhat different with those cases where exhaustion is one of the factors in the causation of the insanity, and a somewhat physically deterior-

ated condition is a prominent feature. Also, in a large number of cases of depressive insanity, rest and quiet are valuable adjuncts to the cure. A method of treatment that has been in vogue for the last few years supplies these requisites, and is especially adapted to the treatment of cases at their homes. The method consists simply in putting the patient to bed and keeping him there during the early acute stages of his disease, and with it all the essentials of the Weir Mitchell rest cure, and its practice, when carried out, has without question been of advantage to a great many cases.

The results of this treatment are very generally good, and it is found practicable not only in the weakened, but in physically strong insane individuals. The moral effect is undoubtedly a prominent factor in its efficiency, but for the weakened and exhausted cases the systematic feeding, and, in some instances, the massage, could hardly be otherwise than beneficial. As a routine treatment for all classes of cases it can hardly be recommended, and it comes, in some of its features, very close to the discredited methods of restraint. For the home and general hospital treatment of insanity, however, whether agitated or otherwise, it will be found often extremely convenient, and will resolve certain problems that would otherwise puzzle the practitioner. The statistics of this method, as they have been published abroad, do not show that its results as regards cure are especially better than those of other methods formerly, and still to a large extent, employed. It has, however, the advantage of keeping the patient quiet, avoiding destructiveness and untidiness,—that is, provided that the nurses are efficient and understand their business,—and, therefore, in an asylum it may be said to meet pretty nearly the same indications that did the old-fashioned methods of physical restraint, but in a less objectionable manner.

Its disadvantages are the expense, trained nurses being required day and night in attendance, with additional help at hand in case the patient becomes too obstreperous to be easily handled by them.

Speaking of restraint, it may be said that it has almost gone out of use, in the general acceptation of the word, in the better-managed hospitals for the insane. The camisole or strait-jacket, the muff, the wristlets, the mittens, the anklets, the bed-straps, and the crib are nowadays rarely met with, and only exceptionally used. It has been found that the advantages of any extensive use of these apparatuses are far more than counterbalanced by their disadvantages, both to the patient and the morale of the institution. In certain surgical cases, however, where it is necessary to retain dressings on an agitated patient, the use of some sort of restraint is often absolutely necessary, and there are other rare cases of extreme violence in crowded establishments where they will also be required. They have also, in rare instances, a certain therapeutic value which cannot be altogether ignored, and any wholesale condemnation of their use is unscientific. In the home treatment of the insane they may be more needed under certain conditions, and their use more excusable, than in asylums, but they should be avoided as far as possible. The mittens fastened on the hands without restricting the freedom of movement of the arms, or the wristlets and anklets, are mild forms of restraint that are sometimes of advantage with very destructive patients, and are hardly reckoned as objectionable forms by many alienists.

The shutting-up of the patient alone in a cell or room, padded, darkened, window-guarded, or otherwise, forms the so-called seclusion, which is generally classified with restraint, and comes under the same general condemnation. It has, however, its uses in

many cases, and for therapeutic purposes cannot be altogether dispensed with. Many patients would voluntarily prefer seclusion to mingling with their fellows in the asylum ward, and this may be occasionally to their advantage, as well as more generally to their disadvantage. The great objections to seclusion, when much practised, are that it takes the patient out from observation of the attendant, it may lead to vicious habits, and it is a very easily abused method, the tendency to employ it unduly being very strong. Neither restraint nor seclusion should be used except under the advice and general oversight of the physician, and this is as true in the care of the insane at their homes as in a public institution. For cases who are inclined to brood over their condition, and to whom the stimulus of association with others is advisable, seclusion should be used, if at all, with the greatest caution.

A method of restraint that was formerly much in use, and which has certain therapeutic advantages in some cases, is that form of hydrotherapy known as the cold-pack. It is hardly necessary to describe the method here, as it is well known. It should never be used simply for purposes of restraint; its utility in insanity is entirely in its hydrotherapeutic application. We have already spoken of baths and cold effusions in excited conditions, but baths are also useful otherwise. A warm bath at bedtime is often one of the best incitants to sleep, and the use of baths generally in insanity has been highly recommended, especially the Turkish bath.

Massage is a measure which has much to recommend it in certain special neurasthenic and depressed conditions.

Electricity is an agent which has been recommended in insanity, as in almost every other affection, but its uses are also limited. The forms under which it may

be said to have the best effect are general faradization, static electricity by insulation, and cerebral galvanization. The uses of electricity for cases of paralysis, where not specially contraindicated by the mental condition of the patient, are the same as in the mentally sound.

Hypnotism has been tried, and some have spoken of success with its use. As a general thing, however, it will be found that the insane do not make good hypnotic subjects, and that its utility is very restricted in most forms of mental disease. In some hysteric cases it may be of use, but there are some difficulties even there. It cannot be regarded, in our opinion, as an efficient therapeutic agent in the general treatment of insanity. When it is found useful, the case is exceptional. It should be remembered, also, that the induction of hypnotism is the production of a morbid condition in the brain, and that there is sometimes a risk in its use.

Certain special features of insanity require special measures for their relief. One of these which has very important practical bearing is the general untidiness and filthy habits of many of the acute and chronic insane. They are absolutely neglectful of all decency, and sometimes appear to be perversely inclined to aggravate their care-takers by their outrageous filthiness. The personal cleanliness of the patient is, of course, naturally the care of the attending nurse, who will find her strength and wits often severely taxed to meet the needs of the case. For patients that are simply untidy, close attention to the condition of the excretions will sometimes suffice. For those that are more actively and viciously filthy, other measures may be necessary. In some cases where patients have habits of defiling their rooms, bedding, and so forth, at night, a thorough injection of salt and water several hours before bedtime, with consequent

complete cleaning out of the large intestine, will have a very excellent effect. This will have to be done, generally, by force, and should be carried out under the eye of some responsible person—the physician, if possible. It sometimes seems to have not only a mechanical effect, but a very important moral effect upon the patient, and instances of recovery apparently dating from this treatment have been known.

The destructive habits of the insane are well known, and they were formerly checked largely by the use of mechanical restraint. Much can be done, however, to better them by close attention on the part of the attendant, and by giving them something to employ their activities in a more harmless way. Patients that simply tear their clothes can have their hands occupied with some simple employment easily devised, and can sometimes be made really useful. In other cases, it is customary in some hospitals to use bedding and clothing made of heavy material, which is not easily destroyed. A certain amount of destructiveness and sacrifice of property is probably unavoidable in many cases.

A tendency to suicide can be guarded against only by constant watchfulness, and the removal of all facilities for self-destruction or injury. In these cases, as in the destructive and untidy ones, almost everything depends upon the tact and skill in managing the patient, and there are persons who seem to be able to avoid all these accidents to the patients under their charge. The vicious sexual habits, masturbation, etc., have been already noted, and employment mentioned as their best antidote. Something, however, may be done with drugs, bromids, etc., and with regulated diet. Other measures, such as blisters and so forth, have only a temporary effect, as a rule, and restraint is absolutely futile in determined cases. It should be remembered that these practices are often only a symptom of

insanity, and that they cease with the mental improvement.

From time to time we hear of cases of insanity cured more or less completely by surgical operations, and the surgical therapeutics of mental disease has therefore a claim for consideration. Some of the cases reported are undoubtedly only temporary amelioration; others may be actual cures, or very noticeable improvement. Even in some pronounced degenerative types, surgical measures, or what amount to the same thing, have been reported as curative, though the credit given them is doubtless in many cases exaggerated. Lannelongue's operation for idiocy is in point; there may be a few cases where constriction of the brain occurs which can be relieved by craniectomy, but such instances must be few and far between. We have ourselves known a case of periodic moral insanity apparently cured by a severe injury, and it is possible that there are many instances falling more or less fully into this class. In cases of traumatic insanity, especially where there has been neglected depression of the cranial bone, surgery is, of course, indicated, and may be expected to be beneficial in its effects. Aside from these, however, its utility is slight, and the surgical therapeutics of insanity may be considered as very limited in their scope, however remarkable the cures sometimes reported. With modern antiseptic methods surgery of the brain is certainly safer than it formerly was, and many operations that were formerly dangerous, and therefore unjustifiable, may now, perhaps, be attempted, even with a remote chance of their doing good.

Some authorities (Rohe, Hobbs, Holt) have claimed very striking cures from gynecologic operations on the insane, and have insisted that neglected disorders of the female genital apparatus are responsible for a very large proportion of the cases of insanity in women.

What has been said as to searching out every bodily cause that may have any possible relation to the mental disorder applies here, and there is no question that an insane woman has the same right to be relieved of her physical infirmities as a sane one. It is well, however, not to be too sanguine as to permanent results as regards the mental condition from such operations. The facts given by the advocates of this procedure of generally operating for the gynecologic disorders in the insane are not absolutely conclusive; many of their best successes were obtained with comparatively recent and presumably curable cases, and others have not fully stood the test of time or their after-history has not been fully given. In many chronic cases a severe illness or operation may easily produce a temporary betterment; we have seen an apparently completely demented woman become comparatively lucid in severe bodily disease. Only long-continued observation can supply adequate proof of the value of such operations, and, so far as we have this in the experience of the mass of alienist physicians, even those who are by no means negligent in such matters, it has not been forthcoming. It is best, therefore, to reserve opinions as to such measures, and where they are not clearly necessitated for the patient's physical welfare, there may often be a doubt as to their propriety in the insane woman in her irresponsible mental condition.

In any case a judicious conservatism is better than a too radical operative enthusiasm, and as the case stands there is a reasonable doubt as to the value of any such wholesale measures as some have advocated. In private practice amongst friends and relatives of the patient, gynecologic operations, it must be said, can sometimes be performed without the embarrassments attending them in public hospitals for the insane, where the patient herself cannot be a legally

consenting party and the guardians and friends are inaccessible, hostile, or suspicious.

Serum and organ therapy have as yet no standing in the treatment of mental disease, with the one brilliant exception of the thyroid treatment in myxedematous idiocy, where it comes near to being a specific. Thyroids have been tried in other forms of insanity (Bruce and McPhail, Mabon, Babcock, Berkley, Middlemass), and good results have been reported by some. The treatment appears to decidedly affect metabolism, and we have seen it apparently of value in one or two cases where there appeared to be a possible thyroid defect. In the average of cases, however, its action cannot be usually foretold and its use is empiric. Properly given, in suitable cases, and watched, it can do no serious harm, and its trial may often be warranted as a justifiable experiment for the patient's good.

The moral or psychic treatment of mental disorders comprises the whole range of methods and devices that can affect the patient's condition otherwise than through the ordinary medicinal and mechanical means employed. The general principles are few, and the first of these in importance is that the physician, and whoever else may have the direct care of the insane, should govern themselves according to the rules of strict honesty and fairness in all their dealings. The question sometimes arises whether it is justifiable, or even expedient, in any case to deceive the patient. That this is habitually done by outsiders does not affect the question. Those who have to deal with the patient for any length of time will find it almost, if not absolutely, an invariable rule that it is best to impress upon their charges the perfect reliability of those that have to do with them. If it is possible, as it generally is, to treat the patient as a sick man, realizing his own condition and wishing to cooperate in the measures taken for his relief, it is best to do so; the more nearly

we can treat them as rational beings, the better, as a rule, will we succeed with the insane. Allusion has already been made to this fact, but it cannot be too much emphasized. Anything like active deception, on the other hand, is likely to react disastrously upon the person availing himself of it. If we cannot get the full confidence of our patients, we should at least endeavor to give them no reason for distrusting us.

A second general principle of the moral treatment of insanity, and this is a very general one, is that every case is a study by itself, and the measures taken should be adapted to its special needs. No one has better reason to make a study of character than the physician in charge of the insane, and his conduct toward them will be modified, advantageously or otherwise, according to his skill in estimating human nature and individual peculiarities as they appear in persons suffering from diseases of the mind. What would be useful to one patient would be damaging to another, and it is sometimes hard to distinguish which of these results is going to follow any particular course of conduct. For this reason, therefore, the first general principle comes always into play. There should be good intentions and absolute rectitude of conduct in carrying out whatever measures are adopted; these are essential. Following these two general principles, the moral treatment will be at least the best that is in the capacity of its director. Not every one has equal address and tact in managing the insane, but no amount of skill will compensate for unreliability of purpose or conduct.

In large asylums much can be done in the way of change of wards and associations with other and different classes of patients in the way of moral treatment of the insane. It often happens that certain patients, though not recovered themselves, have an excellent influence over certain other patients, and a proper realization of this fact is sometimes a very

valuable aid in the treatment of cases in certain stages of their mental disorder. This resource is, of course, not available to such an extent in small institutions, or in the home care of the insane, and it is one of the disadvantages of both of these that such is the case. In the large institutions, also, there is a greater diversity of employment, more distractions and diversions which can be carried on under the direct supervision of the medical officers, and, in certain classes of cases, greatly to their benefit.

It is hardly necessary to state that anything like actual intimidation or punishment should form no part of the moral treatment; what disciplinary measures are required should be also justified by the medical necessities and therapeutics of the case. Removal from one ward to another, according to the patient's condition, will often be appreciated by the patient, to some extent, as discipline, though it is necessitated by his conduct or his physical and mental condition. The same is true of the necessary cutting off of certain privileges, where they are abused or not appreciated, and these two classes of measures are found quite sufficient for all needs of discipline in large institutions. It should also be unnecessary to say that the physicians, attendants, and whoever else comes in direct contact with the unfortunate of these classes, should have thorough self-control, ample patience, and ready ability to turn whatever may happen to the best account. There should be a feeling on the part of all of them that they are dealing with irresponsible persons, and whatever insults or injuries they may receive are not to be taken as coming from any one against whom any resentment could properly be felt. The possession of mental health among these unfortunates who are deprived of it should incite a feeling of a sort of *noblesse oblige*, which ought to make any provocation or annoyance experienced to be

felt as a matter of no particular importance. This, of course, does not imply that any undue feeling of personal superiority, or of disparagement of those who suffer from the evil of insanity, should be encouraged or kept up.

In the early stages of very acute insanity, such as maniacal frenzy, extremely agitated melancholia, or any pronounced motor and emotional disturbances, the value of moral treatment is hardly perceptible; but even in these, transfer to the asylum, which constitutes a form of suggestive therapeutics, has often a most beneficial effect. It is common to see a patient who has been almost continuously agitated and noisy brought in in restraint apparatus, which are immediately removed, and he sits quiet and composedly in the ward where he is placed. There is, we might say, a sort of atmosphere of discipline and control about the place which is immediately appreciated often by the wildest patients. In later stages of the disease, however, and especially toward convalescence, and at the turning-point between chronicity and recovery, the moral treatment is of the utmost value. The principal idea will be, in most cases, to keep from the patient every possible irritation or other cause of a relapse; unpleasant news from home, injudiciously timed visits, or those by persons who have not the tact or judgment to refrain from saying or doing things that can disturb the patient's mental equilibrium, ought to be most carefully avoided, and even the reception of letters is a matter for the physician's careful oversight. The chance of these things doing harm is in most cases comparatively small, but there are occasions when the exercise of correct judgment in these matters is of the utmost importance for the patient's welfare.

In delusional cases it is customary to say that any contradiction or argument against these false notions

is to be carefully avoided. This is true, as a general rule, and especially so in certain phases of the disorder. Here, however, as in everything else in the treatment of insanity, a careful study of each individual case is absolutely necessary, and there are times when even delusions may be judiciously combated. It is often a serious question just how we are to treat this symptom, as anything we may do may have untoward effects. The general rule will be that while they should not be contradicted, they should not be acquiesced in, and here the tact of the physician and the attendant will have full sway. The best plan probably is to have at least an understanding with the patient that he is considered an invalid as regards his mind, and is treated as such with the utmost consideration. With some patients the feeling that this is the case will be an aggravation, but these are in the minority, and most will appreciate kindness and courtesy that are shown them under such conditions, even though they may persistently demand recognition of their delusions.

The moral treatment of the chronic insane differs but little from that of the curable cases in the stages where it is available. As a rule they are more amenable to moral treatment, which must necessarily comprise the greater part of the therapeutics of their disorder. With a certain class of patients, like many epileptics, who are absolutely rational for a large part of the time, much can be done in the way of getting their active cooperation in the measures required for their control. A good set of rules, reasonable and yet strict, fairly stated to them, with the reasons for their adoption, will very generally be accepted, and whatever special privileges are given in the way of exceptions to these rules, if properly understood as favors, and not as rights, will be gratefully received. If, on the other hand, they are given indiscriminately, so that the patient feels aggrieved at their being shut off, trouble is almost sure

to follow. The management of these cases should be with a firm yet gentle hand.

One thing should be remembered in the treatment of every form and case of insanity; that is, to look out sharply and constantly for any symptoms of change. The insane are characteristically unreliable, and even the most harmless cases may sometimes develop dangerous or unfortunate tendencies. On the other hand, even in the most hopeless appearing cases, a change for the better may sometimes occur, and if promptly taken advantage of may end in at least a partial recovery. Cases are constantly reported in the journals of recoveries from chronic insanity of five, ten, or even twenty years' duration. While these are rare, they should not be forgotten, and no case, where there is not irreparable and demonstrable organic disease, fatally affecting the mental functions of the brain, should be considered as absolutely hopeless. Even paresis, which is considered as perhaps the most hopeless form of mental disorder, and the most inevitably fatal within a few years, may undergo long remissions, some of which can hardly be separated from actual recoveries.

## CHAPTER IX.

## CLASSIFICATION.

Some sort of classification of the different forms of insanity is a necessary prelude to their description. It has been customary of late years to disparage classifications of mental diseases, and to say that the simplest and briefest is the best. This fact is due largely to the difficulty of making any uniform systematic arrangement that is accepted by or acceptable to all who have written on the subject. Almost every author of a work on insanity has promulgated his own classification, differing more or less widely from that of all others. The result has been to discredit, in a measure, all such attempts. It is nevertheless the fact that some sort of systematic classification is absolutely necessary, and it cannot be up to the needs of our knowledge of disorders of the mind and merely include the simple symptomatic forms that were alone represented in the earlier classifications.

A classification of insanity falls usually and naturally into one of three groups: the symptomatic, the pathologic, and the etiologic. We might add, also, the psychologic, of which a few examples have been given in times past. The most natural and readily made classification is the symptomatic, and the earlier ones were nearly all of this type. It is easier to see the obvious distinction based on symptoms than to attempt to divide all the forms of mental disorders according to any supposed pathologic condition. We say supposed, for our knowledge of the pathology of insanity is yet too little advanced to enable us to carry even the simplest classification entirely on this one standard.

The pathologic classifications which have been attempted are therefore unsatisfactory, because they are based on imperfect knowledge, and their inconsistencies are too obvious to render them acceptable. An etiologic classification is simple enough, but that is about all that can be said in its favor, and it necessarily fails where the history of the case is lacking. There is a certain relation often between the cause and the form of the disease, but this is not constant, and the exceptions are too numerous to permit any positive general rules. One has, also, in following this plan, to include under the same head the most widely differing symptomatic forms, a course which is too unnatural to be desirable, in spite of the convenience of referring each case to a species based upon its alleged or presumed causation.

Most classifications of insanity which have been made are therefore composite productions, based on no one simple plan. They are partly etiologic, largely symptomatic, and, where possible, pathologic, in their general idea or conception. Occasionally we have one that follows the psychologic plan, like the following of Ziehen. It will be seen that here we have a rather consistent system, based upon the mental states alone:

CLASSIFICATION OF TH. ZIEHEN.

1. *Psychoses without intelligence defect.*
   - A. Simple psychoses: only one chief phase.
     1. Affective psychoses: chief symptoms in the emotional sphere.
        - (a) Mania.
        - (b) Melancholia.
        - (c) Neurasthenia.
     2. Intellectual psychoses: chief symptoms in the region of the intellect.
        - (a) Stupidity.
        - (b) Paranoia.
          - (*a*) Paranoia simplex.
          - (*b*) Paranoia hallucinatoria.
          - (*c*) Delirious (Ideenfluechtige) form.
          - (*d*) Stuporous form.
          - (*e*) Incoherent form.
        - (c) Insanity of fixed ideas.

B. Combined psychoses, with several phases.

*c. Defect psychoses.*

A. Congenital mental weakness.

(a) Idiocy.

(b) Imbecility.

(c) Debility.

B. Acquired mental weakness or dementia.

(a) Dementia paralytica.

(b) Senile dementia.

(c) Secondary dementia after functional psychoses.

(d) Secondary dementia with local brain disease (syphilis cerebri, etc.).

(e) Epileptic dementia.

(f) Alcoholic dementia.

This is the most recent classification proposed on a purely psychologic basis. It has the advantage of being symptomatic as well, and is probably as good a type of a special systematic arrangement based mainly or entirely on mental symptoms as has been proposed. It also is consistent throughout, and not mixed, partly pathologic, partly symptomatic.

Another German classification of very recent date, and one that has some special features of interest,—for example, the inclusion of the usually considered primary insanities, mania and melancholia, in the degenerative periodic forms,—is that of Kraepelin. It has, as will be seen, a sort of pathologico-etiologic basis, one which seems likely to come into favor as probably the best available basis with our present knowledge of the actual underlying conditions of mental disease.

CLASSIFICATION OF KRAEPELIN (1897).

A. *Acquired insanities.*

I. Exhaustive conditions.

a. Collapse delirium.

b. Acute confusional insanity (Verwirrheit).

c. Acute dementia.

d. Acute nervous exhaustion.

II. The intoxications (toxic insanities).

1. Acute intoxications.

*a.* Febrile delirium.

*b.* Intoxication delirium.

2. Chronic intoxications.
   *a*. Alcoholism.
   *b*. Morphinism.
   *c*. Cocainism.

III. Metabolic insanities (autotoxic).
   a. Myxedematous insanity.
   b. Cretinism.
   c. The dementia-producing types.
      1. Dementia præcox.
      2. Catatonia.
      3. Dementia paranoides.
      4. Dementia paralytica.

IV. Insanities from organic cerebral disease.

V. Insanities of old age.
   a. Melancholia.
   b. Senile dementia.

B. *Insanities from morbid predisposition* (*degenerative*).

I. Constitutional insanities.
   a. Periodic insanity.
      1. Maniacal form.
      2. Circular form.
      3. Depressive form.
   b. Paranoia.
      1. Combined forms.
      2. Hallucinatory forms.

II. The general neuroses.
   a. Epileptic insanity.
   b. Hysteric insanity.
   c. Shock neuroses.

III. The psychopathic conditions.
   a. Constitutional "Verstimmung" (insane diathesis, psychic neurasthenia).
   b. "Zwangsirrsein" (phobias, obsessions, etc.).
   c. Impulsive insanity (morbid impulses, etc.).
   d. Contrary sexual feeling.

IV. The defects of development.
   a. Imbecility.
   b. Idiocy.

NOTE.—In Kraepelin's later edition (1899) there have been some slight changes in this classification.

The more recent French classifications, those of Regis (1892) and Dagonet (1894), are quite different from the above, and are based on a different principle. That of Regis, which is, in its way, the more philosophic and consistent of the two, divides mental

disorders mainly according to their symptomatic characters, giving in a second classification the associated forms, arranged according to the bodily disorders they accompany, and to which they are commonly attributed in the etiologic classifications, like those of Skae or Clouston. It is in this a sort of pathologic classification imposed upon and supplementary to a symptomatic, and has the advantage of completeness, almost every possible type being included under some one of its heads.

CLASSIFICATION OF M. REGIS (1892).

Primary Conditions of Mental Alienation.

I. Functional Alienations (Insanities, Vesanias, Psychoses).

| | | |
|---|---|---|
| Generalized or Symptomatic Insanities. | (1) *Mania* . . . . | Subacute mania (maniacal excitation). |
| | | Acute mania (typical mania). |
| | | Hyperacute mania (acute delirium). |
| | | Chronic mania. |
| | | Remittent or intermittent mania. |
| | (2) *Melancholia or lypemania* . . . | Subacute melancholia (melancholic depression). |
| | | Acute melancholia (typical melancholia). |
| | | Hyperacute melancholia (melancholia with stupor). |
| | | Chronic melancholia. |
| | | Remittent or intermittent melancholia. |
| | (3) *Insanity of double form* . . . . . | Continuous insanity of double form. |
| | | Intermittent insanity of double form. |
| Partial or Essential Insanities. | Systematized progressive insanity . . | First stage (hypochondriacal insanity). |
| | | Second stage (persecutory, religious, political, erotic, etc., insanity). |
| | | Third stage (ambitious insanity). |

## II. Constitutional Alienations (Degeneracies, Deviations, Mental Infirmities).

| | | | |
|---|---|---|---|
| Degeneracies of Evolution (Vices of Organization). | *Disharmonies* | | Defect of equilibrium, originality, eccentricity. |
| | *Neurasthenias* | | Fixed ideas, impulsions, aboulias. |
| | *Phrenasthenias* | | Delusional (multiple delusions of degenerates). |
| | | | Reasoning (reasoning insanity, moral insanity). |
| | | | Instinctive (instinctive insanity). |
| | *Monstrosities* | | Imbecility. |
| | | | Idiocy. |
| | | | Cretinism, myxedema. |
| Degeneracies of Involution (Disorganization). | Dementias | | Simple dementia. |

## Secondary Conditions of Mental Alienation.

(Associated or Symptomatic Insanities.)

### I. Physiologic Conditions.

(Sympathetic Insanities.)

| | |
|---|---|
| Infancy. Puberty | (Hebephrenia; pubescent insanity). |
| Old age | (Senile insanity). |
| Menstruation | (Menstrual insanity). |
| Pregnancy | (*Puerperal insanity*). |
| Menopause | (Climacteric insanity). |

### II. Local Visceral Disorders.

(Sympathetic Insanities.)

| | | |
|---|---|---|
| 1. Genito-urinary organs | Uterus and annexes | (*Utero-ovarian* insanity). |
| | Kidneys and bladder | (Brightic insanity). |
| 2. Digestive apparatus | Stomach and intestines | (Gastro-intestinal insanity). |
| | Liver and bile ducts | (Hepatic insanity). |
| | Intestinal worms | (Helminthic insanity). |
| 3. Circulatory apparatus | Diseases of the heart | (Cardiac insanity). |
| | Diseases of the vessels | |
| 4. Respiratory apparatus | Diseases of the lungs | |

### III. General Diseases.

(Insanity of Acute Disorders. Diathetic Insanity.)

| | | |
|---|---|---|
| 1. Acute | Variola. Erysipelas . . | |
| | Typhoid fever. Cholera. | |
| | Grippe . . . . | |
| 2. Chronic | Intermittent fever . . . | (Malarial insanity). |
| | Rheumatism . . . | (Rheumatismal insanity). |
| | Gout . . . . | (Podagrous insanity). |
| | Tuberculosis . . . | (Tubercular insanity). |
| | Pellagra . . . . | (Pellagrous insanity). |
| | Cancer . . . . . | (Cancerous insanity). |
| | Syphilis . . . . . | (Syphilitic insanity). |

### IV. Diseases of the Nervous System.

(Cerebrospinal Insanities. Neurotic Insanities.)

| | | |
|---|---|---|
| 1. Cerebral | General paralysis . . . . | (*Paralytic insanity*). |
| | Local brain disease . . . | |
| 2. Spinal | Locomotor ataxia . . . . | (Tabetic insanity). |
| | Multiple sclerosis . . . . | |
| 3. Neuroses | Epilepsy . . . . . | (*Epileptic insanity*). |
| | Hysteria. Somnambulism. | (*Hysteric insanity*). |
| | Chorea . . . . . | (Choreic insanity). |
| | Paralysis agitans . . . . | |
| | Exophthalmic goiter . . | |
| | Asthma . . . . . | |

### V. Intoxications.

(Toxic Insanities.)

| | |
|---|---|
| Alcoholism . . . . . | (*Alcoholic insanity*). |
| Saturnism . . . . . | (Saturnine insanity). |
| Morphinism . . . . . | (Morphinic insanity). |
| Hashischism . . . . . | (Hashisch insanity). |
| Etherism . . . . . | (Etheric insanity). |
| Chloralism . . . . . | (Chloralic insanity). |
| Cocainism . . . . . | (Cocainic insanity). |
| Oxy-carbonism . . . . . | (Oxy-carbonic insanity). |

The most obvious objection to this classification is its elaborateness, but this is less real than apparent. It has the special merit of prominently bringing forward a class of mental disorders that, while not so frequently met with in asylums, and therefore not commonly included in their classifications, is liable to come before

the general practitioner at any time: the degenerative neurasthenics and sympathetic insanities, which in their milder manifestations are far from uncommon and need recognition.

One of the most recent Italian classifications of mental diseases is that of Agostini, which in some respects resembles that of Kraepelin. It is less elaborate and lengthy than that of Regis, and differs from that of the German alienist in the different estimate placed upon mania and melancholia, which are not recognized as particularly degenerative or periodic types. In this last view Kraepelin has not as yet a large following, though in a modified form it is likely that some of his ideas will come to have many adherents.

CLASSIFICATION OF AGOSTINI (1898).

GROUP I.

Mental Disease in Normally Developed Individuals.

- a. Functional disorders of general metabolism.
  - Mania.
  - Melancholic insanities.
  - Confusional insanities.
  - Stuporous insanities.
- b. Intoxications or acute infections.
  - Acute delirium.
- c. Subacute or chronic intoxications from auto- or hetero-toxic agents, or by special poisons or drugs.
  - Paralytic dementia.
  - Pellagrous insanity.
  - Syphilitic insanity.
  - Myxedematous insanity.
  - Alcoholic insanity.
  - Saturnine insanity.
  - Carbonic insanity.
  - Morphinic insanity.
  - Cocainic insanity.
- d. From regressive or degenerative cerebral changes.
  - Senile dementia.
  - Secondary dementia.
- e. From diffuse or local cerebral disease.
  - Hemiplegic dementia.
  - Dementia from diffuse sclerosis.
  - Dementia from cerebral compression, etc.

GROUP II.

| | | |
|---|---|---|
| Arrests or Deviations of the Psychic Faculties in the Degenerate. | Precocious types. | Idiocy.<br>Imbecility.<br>Endemic cretinism.<br>Original paranoia.<br>Rudimental paranoia.<br>Reasoning insanity.<br>Moral insanity.<br>Episodic paranoia. |
| | Late types. | Paranoia tardive.<br>Periodic insanity.<br>Catatonia. |

GROUP III.

| | |
|---|---|
| Psychoses Connected with Neuropathic Constitution. | Hysteric insanity.<br>Epileptic insanity.<br>Hypochondriac insanity.<br>Neurasthenic insanity. |

NOTE.—The following is the latest Italian classification, adopted by the Italian Congress of Alienists at Ancona, October, 1901 ("Gaz. degli Ospedali," Oct. 13, 1901):

1. *Congenital Psychoses.*—Arrests and deviations of psychic development, phrenasthenias, moral insanity, sexual psychopathies.

2. *Acute and Simple Psychoses.*—Maniacal and melancholic conditions, amentia, hallucinatory insanity.

3. *Chronic Psychoses, Primary and Secondary.*—Paranoia; periodic insanity; senile, primary, and consecutive dementia.

4. *Paralytic Psychoses.*—Dementia paralytica (classic), luetic, alcoholic, encephalomalacic.

5. *Psychoses of the Neuroses.*—Epileptic, hysteric, neurasthenic, choreic, etc., insanities.

6. *Toxic Psychoses.*—Pellagrous, alcoholic, morphinic, cocainic, etc., insanities.

7. *Infectious Psychoses.*—Post-influenzal, typhoidal, syphilitic insanities; acute delirium.

Dr. F. X. Dercum ("Jour. Nerv. and Ment. Dis.," Sept., 1901) proposes five groups of mental affections only:

I. Delirium, confusion, stupor.
II. Melancholia, mania, circular insanity (melancholia-mania).
III. Paranoia.
IV. Neurasthenic insanities.
V. Dementia.

These, however, require subdivisions according to developmental periods, causes, etc., and the apparent simplicity is not realized to the fullest extent. He also leaves out idiocy and imbecility as quantitative defects and not true insanities, ignoring their close relations to paranoia, etc.

The following is a comparatively recent (1897) English classification—that of Andriezen. It has decided merits, but its novel nomenclature and some other features are likely to stand in the way of its early general adoption.

I. Aphrenia; arrest of psychic development with absent or deficient evolution of personality.
   a. Somnolescent vegetation (paralytic idiots, etc.).
   b. Medium and higher grade (microcephalic, cretinoid, myxedematous, idiots).

II. Oligophrenia. Enfeeblements and diminutions of psychic development.
   a. Lower grade imbeciles.
   b. Medium grade imbeciles.
   c. Higher grade imbeciles.
   d. Feeblemindedness.

III. Paraphrenia. Anomalies and perversions.
   *a.* P. acuta (eccentrics, cranks, mystics).
   *b.* P. *gravis.*
      1. Observing and impulsive.
      2. Persecutors. Querulant.
      3. Moral insanity—sexual pervert.
      4. Congenital criminals.
      5. Paranoias.
      6. Cyclic.
      7. Epileptic, hysteric, neurotic.
      8. Pubescent.

IV. Phrenopathia. Morbid condition or derangements occurring in brains of nearly full psychic development and previous health with corresponding morbid alteration of personality.
   1. Vesania type (melancholic mania, stupor, confusion).
   2. Toxic type.
   3. Febrile micro-parasitic types, puerperal acute delirium, etc.
   4. Diathetic group. Derangement of metabolism (myxedematous, acromegalic, diabetic, syphilitic pseudo-paralysis).
   5. Chronic meningo-encephalitis, general paralysis.
   6. Involutional. Chronic cerebral atrophy, characteristic seniles.
   7. Traumatic.
   8. Neoplastic and thrombotic hemorrhages and neoplasms.

The fact that nearly every writer on insanity has offered his own classification, differing more or less from that of any other, has probably had its influence in discrediting the classifications of mental diseases generally in the public mind. The fact itself indicates

the difficulties that any attempt of this sort must meet, and the wide range of views that are possible. Insanity is a symptom of brain disease, and we know as yet too little of all the multiform functions of that organ to be able to make any absolutely correct and uniform division of its disorders that is likely to be generally accepted. The classification adopted in this work will be a simple one. The general principle is to divide the disorders according as they occur, first, in a normally constituted brain and mind; and, second, as they occur in organizations that are defective from the start. It does not follow that what we call a normally constituted mind may not be in some respects specially favorable to the outbreak of mental disease. Absolute freedom from any predisposition is too rare an occurrence to be reckoned with. The difference, however, between the degenerative and the non-degenerative types is found in the clearly manifested defective constitution that appears to be closely related with certain types or forms of insanity. The first division, therefore, includes the alienation that may occur in ordinarily well-constituted individuals, due to the accidents to which every one is liable, overstrain, toxic agencies, traumatisms, etc.

In this division, which differs from that of Agostini and its arrangement, we include also the insanities connected with the general neuroses and the neurotic predisposition which is not directly ascribable to a pronounced general degenerative constitution. These are the so-called neuropathic forms. In a second group we have the evolutional and involutional forms. In the third group we have the insanities of the degenerates properly so called, and here we place those forms that are connected with gross teratologic defects. These divisions are not absolute, and there is a possibility in every case of more than one influencing cause, but they are adopted for their convenience.

In the first group we do not include the common form of mania, which, following Kraepelin, is placed in the degenerative type. As regards melancholia, however, we do not think that we have the evidence that we should have to refer it to this class. Melancholia occurs, according to our experience, in much the same form in both young and old, though predominantly in the latter, and Kraepelin's division of it into a depressive form of periodic insanity, and a true melancholia of the aged, does not seem to us fully justifiable.

With mania, on the other hand, there is a greater difficulty in deciding its proper place in the classification. Understanding by the term only the typical form, which almost invariably has a hereditary history of mental disorder, or some other pronounced neurotic or neuropathic heredity, and with these also marked degenerative stigmata, it would not appear unnatural to refer it to the degenerative psychoses that do not occur in the normally constituted individual. To class it with the periodic insanities because of the likelihood of its recurrence, as does Kraepelin, seems to us an error; its periodicity is too irregular to be called such, and its absolute certainty of recurrence is not yet satisfactorily established. We have placed it, therefore, in the degenerative forms, as it were, provisionally, subject to change in case the facts appear to warrant it in the future. There is no doubt, as Worcester has pointed out, that in the past a large proportion of the cases of acute confusional insanity have been classed under this head in the statistics, and it is an important service of Kraepelin's work that it emphasizes the distinction between these two types. Indeed, in many of the asylum reports of this country and Europe no such class of mental disorders as confusional insanity has existed, and this type is not so much as named in the international classifications of 1885 and 1889, or in that of the International Congress of Mental Medicine

(1889), a fact that is a striking commentary on the pathologic conceptions of insanity that have been in vogue up to recent date.

The second division of acquired insanities in our classification is that of the mental disorders from direct drug intoxications. In this way we have a sort of gradation, and the real difference between the two types is not so great as to justify, in our opinion, their complete separation from each other. In the intoxications, but placed by itself, we include paretic dementia, as probably in most cases a parasyphilitic disorder, and in any case as the result of an active toxin, which, if not syphilitic in its origin, may be due to other conditions, like plumbism, pellagra, etc.

The fourth division gives those mental disorders directly connected with gross organic brain disease, such as traumatic insanity from brain lesions, and hemiplegic insanity, etc.

The fifth group of acquired mental disorders includes those connected with neurotic or neuropathic conditions. Under this head we have hysteric insanity, epileptic insanity, and the special types of neurasthenic derangement that indicate a neuropathic predisposition. These disorders are very often reckoned with the degenerative forms, but their more correct place appears to us to be among the acquired forms of mental disease. Hysteria, which of itself comes nearest to a degenerative psychosis, is a latent possibility in the vast majority of individuals, if not in all to some degree. It is drawn out or excited into manifestations by various causes, chiefly bad training, psychic or physical shock, but there may be also other exciting causes. Epilepsy is very often, if not usually, an acquired symptom, and the same is true of hypochondria.

A group that more nearly falls between the acquired and the degenerative mental disorders is that we have called the insanities of critical periods. These are the

forms that occur under stress of development or of regressive changes; they indicate weakness, but are not the inevitable or the easily excited types of the generally and continuously unstable organization that we include under the degenerative psychoses.

This class approaches closely to the degenerative insanities; in fact, it may be considered as a sort of connecting-link or intermediate between the acquired mental disorders and those due to well-marked degenerative defects. Under these latter, which comprise our third great division, the insanities of the degenerates, we have included circular insanity, paranoia, psychic or periodic insanity, and the various types that grade down finally toward imbecility and idiocy. Mania, as already stated, is provisionally put in this class.

We make a separate group for the borderland and episodic conditions which follow the degenerative insanities. This does not imply that these are all more advanced degenerative states, for they are not; they are merely considered here for convenience, as they include symptoms ranging from comparatively unimportant and temporary neurasthenia to pronounced evidences of degeneracy. They clinically, however, may be classed with the other forms, and they have certain features in common that make their consideration in a group by themselves the most natural arrangement.

As regards chronic insanities, no attempt has been made to put them in a separate division; they may all be referred to one type, that of terminal dementia, in so far as they do not continue in a chronic form the symptoms of their acute stage. Thus, paranoia may never pass into terminal dementia. The same is true to some extent of other forms, such as mania and the different types of cyclic or periodic insanity.

The following is the classification that has been out-

lined above, and which will be followed in the present volume:

I. Acquired insanities. Mental disorders of the normally constituted.
  a. Exhaustional and autotoxic types, including,
    Primary confusional insanity,
    Secondary confusional insanity,
    Melancholia.
  b. Toxic (drug) insanities, including,
    Alcoholic insanity,
    Morphin insanity,
    Cocain insanity, etc.
  c. Paretic dementia (paresis).
  d. Organic insanities, including,
    Hemiplegic insanity,
    Traumatic insanity.
  e. Insanities of the neuroses, including,
    Epileptic insanity,
    Hysteric insanity, etc.

II. Insanities of critical periods—developmental and involutional.
  a. Adolescent insanity, including,
    1. Dementia præcox,
    2. Catatonia.
  b. Senile insanity.
  c. Climacteric, etc., insanity.

III. Degenerative psychoses, including,
  a. Mania,
  b. Circular insanity,
  c. Paranoia, including,
    1. Systematized delusional type,
    2. Original paranoia.
  d. Moral insanity,
  e. Imbecility,
  f. Idiocy.

IV. Borderland and episodic states, including obsessions, phobias, impulses, sexual perversion, etc.

V. Terminal dementia.

A very casual examination will readily show the resemblances between this classification and those of Kraepelin and Agostini, the differences being mainly in alteration of arrangement, and minor details that have been mentioned. It is not so easy, however, to recognize the exact equivalents of the species here given and those of Kraepelin and Regis, representing, as it

## A COMPARATIVE TABLE OF CLASSIFICATIONS.

| Brower and Bannister. | Spitzka. | Regis. | Kraepelin. | Agostini. | Common Use. |
|---|---|---|---|---|---|
| *Acquired Insanities:* | I. | | | | |
| a. Exhaustion and autotoxic types. | | Mania and melancholia and their varieties. | | | |
| | | | Collapse delirium. | Amenza confusionale. | Mania, melancholia. |
| Confusional insanity. | Primary confusional insanity. | Symptomatic insanities. | Acute confusional insanity (Verwirrheit), dementia acuta. | Mania, melancholia. | |
| | Delirium grave, stuporous insanity. | | Chronic nervous exhaustion. | Delirio acuto. | Acute delirium. |
| Melancholia. | Melancholia; stuporous insanity. | | Melancholia (senile insanity). | Melancholia. | Melancholia. |
| b. Toxic (drug) insanities. | Alcoholic insanity. | Alcoholic insanity. | | | |
| Alcoholic insanity. | | Morphin insanity. | Alcoholism. | Frenosi alcoholica. | Alcoholic insanity, alcoholism. |
| Morphin insanity. | | Cocainism. | Morphinism. | Frenosi morfinica. | Morphinism. |
| Cocain insanity. | | | Cocainism. | Frenosi cocainica. | Cocainism. |
| c. Paretic dementia; paresis. | Paretic dementia. | General paralysis. | Dementia paralytica. | Frenosi paralitica. | Paresis; general paralysis. |
| d. Organic insanities. | Dementia from coarse brain disease. | Simple dementia. | | | |
| Hemiplegic insanity. | | | | Demenza emiplegica, etc. | Organic dementia. |
| Traumatic insanity. | | | | | |
| e. Insanities of the neuroses. | | | Epileptic insanity. | Follia epilettica. | Epileptic insanity. |
| Epileptic insanity. | Epileptic insanity. | Epileptic insanity. | Hysteric insanity. | Follia isterica. | Hysteric insanity. |
| Hysteric insanity. | Hysteric insanity. | Hysteric insanity. | | | |

| | | | | | |
|---|---|---|---|---|---|
| | II. | | | | |
| *Insanities of Critical Periods:* | | | | | |
| a. Adolescent insanity. | Insanity of pubescence. | Sympathetic insanity. | Dementia præcox. Catatonia. | Follia catatonica. | Pubescent insanity. Catatonia. |
| Dementia præcox. Catatonia. | Catatonia. | | | | |
| b. Senile insanity. | Senile dementia. | Sympathetic insanity, senile. | Senile dementia. | Demenza senile. | Senile dementia. |
| c. Climacteric insanity. | | Sympathetic insanity, menopause. | | | |
| | III. | | | | |
| *Degenerative Insanities:* | | | | | |
| a. Mania. | Mania. | Mania. | Periodic insanity. | Follia periodica. | Mania. |
| Circular insanity. | Periodic insanity. | Insanity of double form. | Periodic insanity. | | Circular insanity. |
| b. Paranoia. | | | | | |
| Systematized delusional types. | Monomania. | Systematized progressive insanity. | Verwirrheit. | Paranoia tardive. | Paranoia, monomania. |
| Original Paranoia. | | Phrenasthenia — delusions of degenerates. | | Paranoia originaria. | |
| c. Moral insanity. | | Phrenasthenia — moral insanity. | Imbecility. | Follia morale. | Moral insanity. |
| d. Imbecility. | Imbecility. | Monstrosity. Imbecility. | | Imbecilite. | Imbecility. |
| e. Idiocy. | Idiocy—cretinism. | Idiocy. | Idiocy. | Idiotisma. | Idiocy. |
| | IV. | | | | |
| *Borderland and Episodic States:* | | | | | |
| Obsessions, phobias, impulses, etc. Sexual perversion. | Momentary frenzy, etc. | Neurasthenia, etc. | Psychopathic states. | Paranoia rudimentale, etc. | |
| | V. | | | | |
| Terminal dementia. | Terminal dementia. | Simple dementia. | | Demenza consecutiva. | Dementia. |

were, the later German and French schools. We therefore offer in tabulated form what seems to be to us the nearest equivalents in these classifications, and also in that of the work of Spitzka, which has been in its way a standard in this country for many years. Here in parallel columns are given the names of the types of mental disease as recognized by each author opposite the species corresponding to it in our own classification. The advantage of this appears to us obvious, as a confusion of terms that exists between the different nationalities and in the different languages is a real drawback in the study of insanity. For many years we have had no equivalents in our terminology for some of the names used abroad, and the absence of the term to some extent has implied also the lack of the proper conception of the species.

It is well to bear in mind that any classification, except, perhaps, the most simple ones, is at best a compromise. If we confined ourselves to simply dividing insanity into a few symptomatologic groups, we would escape many difficulties, but the security would be only that of invincible ignorance that pays no attention to any but the most simple and obvious facts. All the acquisitions of late years would have to be ignored, and the satisfaction that some have expressed of late with such, as compared to the more full and elaborated classifications, is hardly creditable to them.

With the multiplicity of actual and possible causes of insanity, especially of the forms not directly associated with direct toxic actions or gross lesions, it is often impossible to say that this or that element enters more as a factor into the causation of the disorder, and the placing of any individual case is often at best only provisional. The predisposition that has been already stated to exist so generally has always to be reckoned with, and degeneracy is, as applied to mankind, only a comparative term; the individual who is absolutely

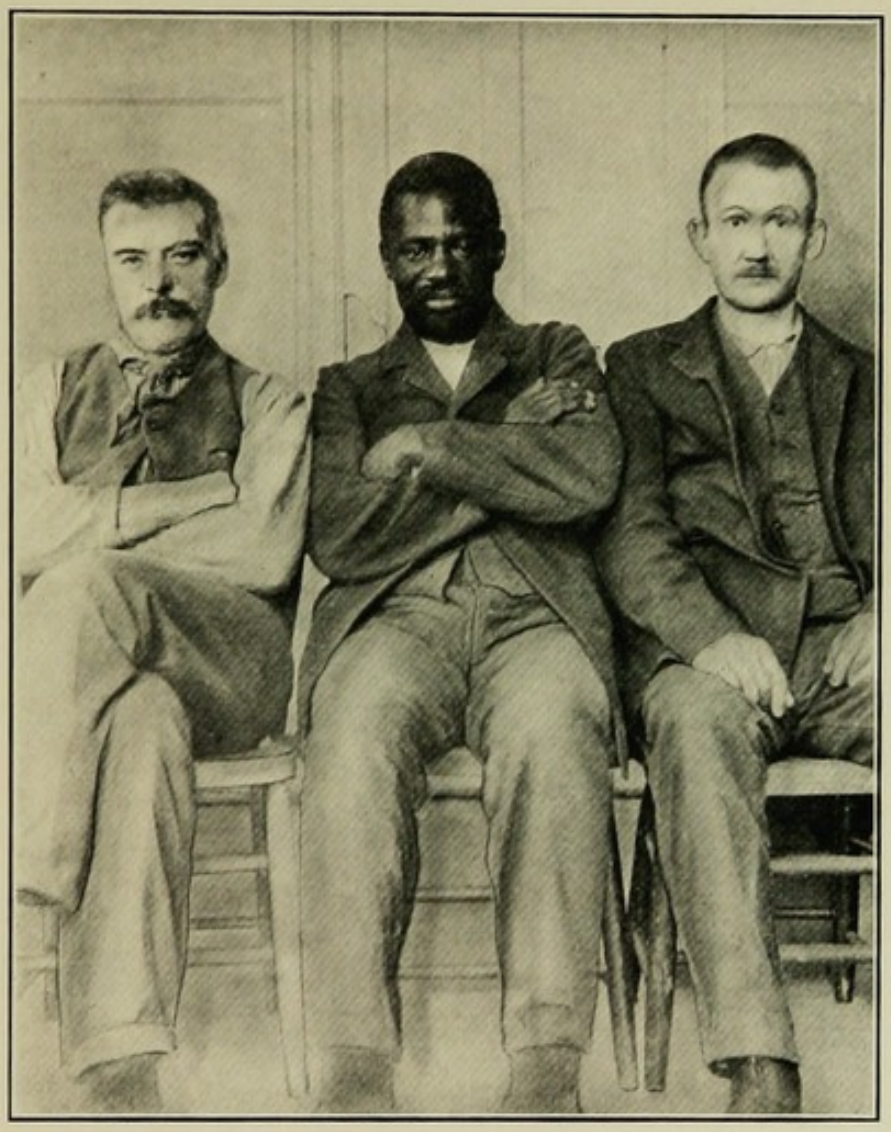
free from some of its stigmata and some of its active tendencies in all probability does not exist. Therefore, our distinction of acquired and degenerative types of mental disorder is not always a clearly marked one, and patients have to be classified according to the most prominent features and symptoms. We have, however, a sufficiently well-defined set of syndromes that in most cases is enough for our purposes, and there is no reason why we should not utilize them.

## CHAPTER X.

## THE ACQUIRED INSANITIES.

By the acquired insanities we understand those forms that are possible in normally developed individuals without special hereditary or congenital defect that would more or less inevitably tend to the production of mental disorder under favoring conditions. It is not intended to restrict this class exclusively to normally constituted individuals, or to exclude predisposition. They are as liable to occur in predisposed or degenerative cases, and even more so; but this special type of insanity is such that it might occur in any one with sufficient external cause. It is the type, not the etiology or the constitutional conditions and predilections of the patient, that rules the classification.

There are included in this division the mental disorders from exhaustion and auto-intoxication, which can best be considered together, as both causes very commonly cooperate in the etiology of the insanity; the strictly toxic insanities due to poisons introduced into the system from without, the organic and traumatic insanities caused by gross organic lesions of the brain, and, lastly, the insanities of the neuroses, which form a sort of transition to the next following class: the insanities of critical periods, or those occurring at special developmental stages when the special stress upon the brain and nervous system is in excess. Taking them up, therefore, in the above order, we have first to consider the exhaustional and auto-intoxication types.



CONFUSIONAL INSANITY.

## PRIMARY CONFUSIONAL INSANITY.

**Definition.**—By primary confusional insanity we understand a form of primary mental disorder characterized especially by marked intellectual impairment, delirium, incoordination of ideas, impaired consciousness, and generally hallucinations and illusions, and sometimes a more or less stuporous condition, occurring, as a rule, after severe mental or physical exhaustion, or auto-intoxication in disordered states of the organism.

The simplest and most familiar type of the disease is the temporary delirium of fever, which is hardly recognized as insanity, and which, in the vast majority of cases, passes away without causing permanent damage. In cases, however, that properly fall in the category of confusional insanity, the direct auto-intoxication is less acute, and the damage to the mentally functioning brain elements is much more serious. It stands in about the same relation to febrile delirium that the more lasting alcoholic intoxication or alcoholic mental derangement does to acute intoxication, except that it is not so commonly preceded by repeated temporary attacks. As alcoholic insanity may occasionally occur in steady drinkers who seldom or never exhibit the symptoms of acute inebriety, the parallel is not so incomplete.

While the symptoms of this type of insanity have long been recognized under one form or another, for its acceptance as an independent species of late years we are largely indebted to the Germans, with whom it has passed under various names, as amentia, acute hallucinatory "Verwirrheit," etc. Spitzka (1877) in this country was one of the very first, if not actually the first, to recognize and describe its typical form as an independent entity. Chaslin (1895), "La Confusion Mentale Primitive," has given an excellent monograph on this subject, in which the historic data are very

fairly summed up, and it does not appear from it that any author really antedated Spitzka in the first edition of his excellent manual on insanity, published in 1877. At the present time it has not yet commonly won a place in asylum statistics, but its general recognition is probable in the near future, the more so since it has the sanction of some of the more recent foreign treatises, such as those of Kraepelin and Agostini.

As here understood, the species is more comprehensive than is that of Kraepelin, whose "collapse delirium," acute "Verwirrheit," and dementia acuta are here all included under the same general head of primary confusional insanity. It has seemed better to do this, to consider them as varieties of one species, rather than as distinct clinical forms always recognizable, and not so intimately related as we must admit them to be. They have, in the main, and as acute conditions, the same etiology, and, as Kraepelin admits, the same marked disorders of understanding, of connection of ideas, and of the mental reaction to external impressions and representations. Their treatment is practically the same, only varying with minor and special individual conditions. They graduate also into each other, so that every variation can be found between the most excited collapse delirium at the one extreme, to almost absolute stuporous insanity at the other. To quote Kraepelin again, his acute "Verwirrheit" can, in a certain sense, be called a prolonged collapse delirium, and his acute dementia may begin with the characteristic symptoms of either of these types.

With this more comprehensive concept of confusional insanity it is therefore necessary to recognize as phases or varieties of the disorder the more striking modifications of the type. This, however, need not be done formally under different heads, at least as regards the first two, the "collapse delirium" and the acute

"Verwirrheit" of Kraepelin. The deeper involvement of the intellectual and sensory centers, as shown in the condition called by him "acute dementia," and which in its extreme phase includes what has been known as stuporous insanity, is clinically more distinct, and possibly deserves a separate heading, as a more marked variety, such as had been given it by some recent authorities who have treated of the subject (Agostini, Kraepelin, *et al.*). Collapse delirium and acute hallucinatory delirium pass into each other imperceptibly —there are cases which it is hard to say to which category they belong. It is sometimes the case that the more acute cases with apparent shorter duration may relapse after, as it were, passing into the convalescent stage, and become typical confusional insanity, lasting for weeks and months. A little error in the treatment, or some unavoidable accident, may change the apparently more acute delirious attacks to the more lasting phases. From these considerations we do not here recognize the two types as more than the variations of a single species of mental disorder.

**Etiology and Frequency.**—Aside from predisposition or original defect, which may, of course, coexist without affecting the status of this disorder as an acquired insanity, and other factors indirectly favoring its occurrence, the chief causes of confusional insanity are those that directly affect the nutrition of the brain, or exhaustion from excessive mental strain in some form or other. Thus, the puerperal state and lactation may be reckoned as amongst the most frequent; then come exhausting acute disease, mental overwork or excitement; and, lastly, in all probability excessive emotional excitement. Just the proportional part that the exhaustion of the brain-cells and auto-intoxications occurring in connection with the above-named causes play, is hard to decide, and the question will be more thoroughly discussed under the head of pathology. There

is little question, however, but that both these elements have a share in its causation, and that the morbid conditions due to fatigue in themselves are attended with the production of toxins that may react on their originating cells or organs, and their functions.

Kiernan * reports cases due to fright, rheumatic infection, lead-poisoning, etc., and considers nervous asthenia as the underlying condition. He quotes Kraepelin and Moeli as holding a similar view and making the nerve exhaustion rather than the toxemia the leading factor. This is probably correct in the main, but the toxin element cannot be altogether unconsidered in many cases, at least, as a factor in the nerve exhaustion itself; the latter is sometimes the leading manifestation of the toxic action. The rapidity with which the etiologic factors develop is held by some (Binswanger) as having an important influence on the form of the disorder. The more long continued the prior exhausting influence, the more prominent are the inhibitory symptoms (stupor, etc.), while the irritative symptoms follow more usually in the cases of quick development and less prolonged antecedents. This, however, is only true to a certain extent; the intensity of the impression on the nervous system and its special idiosyncrasies in any individual case have more to do in many cases than the length of time they have been acting.

As rule, there must be a weakened organism or a special predisposition to form the favoring soil upon which these causes may produce their morbid product. This is readily supplied by the physical conditions of an exhausting parturition, or an acute attack of fever, for example, in those who have not a congenital weakness to favor the outbreak. Long-continued night watching without compensating sleep by day, especially if accompanied with anxiety, may be a cause;

*"Med. Standard," July, 1895.

excessive political or religious excitement also is occasionally credited with producing it, and it is, as Regis has pointed out, the most marked type of the insanity that sometimes follows surgical operations—the so-called post-operative insanity. Typhoid fever, influenza, and other exhausting disorders in which there enters also an element of auto-intoxication are also frequent causes, and we may sum up the etiology by saying that it embraces whatever may lead to rapid exhaustion of the cerebral nervous centers.

Primary confusional insanity in one or another of its types or phases is not an infrequent form of mental disorder; the more acute and typical form, the collapse delirium of Kraepelin, is possibly the most frequent, and is, as has been stated, not uncommonly classed as mania in the average asylum classifications. The more long-continued form, the "amentia," is probably less frequent, and the more or less stuporous type is by no means rare. It is difficult to say what proportion of all the cases of insanity all these forms together make, on account of the very common failure to recognize them as distinct clinical species; there has been, indeed, a confusion of ideas in regard to them, and that state exists even in comparatively recent text-books on insanity, and has greatly obscured the subject, and led to almost a complete absence of statistics. It does not appear improbable, however, that of strictly recent cases it forms a very considerable percentage; not less, at the least calculation, than 10 to 15%. Counting only the acquired insanities by themselves, and excluding the degenerative and neurotic types, the proportion would, of course, be still larger.

**Symptoms.**—With the more comprehensive conception of confusional insanity given above, there must of necessity be a wider range of symptoms than some have attributed to it, including, as it does, not only the delirious types, but also the more depressed and

stuporous ones. In describing the clinical phenomena of the disorder here, all these will be noticed in their natural connection, without attempt at formally separating the types or varieties.

In a large proportion of cases the onset is sudden; the patient, while he may be aware of having overworked his brain, or otherwise undergone a mental or physical strain, is apparently not aware of any special change in his health, and the onset of the attack is unanticipated. One such, who preserved some sort of recollection of what he passed through when he was taken suddenly when traveling on a railroad train, endeavored to vividly describe the hallucinations and ideas that then possessed him. As far as he could remember, they were those of impending danger, but at best it was a sort of confused dream, which soon passed into a condition of which he had no recollection whatever. Such patients are rare, and we generally have to endeavor to appreciate their mental condition by their objective symptoms and speech. In the more acute form (collapse delirium) they show from the first, as a rule, a loss of appreciation of their surroundings; their intellection is embarrassed, the ideas, while flowing incoherently and disconnectedly from the first, indicate when closely studied an actual retardation rather than an acceleration of mental action. The patient repeats meaningless phrases, seemingly disconnected portions of sentences, as if his ideas were broken off in the middle; or he may talk a little more connectedly, as if under a host of fleeting and disconnected deliriums or hallucinations. He is in heaven or hell, is general of armies, or is to be crucified; all these rapidly changing from minute to minute. The hallucinations and illusions are mostly visual, but may involve any of the senses. They relate to the surroundings, or the identity of individuals about him; he is in a palace, is surrounded by devils, saints, or angels. Perfumes or foul odors

are thrown upon him, etc. Not infrequently they may have an erotic tinge; the patient believes he is under the influence of love potions, etc., and the acts may be in accordance. There is often a tendency in the speech to alliteration, and there can sometimes be apparently traced a connection of sound without sense between the words or phrases. The speech often seems to be only a sort of an automatic verbigeration, with only a faint indication of any intellectual process.

The emotional condition in these more acute cases is generally rather exalted than depressed, but there may be with the rapidly changing kaleidoscopic impressions spells of terror, leading to acts of sudden violence. One patient who was of this general type, for a time in the experience of the writer, was one of the most difficult patients in a large hospital to manage, because of this tendency, and the intense motor excitement. He could not be well managed by two or more attendants on account of his physique and the quickness of his movements, and isolation under close observation was for a time the only seemingly practicable resource. Such cases are rare in acute confused insanity, but they sometimes occur, and extreme motor excitement is not altogether uncommon in very well-marked cases of this acute type.

The majority of the cases of acute confusional insanity, aside from those following childbed and acute diseases, probably begin in this way, with few premonitions, except that the patient may feel that he is overworked, and is not in his best condition, is suffering from constipation, etc. In other cases, however, there are premonitory symptoms, restlessness, insomnia, a certain degree of mental depression preceding the outbreak by a few days or a week or two, in some cases even over a month. With this less rapid onset of the attack there is a more gradual development of the symptoms, and the more or less intense, often slightly

erotic and hilarious excitement, is no longer the rule. The patient is as much, or more, likely to be depressed rather than excited. In some cases the mental confusion, though existent and well marked, may come on so insidiously that the casual observer may not recognize the mental condition, especially if it is attended by taciturnity, as is sometimes the case. It may vary also in degree; the patient may still be able to partially or occasionally orient himself, as in an instance under observation, where a man wandered away from home, and was yet able once or twice to direct incoherent communications to his friends, though with no recollection of having done so later. This case will be more fully noticed when speaking of the later stages of the disorder.

When the disorder appears after childbirth, acute febrile infections, or exhaustive loss of blood, the course is commonly the same; the onset of the mental disorder may be sudden or gradual, but the early course of the affection is modified by the physical condition of the patient; there is less likely to be excessively stormy agitation, for the simple reason of the weakness following the original cause. A very large proportion of the cases of so-called puerperal insanity are of this type—an acute hallucinatory delirium, with mental confusional symptoms marked. Occasionally the beginning is so gradual that the patient herself is aware of the condition, and may even seek advice and treatment after the incoherence and inability to express herself or describe her symptoms is well established. There may be, lastly, in some cases a stuporous tendency from the beginning; in short, there is every variety in the mental symptoms of the incipient disorder, ranging from acutely maniacal-appearing agitation to more or less complete apparent apathy or dementia.

As the mental disorder progresses, the symptoms usually become more marked after the immediate onset,

the mental confusion becomes more pronounced, the hallucinations, which are the rule, more evident, and whatever consciousness or memory of his or her condition the patient may have possessed up to this time is commonly lost. The motor impulsion, which in the severer cases stimulates actual maniacal furor, soon reaches its height when it occurs. In the more slowly progressing form the emotional condition, while most frequently more or less of the depressive type, may also take on an excited form, and a mildly hilarious grand delirium, or delusions of exaltation, may appear, even in the cases where the physical depression is most strikingly marked. Patients in this condition, however, are rather exceptional; the general rule is a confused depression. They appear often as if they were wondering why they were depressed, and are not so commonly actively and obstinately inclined to self-depreciation or self-injury as melancholiacs, with whom they have often been classed; or if otherwise, it is but momentary, and under some special stress of agitation. They may be mildly resistant in an aimless, semi-passive way, but rarely more than this.

With the mental changes, there are generally parallel physical symptoms. The condition after exhausting fevers or other diseases, childbirth or lactation, or often extensive hemorrhages, is, of course, one of exhaustion, anemia, and malnutrition, and in the post-febrile cases we have also the special toxins to reckon with as probable disturbers of the bodily health. In those credited to overwork, and especially to sudden shocks or strains, the general physical condition may be better, and the muscular power particularly be retained to a very large extent, so that such patients, under the influence of their fleeting delusions, may be at times quite difficult to manage, and in the very acute and rapid cases of so-called collapse delirium there may be no very serious physical depreciation decidedly visible till the

relaxation of the strain toward the beginning of convalescence. But even in these cases there may be manifest bodily symptoms, and there is almost invariably a disordered digestive tract, as shown by foul breath, a coated tongue, and generally an obstinate constipation. In some rare cases the depraved physical condition may go so far, even without attendant stupor, as to produce local disorders of the circulation, edema, local asphyxia, or even bed-sores very early in the disease. The appetite is commonly poor or lost, and artificial feeding may be required. Constipation is the rule, but may alternate with diarrhea.

In a certain proportion of cases which usually commence as described, the mental condition passes in a few days or weeks to a more or less profoundly stuporous condition. This may vary from a state in which the patient sits or stands in a dull apathetic way, but can still be roused to answer questions in a confused manner, or may even have a set of phrases which he repeats, to complete apparent abolition of mental activity. The patient may occasionally, but rarely, have sudden spells of agitation, or there may be remissions in which the intellectual activities seem to be again aroused, only to fall back into his old condition. In other cases there is, with this semi-stuporous condition above mentioned, a sort of agitation, a mumbling of incoherent phrases, the patient may perform acts without motive, and be to a certain extent destructive of clothing, etc., and may masturbate constantly. This condition in any of its forms rarely appears at once, but is generally preceded by a period of confusional delirium similar to that described already as typical of this general type of mental disorder; in fact, it is, as a rule, the outcome and aggravation of those forms called collapse delirium or acute confusional insanity, and especially of the former, when it does not tend to early recovery.

It is in this form particularly that the bodily symptoms are most marked. The patient lies, sits, or stands impassive, and generally expressionless; only in the partial forms is there sometimes a sort of distressed, puzzled look, as if apprehending to an extent his condition. In the fully developed cases the pupils are dilated and the eyes seem dull; the face is pale; the mouth is apt to be partially open, and it may be drooling saliva; the tongue is thickly coated, the breath foul; the pulse is feeble, the temperature often subnormal, but liable in some cases to febrile exacerbations, even reaching 40° C. (104° F.) (Sauze, quoted by Chaslin); the hands and feet are often blue, swollen, the sensibility and the reflexes diminished; the appetite is lost and the general condition of malnutrition marked. Occasionally there is a slight approach to cataleptic muscular rigidity; the patient neglects calls of nature, and passes the urine and feces without any attempt at control or regard for time or place. If questioned, it is only with difficulty that any answer can be obtained, and then it is given, if at all, with extreme embarrassment and slowness.

There is every variety between this complete stuporous type of the disorder and the less profound acute confusional insanity, as there is also between the latter and the more agitated and maniacal type of collapse delirium. These physical symptoms may, therefore, be seen in part existing in the other phases, but, as given above, they are best seen combined and fully developed in the typical stuporous insanity. The maniacal form is usually of shorter duration, and affects the physical condition of the patient least; certainly this is the case while it continues; thus, the more slowly developing confusional type, following, as it does very often, depressing fevers and other diseases, has the somatic phenomena more pronounced, while in the fully developed acute dementia or stuporous insanity

they are most marked of all. It is only in very rare and exceptional cases—and this it is possible, in those where a hereditary and degenerative taint is strong, thus to a certain extent making their reference to the category of acquired insanities a somewhat dubious one—that we find complete stupor occurring without these very notable indications of general somatic disturbance existing to a very marked extent.

The so-called acute delirium is often only the hyperacute phase of confusional insanity from exhaustion or toxemia. In this case the process is a more active one, the cortical changes become more pronounced, and, correspondingly, we have the more marked somatic symptoms indicating actual meningeal and cortical inflammation. The patient is acutely delirious; insomnia is absolute; the temperature often runs up to 103°, 104°, or higher; there is extreme motor restlessness, together with rapid physical exhaustion. Appetite is lost, the teeth become covered with sordes, and the final stage is one of low typhoidal delirium with generally a fatal ending. While the clinical syndrome may occur as a complication of other forms of mental disorder, notably in paresis, yet in the so-called primary cases it is often only, as said above, an aggravated form of the same toxic or exhaustional condition that more commonly reveals itself as the ordinary confusional insanity. The macroscopic changes observed in the brain in fatal cases of this type are those of intense meningeal and cortical congestion, and microscopically the nerve-cells show swelling, pigmentation (especially of the giant cells of Betz), and sometimes breaking down in all layers of the cortex of nearly all parts. Alzheimer has distinguished five different types of acute delirium according to the nature and extent of these changes, some of them especially characteristic of those cases due to exhaustion or intoxication.

**Course and Termination.**—The course of the disease

varies with its form. In the acute collapse delirium type it may last only a few days; rest, good feeding, and attention to the state of the bowels and sleep bringing on a rapid cure. Sometimes, however, as already indicated, a marked apparent improvement may be followed by a relapse, and the patient either have a repetition of the former symptoms, or pass into one of the longer continued forms. In favorable cases of the more acute form of confusional insanity there is sometimes a sudden and complete recovery, but more often, after a few days or weeks, the sufferer begins to change for the better, the agitation disappears, the mental confusion clears up to a large extent, the sleep returns, and the appetite becomes even excessive. There may be for a considerable time some remnants of the confusional condition, some incoherence of ideas, and some delusional notions; but these generally pass away, at least to a very great extent, and the patient is practically well. Recovery with defect may occur, but considerable permanent mental impairment is the exception in this more acute form, when it passes quickly to recovery. In very acute cases the condition sometimes becomes so aggravated as to cause fatal exhaustion before any letting-up of the symptoms may occur, or the syndrome may even be that of acute delirium with high temperature, and all the signs of profound inflammatory meningeal and cortical involvement. Many cases of so-called primary acute delirium or typhomania are, as already said, doubtless instances of this termination of acute confusional insanity.

The less acute type, the "amentia" of the German authors, is more chronic in its course, and lasts, as a rule, for weeks and months instead of days or weeks. Its course is liable to be interrupted by partial remissions that may cause hopes of a quick recovery, only to be disappointed by a speedy relapse; but in other cases, and more often, the disorder is continuous for weeks,

and the recovery is gradual; exacerbations of excitement and of the mental confusion are even more likely to be observed than are remissions, and these are apt to follow some systemic disturbance, like the occurrence of the menses, etc. Death, when it occurs, may be due to marasmus, but is more likely to be the result of some intercurrent disorder, like pneumonia, which finds a less resistant organism from the general state of the patient. The passage from this into the third state, that of acute dementia, or stuporous insanity, is not uncommon. Recovery, generally with some defect, in these cases may occur even after many years. One case observed by us made a very fair recovery after five years, during the last two or three of which she had been absolutely demented to all appearance—untidy, drooling saliva to the amount of pints daily, and unable even to attend to her simplest wants. Few cases, however, recover even partially after so long a period as this; one or two years is generally the limit.

The patient whose insanity continues longer than this is more liable to pass into a state of chronic secondary or terminal dementia, in which the confusional type can often still be recognized. The physical condition improves and the mental symptoms become chronic.

In the lighter forms of stuporous or semi-stuporous insanity, especially those more depressed forms following childbed or exhausting lactation, the mental symptoms may disappear rapidly, with improvement in the bodily health, and the same may also be the case, but more rarely, in some instances occurring after acute infectious diseases. Usually with this type the improvement, when it occurs, is slow; the patient gradually comes to a realization of his surroundings, begins to act and care for himself, and occasionally, it may be after one or more partial relapses, makes an approximate recovery, but usually with more or less permanent

mental defect. On the other hand, the more common outcome is the chronic terminal dementia; the improvement is checked at an earlier stage, and the mental impairment remains so pronounced that the case cannot be called even approximately well. In still other cases the patient is worn out with his general marasmic condition, and succumbs, or develops phthisis or some other intercurrent disorder that carries him off.

It is rare for any extensive or accurate recollection of the incidents during the attack to be preserved by the patient after recovery. In any of the forms of confusional insanity he may have some partial reminiscences of the initial symptoms, and some obscured and perverted recollections of events during early stages of convalescence, often obstinately maintained as true after recovery has become more advanced. It is this class of patients that furnishes a considerable proportion of the cases that bring charges of ill treatment, their perverted recollections continuing in their minds as positive facts, even long after their discharge from the asylum. While practically sane, they still retain delusional concepts of the past that only gradually wear away, and often leave prejudices and ill feeling toward those who have cared for them long after they have become themselves less vivid or have disappeared.

While occasional brief spells or attacks of violent agitation may occur in all the forms, and sometimes be almost continuous for days or longer in the very acute types, thus causing the patients to be considered as violent and unmanageable, actual homicidal tendencies are rare. Confusional patients are also not ordinarily disposed to suicide or self-injury, though in the depressed cases such a tendency is sometimes observed. Like all the insane, they may be reckoned as somewhat uncertain in these respects, while not to be classed as especially dangerous. Impulsive violence and suicide

are what are mostly to be feared, not the steady continuous tendency observed in some other forms of mental disease.

**Prognosis.**—The prospects of cure in confusional insanity are variously estimated. Some authorities make the prognosis relatively favorable, while others, like Chaslin, consider it as dubious at the best. In the different forms the chances of recovery vary; in the acute form,—the collapse delirium,—which in many cases is only of a few days' duration, the patient's chances are relatively good, while in the more developed types there is a much less favorable prospect. It often happens also that an apparent incipient convalescence from the acute form of the disorder is interrupted by some slight and apparently trivial cause, and the prospective recovery is thereby sometimes indefinitely postponed. A woman, for example, whose case was typical in its way, with profound mental confusional symptoms, disorientation as to time and locality, numerous shifting hallucinations, but with retained fair bodily condition, had rapidly improved and was beginning to gradually emerge from her disordered mental state, but with this, as frequently happens, her physical condition, reduced by the intense stress and motor excitement she had passed through, had brought on a state of mild mental depression in which her mind seemed to be slowly realizing matters about her. At this time she was allowed a visit from her husband, a rough, uneducated man, whose manner and behavior to her on the occasion were, to say the least, unfortunate, according to the testimony of the attendants who were present at the time. The result of his visit was an immediate recurrence and aggravation of her former symptoms, which did not improve, and she finally passed into a secondary stage of terminal confusional dementia. Such cases as this are not so very infrequent, and their possibility should always be

borne in mind. Apart from these possibilities the prognosis of acute confusional insanity may be estimated largely by the physical condition of the patient; if there is great physical depression, with a persistence of the mental symptoms, in spite of treatment and proper care, it should be guarded. In those cases where the delirium is intense and accompanied with high temperature, as in some cases that closely approximate to the so-called acute delirium, as regards the majority at least the chances for recovery are not good. Even in the less severe and more ordinary type of the acute form the danger of death from exhaustion or from some intercurrent, usually pulmonary, disorder is always to be kept in mind.

In the less acute form the probabilities of recovery without marked mental defect are rather less than in the acuter type, and the same is true as to the complete or partial stuporous forms. In these latter forms, while recovery undoubtedly occurs in the majority of properly treated cases, the chances must be more diminished according to the more intense involvement of the mental powers by the morbid process. Indeed, we can say with Chaslin that in all forms of confusional insanity the prognosis largely depends upon the severity of the symptoms, the extent of the hallucinatory and delusional manifestations, and the physical condition of the patient. It must be remembered also that there is very likely to be a degenerative complication which may affect the patient's prospects; a purely acquired insanity on a soil prepared by heredity or congenital defect may have an entirely different outcome from that which would have occurred in a normal individual. What is true as to congenital predisposition is none the less so as to acquired degenerative defects, which may also alter the prognosis.

**Diagnosis.**—The diagnosis of acute confusional insanity may present some difficulties. It has already

been remarked that without question many of the so-called cases of mania and melancholia in the statistics of asylums could more properly be classed as of this type, and we can bear personal testimony as to this fact. The non-recognition of the species has been in the past the main factor in this confusion, and even yet this form is still absent in many, if not a majority, of asylum tables.

The diagnosis of the acute form (collapse delirium) is chiefly to be made from mania or the maniacal stage of periodic insanity. In some cases where mental depression and anxiety complicate this type, it may be confused with the agitated phase of melancholia. The distinction is generally to be made, apart from the fact of the disorder following exhausting disease, shock, etc., by the character of the delirium, the presence and predominance of hallucinations, and the very marked mental weakness and retardation of intellectual action, as contrasted with mental exaltation of mania and the more systematized and self-accusatory delusions of agitated melancholia. It is chiefly the most acute cases, with very marked motor excitement and intense hallucinatory delirium, that lead to difficulty in distinguishing them from the acute maniacal or melancholic frenzy. Whether we are to recognize a distinct species of acute delirium or not, it is also certain that some extreme cases of acute collapse delirium fall readily into this type, and are to be distinguished only with difficulty, if at all. Some forms also of epileptic pre- and post-convulsive states may also simulate this type, and the same is true of certain episodes in paretic dementia. In both these cases the general history and context, so to speak, of the attack suffice, as a general rule, to fix the diagnosis. Some intoxications, alcoholic and others, also may simulate collapse delirium, but the study and history of the case will commonly clear the diagnosis. It should be

remembered that confusional insanity of this type may be superimposed upon other conditions, and thus lead to possible errors; such accidents will be more fully noticed later on, when speaking of the secondary forms.

The more chronic "amentia" is less likely to be mistaken when it is fully established, though many cases, especially of the puerperal and lactational forms, have been habitually classed as melancholia. Puerperal melancholia of authors is indeed very largely of this type; the cases where the patient is quiet and depressed, and appears to be suffering from terrifying hallucinations or delusions which she cannot comprehend, while she does not speak or answer questions,—in short, where she gives plain objective evidence of intellectual confusion and retardation of ideation, with physical and mental depression,—are properly to be included in this type, though they have probably been generally classed as puerperal melancholia.

In the advanced completely stuporous form the differential diagnosis will have to be generally from the stuporous stages of catatonia and from that form of melancholia known as melancholia attonita, which latter, however, so far as it exists, is perhaps to be considered as a complication of the two forms of insanity, or as a superposition of stuporous confusional insanity upon melancholia. From catatonia the distinction is made by the more marked physical symptoms of catalepsy, and, of course, if the history is obtainable, by the general course of the disorder; from melancholia with stupor by the more pronounced depressive symptoms than are generally observed in simple stuporous confusion.

There is a rare form of stupor that is sometimes met with in those who have a very pronounced degenerative heredity, and which has received little notice in the text-books. In this the stupor appears suddenly and leaves as quickly; the bodily condition is less affected,

while the mind seems to be a blank, the face perfectly expressionless; the bodily functions may be carried on almost normally, with due attention on the part of those who have the care of the patient. In the one or two cases of this kind that we have seen, the recovery, like the onset, was sudden and complete. These would be included under the periodic insanities by Kraepelin, resembling, as they do, the depressive stages of the circular insanities; but the attack in the cases observed was absolutely isolated, and had, as far as known, no precedent or subsequent relapse for many years, though this latter may, of course, be possible or even probable. As far as the clinical features, aside from the physical symptoms, are concerned, the condition was identical with that of confusional stupor. The stuporous phases of some cases of typical circular insanity are, of course, to be considered in the diagnosis, as they may have a strong superficial resemblance to the extreme type of confusional insanity, but the history of the case or, that lacking, continued observation will reveal the difference. Still, errors are probable in this regard, and Kraepelin emphasizes from his own experience the warning to limit the diagnosis of acute dementia to those cases in which an adequately sufficient cause had produced marked symptoms of cerebral exhaustion without the special characteristics of catatonia or its peculiar stupor. The age of the patient may also be of some aid in the diagnosis between these forms, since catatonia, so called, is more especially a disorder of the first two or three decades of life, while confusional stuporous dementia may occur at any period.

**Pathology.**—The characteristics of confusional insanity, the mental incoherence and retardation, can be theoretically explained by assuming the correctness of some of the latest announced, but as yet not fully confirmed, findings in the nerve-cell and its processes. If the protoplasmic extensions of the neuron possess the

powers of contractility and extension, as has been claimed, and this power is, as it would appear, directly connected with their functional activity in intellection, it is not hard to suppose that disordered connections in these might be associated with a confused and irregular mental action. If Lugaro is correct in his hypothesis that normal cerebration is associated with only a limited number of contact points, and that as a corollary any general extension or contact of a large number of these processes at once must be accompanied with disordered mental function, it is easy to assume the occurrence of mental confusion or delirium, disordered association, perversions of psychic vision in the form of hallucinations—in short, all the various symptoms of acute confusional insanity, including also the retardation or embarrassment of intellection in this way. It would also afford us a means of distinguishing theoretically the pathology of this condition from that of the intellectual exaltation of simple mania, the fixed delusional states, the impulsive and explosive epileptic conditions, and, in fact, nearly all the psychic manifestations in every form of mental disease. Captivating, however, as speculations of this kind may be, it must be borne in mind that they are only hypotheses as yet, and even the fact of the retraction and extension of the neuron processes, supported as it is by the researches of Lugaro and the later ones of Soukhanin, is not as yet so satisfactorily established as to enable us to do anything more than exercise our scientific imagination upon them. The data reported are suggestive, and for that reason are mentioned here. Another fact which seems well established is that of the alteration of the nerve-cell from fatigue, as demonstrated by Hodge, Mann, and others, and this also gives room for speculation as to the underlying physical condition in the cortex in confusional insanity.

There is still to be considered a factor that may

play a prominent part in the production of the symptoms—that of intoxication by substances produced in the blood and in the different tissues by various morbid conditions, among them those of excessive fatigue, shock, or worry. It is well known that some of the normal secretions are very markedly affected by emotional conditions; the milk, for example, may thus become the cause of disease in the infant. Samples from the blood of a fatigued animal can cause the symptoms of fatigue when injected into the veins of an animal at rest (Mosso), and while we know little as yet as to the exact nature of this and other fatigue poisons, the existence of such can hardly be questioned at the present time. The exact mode of their operation on the brain-cells so as to produce the sudden outbreak of mental disease is, of course, only a matter for conjecture, but there can be no more reason for doubting their power thus to act, provided they exist in sufficient quantity, than there is for doubting the similar action of fever toxins in giving rise to the delirium of fever—a precisely analogous condition. The only difference is that in the one case we have a less well-known or familiar toxin than in the other.

Leaving aside, however, these more obscure factors, we have one source of auto-intoxication that is evident in many cases, if not as originally inducing the attack, at least as maintaining and aggravating the mental disorder. The direct connection between cerebral disturbances and a disordered condition of the intestinal tract is illustrated in many ways; by the headaches attending constipation, for example, and by various other neurasthenic symptoms that are rapidly ameliorated by the relief of an overloaded bowel. Bechterew has recently, from careful clinical examinations of the urine, come to the conclusion that intestinal auto-intoxication plays a large part in the production of the symptoms of neurasthenia, and there is

little question but that it has much to do with neurasthenic melancholia, and also with the form of mental disorder here under consideration. In former times these effects were largely attributed to reflex irritation, and the theory of reflex insanity from bowel disorder was maintained by Schroeder von der Kolk and others. At present we are less inclined to see reflex action, but more to consider the symptoms as due to poisons from retained substances in the intestinal tract. The suddenness of the relief afforded by a thorough evacuation of the large intestine is suggestive of a reflex effect, and we must sometimes assume that the pressure of impacted masses there produces a temporary toxic action on the brain that is very largely and immediately relieved by their removal. It not infrequently happens that the chief symptoms disappear at once with this relief, but this subject will again be mentioned when discussing treatment. Aside from this direct and temporary intoxication of the nervous centers by intestinal accumulations, there are also probably more slowly acting toxins due to the same cause, and the effect of these may be more permanent.

As regards actual pathologic findings in the brain or its cortex, the results of investigation have been variable. In view of the acute type of the collapse delirium and its more generally favorable prognosis, it is not to be expected that many reliable data should have been obtained as to the constant or usual findings in the cortex or the brain as a whole. When death occurs in this phase or stage it is most often from complicating acute disorders that of themselves may furnish lesions independent of the original mental disorder. The macroscopic findings that might be looked for would be, in the extremely agitated cases, some degree of meningeal congestion, which is perfectly possible even with a decidedly marked general malnutrition of the brain. So far there have been no very satisfactory

publications of any microscopic studies of the actual lesions in these cases of acute confusional insanity.

When the disease takes on the hyperacute phase of acute delirium,—and, this being very commonly fatal, the pathology is more often investigated,—the symptoms of congestion and actual inflammation are found abundantly in the meninges and the cortex. There may also be marked edema in these regions, but the latter condition is perhaps more characteristic of the findings in the stuporous cases, in which it may be associated with cortical anemia, or even, in long-continued cases, cortical atrophy (Wille). Von Solder* in six cases of fatal acute delirium which were apparently of the acute confusional type found hyperemia and edema of the brain and membranes in all as the chief macroscopic lesions. His cases are noteworthy in that he ascribes them all to the action of intestinal toxins, coprostasis having been a marked symptom, and fecal accumulations having existed in all. With this condition there was a marked alteration of the mucous membrane of the bowel, found at the autopsy, which he believes played an important part in the causation of the mental disease. Alzheimer, who recognizes several different forms of acute delirium, one of them especially associated with the exhaustion psychoses, finds in this latter a marked alteration of the ganglion cells without pronounced tendency to their breaking down, a passive state of the glia, all layers of the cortical convolutions alike involved. The ganglion cells were swollen, their processes showing from within, their nuclei showing only a slight tendency to degenerate, the chromatin streaks breaking down into long granulations that soon cease to take the stain. Somewhat more advanced morbid changes, he thinks, characterize the intoxication types of acute delirium, and, as it is probable that in most cases we have both ex-

*"Jahrb. f. Psych.," XVII. "Neurolog. Centralbl.," 1898, 924.

haustion and intoxication as causal factors, it is probable that all these findings may be present in these hyperacute cases of confusional insanity. In the polyneuritic forms, if the type of insanity first noticed by Korsakoff is to be included to any extent under this head, we may have neuritic lesions in the brain as well as in the peripheral nerves. Nissl, Hoch, and Turner have described a peculiar pigmented condition of the larger cortical motor cells which the latter author considers characteristic of this type of delirium. Whitwell * considers stupor to be due to disproportioned relation of blood in the brain. He says that in these cases we often find a circulation disproportioned to the area, small heart, narrow aorta, etc., and in one case of intermittent stupor he observed transient spasm of the peripheral vessels.

Some observers have noted the state of the blood in exhaustion psychoses, and so far as data have been obtained, it would appear that the most notable change is in the decrease of the red corpuscles, that of the leucocytes and of the hemoglobin being much less marked. This anemia does not appear early, according to Batty Tuke †; certainly not before the end of the prodromal period, and often not till later. It may, therefore, probably be accepted as a result of the mental disorder, rather than as a cause, at least in those cases where this is true. There is no doubt, however, that a morbid condition of the blood reacts on the nervous disorder, as Mosso has shown, by carrying fatigue toxins, for example, and it may in some instances have a more important etiologic relation to the disease, or its continuance and aggravation, than is here indicated. It is hard to estimate the exact relative importance of pathologic facts in mental disease; and while it is easy to say that the disturbance is due to fatigue

* "Brain," spring, 1895.

† "Insanity of Overexertion of the Brain," p. 42.

or to brain stress of one kind or another, that does not tell the whole story. The action of toxins can never be excluded in these cases, from the nature of things, and it may underlie even the obvious lesions of over-exertion.

**Treatment.**—The principal facts to be borne in mind in the treatment of confusional insanity are that we have to do with a condition of brain exhaustion and malnutrition, and also that there is, besides this, in many if not in all cases an element of auto-intoxication to be also taken into account. The indications, therefore, are, first, to restore nutrition, to secure rest, and to eliminate whatever toxin factors there may be that are actively or otherwise assisting in the perpetuation of the disordered conditions in the brain. More than in almost any other type of mental disease the patients are to be considered and treated as veritably sick individuals, and the methods of care and nursing applicable to such to be applied. One of the first things to be attended to is to secure as far as possible mental quiet and rest, and where it is possible this can often be best attained by keeping the patient in bed. In certain especially excited cases of acute "collapse delirium" this may be difficult, or otherwise impracticable, but, as a rule, it is certainly advisable. This course requires the constant attention of one or more nurses; its cost, therefore, may put it out of the reach of many, but it is the only plan by which home treatment of these cases is really practicable or easy. In asylums, especially those of a private character, it ought to be the rule in these cases, and should be continued for such a time as the excitement and confusion are marked and the patient's nutrition suffers. The moral effect of the treatment is good, and if due care is exercised against the formation of bed-sores, and to secure proper cleanliness, there are no possible objections to the method where the attendance is

sufficient to make it possible. There is sometimes a difficulty, it is true, in our large asylums in securing enough skilled attendance for this purpose; the per capita cost must be kept down to the appropriations, and taxpayers cannot always be made to see the necessity of such expense. It is fortunate, therefore, that a large proportion of the cases will recover under other methods of treatment; the "rest in bed" system, though the best, is not always essential; a patient whose physical and mental condition makes special attendance requisite to enforce the bed treatment has still generally the vigor and vitality to improve under other measures judiciously employed, but there is little doubt that some cases that succumb to so-called maniacal exhaustion could be saved by this means.

The question of bed-sores is sometimes, though rarely, a serious one; they are favored by the general condition of malnutrition of the patient, and we have seen them form a very troublesome complication almost from the very beginning of the attack in a patient who after several months made an apparently complete recovery. It is in only a small percentage of these cases that they appear at all, but their occurrence is favored rather than otherwise by the "rest in bed" treatment, unless care is used to prevent them. With the rest and quiet obtained by the bed treatment, three other indications are to be met—the securing of sleep, nourishment of the patient, and attention to the state of the excretions. It is a good plan to commence the bed treatment with a thorough cleaning out of the lower bowel by enema, a warm bath (temperature 93° to 95° F.), which may be prolonged for half an hour or more if thought advisable, and a full meal of milk and eggs. This treatment will very often be followed by a natural sleep, and the patient's convalescence may date its beginning from the awakening. The prolonged warm bath, continued even for hours, is an excellent

sedative, and will help to quiet excited cases. The moist-pack is also useful in some of these cases, but its overuse for this purpose has created a prejudice against it in some countries, which has been transferred here, where the practice has not been so much abused. Usually the warm bath alone will quiet excitement, and even the acute cases, which are here specially considered, of confusional insanity are generally docile enough to be easily managed and quieted so as to submit readily to the bed treatment and the control of a skilled nurse. If the excitement is excessive, cold compresses to the head may also be useful with the warm bath.

In a few exceptional cases where the physical powers of the patient are very little reduced and the motor excitement excessive, with tendencies to violence on account of the nature of the hallucinations or delusions, it may be difficult to apply the rest treatment, and isolation or seclusion may be necessary for a time. Such cases may test the physician's ingenuity and resources, but they are rare, and closely approximate some epileptic conditions, and, like them, are seldom very prolonged.

The feeding of the patient may often present some difficulties; the patient has frequently no desire for food, and may resist when it is offered. When patience and tact on the part of the attendant completely fail to induce him to allow himself to be fed by the ordinary methods, artificial feeding must be resorted to, and this ought not to be put off too long, as full nutrition and even hypernutrition is needed in these cases. In the hyperacute delirious cases this is especially important. It often happens in ordinary acute or subacute confusional insanity that one or two feedings with the tube will be all that is required, and that the patient will readily feed himself or let others feed him after one or two such operations. It may be advisable

also to use washings out of the stomach, and to carefully watch its condition as to hyper- or hypo-acidity. This, however, is not always necessary, and in most cases the digestion, though disordered, rapidly improves under proper care.

While this is being done, attention must also be given to the state of the excretions, especially the bowels. The condition in which these are sometimes found in patients who have been neglected in this respect can hardly be readily imagined by any one who has not seen the cases. In some instances the rectum has been found full of impacted hardened masses that required what might be called extensive mining operations to relieve the condition, while the whole digestive tract from the pharynx down appeared to be in a generally offensive state. Even after mechanical relief had been obtained with great trouble, much difficulty has been experienced in securing proper action of the bowels with any ordinary laxative or purgative agents, and days have elapsed before it could be adequately obtained. The relief to the symptoms, however, from a thorough cleaning-out of even the lower bowel is often most striking. Reference has already been made to a case of a man whose attack was due to overwork and excitement, and who wandered from home, but still preserved some notions of locality, and once or twice in his more lucid states had sent incoherent messages to his family. When finally found by them, he was in a semi-stuporous condition, and the only utterance that could be called out from him was "I am tired," or some similar expression. A thorough purgation made a different man of him at once; he recognized his wife and friends, and while not at once appreciating all his surroundings, and still preserving a certain degree of confused mentality, he seemed at once advanced a long way on the road to recovery. Other similar cases could probably be reported by any

experienced alienist. It is not safe to assume because there is apparently a daily evacuation in these patients that there is not a fecal stasis and poisoning from intestinal toxins. The physician must assure himself that such is not the case. Of course, drastic cathartics are not required or useful, but the thorough emptying of the intestine from any long-retained matter is a necessity. The use of some intestinal antiseptic is also often advisable in these cases.

The use of sleep-producing or quieting drugs is condemned by some authorities, but their cautious, judicious use may be required in some cases, always, however, bearing in mind that the necessity is an exceptional one, and avoiding any steady dependence upon them. The best to use in these acute (collapse delirium) cases are the less dangerous ones—chloralamid, paraldehyd, sulphonal, and in some cases the bromids in moderate doses, and with careful observation of their effects. In many cases a mild stimulating dose of alcohol in milk-punch, or a glass of beer, will be effective. In the "amentia" type of cases these narcotics are more often indicated, but in all cases the physical state of the patient should be considered, and depressing agents avoided whenever the condition of the vital powers is lowered, as is so frequently the case in these patients. In the hyperacute delirious confusion the chief indication is, of course, to support the patient's strength and use hyperalimentation as far as practicable. In stuporous cases much depends upon careful nursing, cleanliness, good feeding, fresh air, attention to the stomach and bowels, and to proper hygienic conditions. Tonics are often valuable, especially in the convalescent stages, and as such quinin and strychnin have been especially recommended. Of course, if anemia exists, iron should be given, with perhaps small doses of arsenic. It is needless, however, to go over the list of drugs, as each

case must be studied separately, and the appropriate medication selected on the same principles.

The moral treatment of these cases is simple, and is generally confined to the convalescent stages. Confusional cases, with only rare exceptions when the motor excitement is excessive, or the hallucinations particularly terrifying, are generally docile and readily controlled by tactful attendants. They are, while the disorder is at its height, hardly able to appreciate their surroundings, and any moral treatment must be in the influence exercised upon them by judicious oversight and management. It is in the remissions and in convalescence that special care should be taken to prevent anything that aggravates their condition, and this will depend largely upon the good judgment of physician and attendants; it is impossible to lay down special rules. In the stuporous cases something can sometimes be attempted in the way of arousing the attention of the patient, and as signs of improvement appear, a carefully adjusted course of gentle exercises may be begun, always, of course, with close observation of the patient's condition, and special care to avoid overexertion or fatigue. In all forms the greatest care should be exercised during convalescence to guard against overfatigue and all disturbing influences of every kind.

## SECONDARY CONFUSIONAL INSANITY.

It has been already remarked that confusional insanity may occur as a complication in many other forms of mental disease—or, as it were, superimposed upon them. Marandon de Montyel has, indeed, claimed that this be considered only as a symptom, analogous to delirium in fever, and that it only exceptionally appears as a simple, uncomplicated disorder by itself. This, however, is only a partial view of the subject, and is probably due to a failure to recognize this type

in many instances from other forms of mental disorder. Del Greco, in an extensive discussion of the subject, divides confusional insanity into five great classes, according to the amount of degenerative taint existing, the first of which, and in part also the second, comprise the disorder as here considered. The remainder may be considered as complicating or secondary types, on a basis of already existing mental defect or disease. It is not hard to understand why patients already mentally disordered should be liable to confusional exacerbations; a brain already morbid might well break down under less strain than would be required to seriously affect a normal one. We may even consider the extreme stage of maniacal excitement, as Chaslin points out, as a sort of confusional exacerbation in which the ideas tumble over each other, and the intellect cannot keep track of them, of the sensory impressions thus giving rise to the numerous illusions and even hallucinations of that condition. In secondary dementia from any cause the cerebrum is a weakened organ, and therefore, we may naturally suppose, is more liable to the effects of any overstrain or toxin. The same is true of the less chronic insanities, in epilepsy and in the already diseased cortex of paretic dementia, in which the hyperacute form of delirious confusion is not infrequently a fatal complication. These facts, however, do not justify us in following Marandon de Montyel in assuming that confusional insanity is only a symptom and not an independent specific form of mental disease. It may occur in imbeciles or in paranoiacs, but it is not therefore a symptom of imbecility or paranoia, and we can say with no more justice that it is merely a symptom of any other form of disease of the brain or the mind. General paresis may also be superimposed upon these conditions, but we do not therefore call it a symptom of them.

## CHAPTER XI.

## MELANCHOLIA.

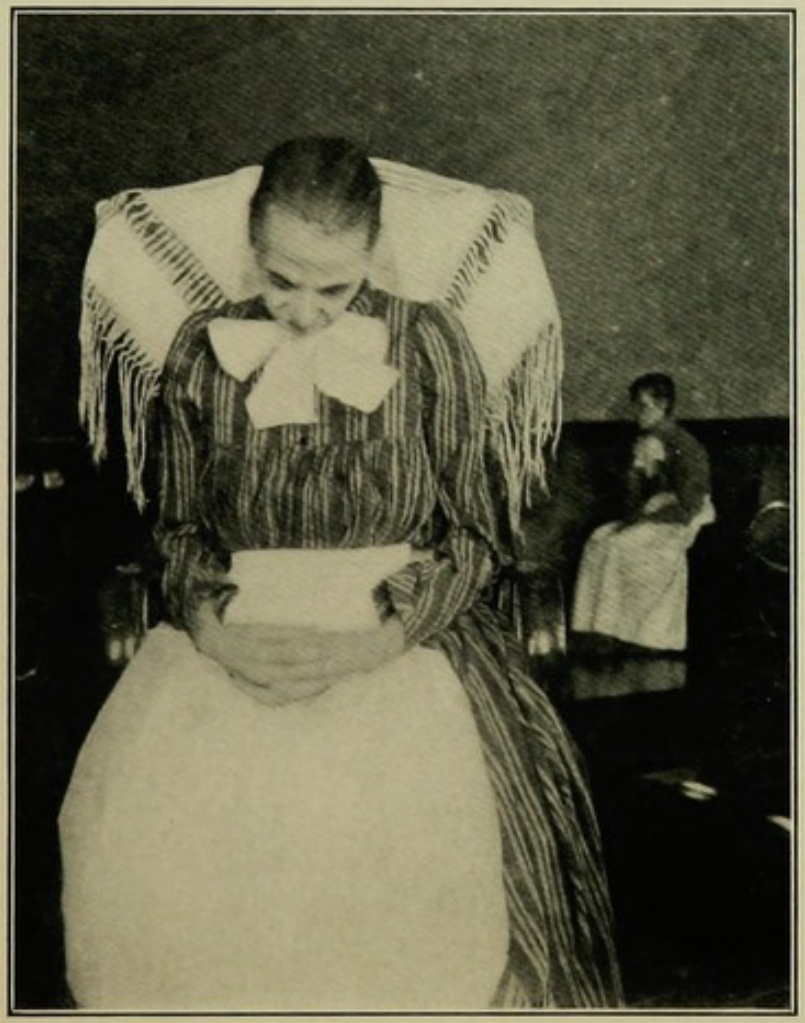
MELANCHOLIA is a form of mental derangement characterized especially by more or less profound depression, with retardation of intellection, with retained consciousness, developing in its progress secondarily delusive ideas, chiefly of self-accusatory nature, sometimes also extreme agitation, and often with intensely suicidal and homicidal tendencies.

In its mildest forms melancholia consists of simple depression with often vague feelings of unworthiness and wrong-doing, but without any real intellectual defect; it is in this stage a purely emotional disorder. The feelings of unworthiness are not delusions, because the patient has no real faith in them; he appreciates their unreasonableness, and resists them to the best of his ability. In this form it is probably the most common of all mental derangements, and as a transient experience is known to a very large proportion of rational individuals. An ordinary severe attack of the "blues," the manifestation in consciousness of a disordered digestion or a temporary toxemia from constipation, is really nothing less than an instance, short and fleeting, of this mildest type of melancholia. When, as the result of original predisposing weakness, or the changes incident to failing powers with advancing age, or as the result sometimes of special toxic or other influences seriously affecting the system and the action of the emotional controlling organs of the nerve-centers, this condition becomes more or less permanent, we have melancholia. There are many persons living in the community and taking a part in active life who

have been and are subject to attacks of emotional depression under favorable conditions, and yet whose disorder, though temporary and subject to repetitions, cannot be considered periodic, as it always is the result, in their opinion, of some adequate physical cause; they are psychic neuralgics, and, as in the case of the purely physical neuralgia, the disorder is only the expression of a nervous weakness, occasionally revealing itself under conditions of special stress. It is a question, indeed, whether or not we can speak of a quasi-physiologic melancholia of short duration, occurring sometimes under such conditions. Some phases of religious experience in certain individuals would almost seem to justify the term, and they may occur in individuals once in a lifetime and in those who cannot be accused of any special mental weakness or failure.

While pure melancholia is largely a disorder of advanced life, we cannot follow Kraepelin in classing it amongst the senile mental disorders. It may and often does occur in youth, and in the prime of life. It is probably because it most frequently appears in its milder form at these ages, and does not progress to a stage that disables the patient from following his usual occupation, or to apparently require asylum treatment, that they are very commonly overlooked, and unrecognized. Including these cases, melancholia is one of the commonest, if not the commonest, forms of mental disorder.

**Etiology.**—The chief causes of melancholia besides predisposition are sudden emotions, such as grief and chagrin, shock, long-continued depressing surroundings, especially if associated with defective or insufficient nutrition, overwork under the same conditions, and intoxications of various kinds, especially if due to retained waste products in the system. The changes in the brain from beginning old age also seem to specially favor its occurrence, hence its inclusion by



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Kraepelin among the insanities of senility. It is rather more common amongst women than amongst men, and amongst the northern than the southern peoples, according to some investigators. It seems probable, for some reasons, that it is more common in civilized and highly cultured communities than are some other types of acute insanity, and its frequency is on the increase, as it is one of the more direct results of the stress of modern civilization.

Nostalgia, or homesickness, in its aggravated form may be considered as a special type of melancholia, which, without self-accusatory delusions, as a rule, tends to intense depression and sometimes to suicide. It is caused by removal from home scenes and by monotonous or unaccustomed surroundings, and is common among fresh recruits in armies; usually it has for its subjects those of rather limited intellectual resources, and of narrow previous experience. Depressing and unusual environments are generally associated as causes, and it is said to be specially frequent in mountaineers removed from their native hills and transferred to a plain or level country. Something approaching it is also experienced by those who have always lived in a level country and are transferred to deep valleys, which have a directly depressing influence upon them.

Melancholia from toxic agents is probably more common than is supposed, but it is likely to be temporary. The action may be directly on the circulation of the brain, but possibly more often on the nerve-cells affecting their nutrition. If the exposure to the toxic action has been brief, as in the case of surgical anesthesia, for example, which has been known to produce this form of mental derangement, the disorder is likely to be temporary. One case was observed by us in which the use of nitrous oxid for the removal of a tooth caused a marked and peculiar type

of depression, lasting, however, only twenty-four hours. Long-continued exposure to toxic influences, as in lead-poisoning, may, on the other hand, give rise to a more permanent and serious form.

It is worth remarking here that melancholic mental derangement is probably the most universal, as well as the most frequent type; it is not confined to the human species, but has been observed in the domestic animals, and doubtless also may exist among animals in their natural state. We have known of the case of a Newfoundland dog taken on a long sea-voyage, and when many weeks out of sight of land became depressed and unnatural in its manner, and finally deliberately jumped overboard and drowned, a case apparently of melancholic suicide. Stories of animals dying of grief at the loss of their mates or their masters are common enough, and need not be too freely discredited.

**Symptoms.**—The beginnings of melancholia are usually insidious or at least gradual. There may be a history of failing health for weeks, months, or even a year; it is seldom the case that it begins abruptly in the pure form of the disorder. The patient generally complains of insomnia, the sleep is broken by troubled thoughts, and if not specially limited as to time it is interrupted by unpleasant dreams, and is unrefreshing. The subject often distresses himself needlessly with worries about business or family matters; there are spells of more or less intense depression, and often the unreasonableness of these is appreciated by the individual, but he cannot rid himself of his morbid feelings. A not uncommon phase or feature of these spells is a feeling of wrong-doing or guilt, that becomes more prominent later, and is the origin of the self-accusations that form so frequent and prominent a characteristic of the fully developed disorder. These spells become gradually more frequent till they predominate in the

mental life and full-fledged melancholia exists. During all this time the intellect seems clear, the patient still appreciates his surroundings, and may seek treatment or advice to ward off what he recognizes as advancing disease, but is himself impotent to prevent.

On the physical side there are also symptoms; in most cases there is more or less constipation, often to a very marked degree; the stomach is likely to be deranged, the appetite fails, and, finally, there is a disgust for food, the patient will not eat or does so without relish and regularity. A very marked degree of general gastric disturbance is frequently observed; loaded bowels, coated tongue, and foul breath, which become more aggravated as the disease progresses, are not infrequently observed. In other cases, however, while there may be disturbance of or lack of sleep and some tendency to constipation, the physical symptoms at this stage are not pronounced; the depression is, as it were, remittent or even intermittent; the patient goes about his ordinary pursuits, it may be quite unsuspected of any mental derangement by those who meet or associate with him. Nevertheless, his mental condition is at times that of intense depression, and these cases are often the most dangerous as regards suicide or even homicide, because they are the least suspected. In some cases the patient's condition may continue in this type, and form the so-called subacute melancholia or melancholia with consciousness, the mental disturbance never passing beyond the stage of simple depression, and the reasoning powers and self-control being largely retained. These lighter attacks of melancholia are probably the most frequent of all its types, the patient only now and then coming under the observation of the alienist, or even of the general practitioner, except it may be for some bodily ailment. The writers are inclined to believe that some cases even pass into a chronic form of

mild general depression after these attacks, in which the symptoms are so little pronounced that for years the individual may simply be regarded as normally low-spirited and possibly a little slow or queer mentally by his friends, who from familiarity overlook his peculiarities.

In some instances, and in young or middle-aged, as well as in elderly people, the onset is more rapid; it may, indeed, be sudden, after a severe moral shock or an acute illness. In these cases, however, we have to look out for a degenerative taint, and to consider the possibility of the existence of periodic or circular insanity. It is beyond doubt, however, that there may be instances of pure, simple melancholia, generally of the milder depressive type, that arise from sudden shock, grief, etc.

After the incipient stage is passed and full-fledged melancholia has taken its place, the symptoms have changed. The predominant picture now is a fixed intense depression, with a decidedly delusive tendency; the patient's judgment and mental powers have given way; he surrenders to his morbid feelings; his whole mind is concentrated on his mental distress, which he shows in his facial expression and bodily attitudes. The vague feeling of having done something wrong has developed into a belief, a conviction that his soul is lost, that all the world knows his unworthiness; he finds in the memories of his past life what is to him ample proof of his delusions, and in what he observes in those around him evidence that they also share his knowledge. Everything is wrong with him, and he has wronged those nearest and dearest to him; his punishment has already begun upon earth, and is to continue through eternity; he is incapable of ever feeling pleasure or comfort again. With this comes the idea of suicide and self-torture. One melancholiac wants melted lead poured down his back, and tries to gouge out his eyes;

another picks out the most dangerous and violent patient in his ward and endeavors to irritate him into making an attack upon him. With all this, and a certain slowness and embarrassment of thought, there may be in all matters outside of his morbid feelings and delusions quite a normal state of intellection, and sometimes brief diversions of the ideas may be brought about even in pronounced melancholia. It is not infrequently observed that desperate melancholiacs have still a sense of humor, and can see the point of a joke as quickly as others. While the dominant note in the delusions of most of this class is a quasi-religious one, the delusions of unworthiness generally relating to imagined sins, that of having committed the unpardonable sin being one of the most common, there are sometimes variations from this; in some the delusions may be of a hypochondriacal type, and we have known of at least one aberrant case in which the whole tendency of thought was distinctly irreligious. The patient was most of the time in a sort of frenzy, walking around and cursing himself in the most blasphemous and obscene manner. He could be diverted momentarily, but would return to his ravings immediately. In this case the depression was of a peculiar type, but it could hardly be classed as anything but a sort of melancholic frenzy, and it was accompanied with many of the typical psychic symptoms, which, however, soon disappeared under treatment, and the patient made a good recovery.

The excessive motor agitation, melancholic frenzy, or melancholic agitation may sometimes appear at this stage, and forms a peculiarly distressing syndrome, though its significance is not always bad. Patients of this type are possibly no more dangerous than others, and equally liable to recover. They are in constant motion, sometimes repeating over and over the same complaint. Their distress is more expressed, but not

necessarily felt more intensely. The case is somewhat different with those in whom the quiet but extreme depression is interrupted by sudden brief spells of violence, in which they may be dangerous to themselves and others. The danger is greater in these cases because it is unexpected; the attacks may be semi-automatic and uncontrollable, or they may be deliberately designed by the patient as affording in some way a relief from his painful feelings.

Hallucinations occur in the advanced stages of melancholia, but they are neither so frequent nor so characteristic of this type of insanity as they have been considered. In many cases, we think, they have been credited to it when they really occurred in a depressed form of confusional insanity. It is only in the extreme phases of the disorder that they occur, when the delusive conceptions have dominated the mental life so fully that the patients begin to seek confirmation of them in the evidence of their senses, and in many melancholiacs, at least, the so-called hallucinations are only perverted recollections of misinterpreted perceptions that were not at the time of their actual occurrence really hallucinations. The patients say they have heard voices accusing them or confirming their self-accusations, but in many cases the idea is really the father of the thought. The occurrence of dreams, especially the semi-waking ones, may also be invoked to account for some of these sense deceptions in melancholia. In comparatively few pure cases of melancholia have we been able to observe what appeared to us as evidence of actual existing hallucinations, such as are so frequent and characteristic of confusional or paranoiac derangement. That they sometimes occur may be admitted as undeniable, but that they are common or characteristic of this special form of mental derangement cannot, we believe, be correctly asserted.

There is commonly recognized a form of melancholia in which the patients are so completely involved in their painful feelings that they lose all physical activity and expression, while mentally they suffer the most acute depression—the so-called melancholia with stupor, or melancholia attonita. In this the outward aspect of the patient is in extreme cases the same as that in stuporous confusional insanity, except that there may be more general untidiness and refusal of food. The exact psychic state in these cases is uncertain; it is assumed that there is intense depression, that the stupor is only apparent, and that the impassive expression, sometimes with an anxious or terrified tinge, is only a mask for the most distressing delusions or hallucinations. It is also accounted for by a feeling of restraint or inhibition that makes movement, and even thought, a painful effort. Undoubtedly this last is the true state of affairs to a certain extent, but in the fully developed phase it may be a question whether this fact does not inhibit also the painful feelings and the patient's full appreciation of his misery. In a much larger proportion of cases we have a partial inhibition, the patient shows some realization of his surroundings, and his manner and expression are not passively stuporous or impassive; there is evident an actual distressful state of mind, but we have not always been able to satisfy ourselves that the real melancholic element was as intense in this phase as it is in the more active forms of the disorder. These patients are liable to sudden outbreaks of violence or suicidal impulses, but close questioning after convalescence does not show, as a rule, that the attempts were directly due to intense mental depression. One very typical case of this kind, who made a desperately persistent attempt at suicide, told later, after recovery, that while he remembered the facts, and thought he also could recall his feelings at the time, his suicidal at-

tempt was altogether the result of a delusional idea —he thought he had to do it.

We are inclined to think that the more nearly the outward manifestations approach to those of stupor, the closer related also are the psychic conditions; the mental inhibition involves the painful feelings as well as the other mental activities. The really greatest sufferers are those who preserve to the fullest extent their normal capacities; and that the inhibition of these benumbs also the sensibility to psychic pain is true, at least in many or most cases. These stuporous and semi-stuporous forms of melancholia also graduate into certain of the chronic types in which dementia is the most prominent psychic feature, though with a very pronounced depressive tinge. For this reason also we are inclined to doubt the existence of the excessive mental anguish and terrifying delusions and hallucinations that are said to be so characteristic.

Some of the physical signs or symptoms of melancholia have been previously noticed. The sleep is very generally disturbed; insomnia to a greater or less degree is the rule. When the patients do sleep, their rest is disturbed by fearful dreams, and is broken up by intervals of distressed wakefulness. Some patients sleep fairly well, but it is often noticeable that on waking the mental depression is more evident and severe than after they have been long awake. Indeed, it is a very common observation that melancholiacs brighten up at the close of the day, to relapse again after their night's rest.

The bowels are habitually constipated, at least in the beginning, and this is apt to be the tendency throughout. Attention to this matter is, as in confusional insanity, one of the most important points in the treatment.

The skin is often pale or sallow, its surface dry, and in old cases there is sometimes a sort of semi-asphyxi-

ated condition of the lower limbs, especially when the skin becomes cracked, producing occasionally a sort of ichthyosis. The circulation is generally poor, or at least disordered, and this is particularly the case in the old semi-stuporous cases. The pulse is small and irregular, and the temperature may be subnormal. In the agitated cases a special symptom is sometimes prominent; they complain of an oppression in the chest, a precordial pain, which is probably due to a special neurosis of the pneumogastric; it is not by any means universally observed, even in these cases, but it is not infrequent, though more has been made of it than its real importance justifies. The patients often complain also of pain in the head, which is probably still more common, though not always revealed. The subjective sensations of melancholiacs are not all easy to detect in extreme cases; a few prominent ones may mask many that are more obscure. There is doubtless a certain degree of anesthesia or analgesia to many uncomfortable sensations that would be unbearable to one not so engrossed in his general misery. This accounts in part for the persistence of the refusal of food as already indicated, and it may also be possibly invoked to explain the indifference to self-injury or mutilation sometimes observed. An acute melancholiac has been known to thrust his head into a heated stove, and later to resist every attempt at dressing the burns or the administration of anodynes to relieve the pain he must have felt, and some of the persistent attempts at self-mutilation can hardly be explainable except on the theory that pain was not normally felt.

The refusal of food is an almost universal symptom of melancholia in its acute stages, though it is not always a constant or permanent one. The motive or cause is partly psychic and partly physical; the patients refuse food, partially on account of their delusions—they are unworthy, it does not belong to them,

sometimes it is because they deliberately wish to starve themselves. On the other hand, there is very commonly a lack of appetite, due to the gastric derangement, or, it may be, to a direct anesthesia of the hunger sense. The patients often actively resist feeding in the agitated forms of the disease, but in the quieter stages their resistance is usually more passive and easily overcome, and sometimes it is only necessary to feed them occasionally, and some melancholiacs even in their frenzied condition eat fairly well much of the time. In a few instances, however, continuous artificial feeding is required for weeks or months at a time.

The suicidal tendency is very general in melancholia, and the greatest vigilance is required to guard against successful attempts; the greatest danger is in those cases that are quiet and liable to put the physician and attendants off their guard. The ingenuity and perseverance of some of these patients are remarkable, and the means and methods sometimes employed are such as only the utmost watchfulness and care could forestall, and no one could very well anticipate. Some patients are capable of sufficient self-control to simulate improvement for the purpose of putting their attendants off their guard; others are liable to sudden impulses in this direction when apparently least depressed. There is no form or condition of melancholia that can be said to be free from this peril; all melancholiacs, even the mildest cases, are to be considered dangerous in this regard.

Homicide has been already referred to as a possible danger in this form of insanity. It may be due to the patient's delusions; he may, with his self-accusatory ideas, also believe that he is causing the misery of others by allowing them to exist, or that by killing them he is saving others from a fate similar or worse than his own. The apparent severity or intensity of depression

is no safe guide as to either suicidal or homicidal tendencies, for these may exist in the mild reasoning melancholia as well as in agitated frenzy. In the latter conditions either homicide or suicide is likely to be more impulsive, and not so directly associated with delusive conceptions; the attempt may be inspired by a sudden fear or an exacerbation of the anguish, physical or mental, for the moment.

**Pathologic Anatomy.**—The pathologic changes in the brain in melancholia have not been satisfactorily demonstrated, at least so far as regards any characteristic lesions. The brain when examined in the acute stages of the disorder shows little in the way of gross changes, and the microscopic alterations have not been well determined. The fact that it is a common disorder in the early stages of physical decadence is suggestive, and its frequent association with and aggravation by autotoxic conditions is also an important indication as to the changes that may take place. It may be said that it is especially a disorder of cerebral nutrition; of failure or defect of the normal metabolism, either in the way of anemia or congestion at times; or of defective elimination of products that give rise to ischemic conditions and molecular disturbances in the cerebral gray matter. The exact mechanism is unknown. In chronic melancholia we have the changes met with in other terminal conditions of insanity—brain waste, vascular degeneration, meningeal thickenings and opacities, and the other cerebral concomitants of terminal dementia.

J. Turner* and Adolf Meyer† have described certain cell alterations in cases of depressive alienation,—shrinking of the cell, achromophilia, dislocation of nucleus, etc.,—which the first-named author considers to be the characteristic lesions of melancholia. He holds

*"Brit. Med. Jour.," Oct. 26, 1901.
†"Brain," spring number, 1901.

melancholia to be due to an interruption or embarrassment of afferent impulses, and that the similarity of the conditions to those due to severance of the axis cylinders or to those on Clarke's columns after division of the posterior spinal columns (Warrington) bears out this view. He also considers the prognosis of melancholia graver than it has usually been considered. Meyer has, however, observed similar cell changes in other conditions, and it seems doubtful whether they are as characteristic as Turner believes. His views, moreover, do not, it seems to us, take into account the milder or temporary cases of melancholia where such advanced pathologic conditions are improbable, and these, as has been said before, are probably by far the most numerous and the most curable.

**Course and Termination.**—Melancholia is a disease generally of slow progress and long duration. There are undoubtedly many cases of the milder type that may last only a short time, but these seldom come under the observation of the alienist, and it may be accepted as the rule that any well-defined cases of pure melancholia have a gradual onset and recovery, and a total duration lasting many weeks or months. It is usually a considerable time after the first symptoms have appeared before the disease is fully recognized by the patient's friends; the cases of rapid onset are exceptional. The stage of full development usually lasts for some weeks or months before convalescence begins, and there may be apparent remissions or oscillations of the disorder. Some patients appear to be on the road to recovery several times before actual permanent improvement sets in.

A genuine return to the normal condition is generally attended with physical as well as mental improvement, and the recurrence of both these together is one of the most hopeful features of the case. The patient regains normal sleep and appetite, the delusions gradually

become less prominent, and finally disappear; the mental depression also becomes less prominent, and the patient begins to take interest in his surroundings and occupations, till at last there is little left of the morbid condition, and the disease is practically eradicated. In some cases an accident, as a complicating affection, will apparently have a favorable influence, and be the starting-point of a recovery. We have repeatedly seen remissions attend a severe inflammatory affection, and even a simple furuncle of the face or neck has been accompanied with very marked mental improvement for the time. A woman who, in the condition of extreme depression, made an attempt at suicide by setting fire to her clothing, using for the purpose a letter she had hidden away and lighting it from the gas-jet, dated her own recovery, and apparently with good reason, from that attempt. The severe burns which she received seemed to completely divert her mental processes. Other cases of similar nature could be reported; they are not so rare as not to be within the observation of most practical physicians who have to do with the insane.

When recovery does not take place, there are several possible terminations of an attack of melancholia. The danger of suicide has been mentioned, but death may result from the disease in other ways. The wear and strain upon the system in agitated melancholia may directly overcome the patient's vital resistance, and death may ensue from what is commonly called in asylum statistics the exhaustion of acute melancholia.

The defective nutrition and the probable action of toxins produced in the system, together with the overtaxation of the nerve-centers through the constant restlessness and failure of repair in sleep, can account for many of these deaths, without invoking any intercurrent disorder. It is a fact, however, that lesions of important viscera are very commonly found in

autopsies of these cases, the lungs are often diseased, and degenerative changes in the liver are especially frequent. These latter may possibly be accounted for by the overtaxation of the defensive function of the organ by auto-toxins, which must be abundantly produced in the disordered organism.

Death may also occur from so-called exhaustion or marasmus in other forms of melancholia, the stuporous or semi-stuporous type more particularly, probably in part by the same mechanism of auto-intoxication as in the agitated form. In these cases the ordinary vital resistance of the system is also so lowered that they readily become the victims of lung disorders, and these are to be credited with many of the fatalities of this disease. The patients do not always reveal their condition by the symptoms, and it is probable that many cases not so credited ought to be attributed to lung and other complications.

When neither death nor recovery ends the scene, the patient passes into what is called the chronic form of the disease, generally a milder and more continuous condition of mental depression, tinged with delusional ideas, and not uncommonly associated with a greater or less degree of general mental impairment. In fact, while it is commonly said that dementia does not usually exist, it is hard to say that a case of melancholia has really passed into the chronic stage without there exists a certain degree of mental impairment. There is no fixed time limit for curable or acute melancholia, and where pronounced dementia has not appeared, it is impossible to say that the case is beyond the chance of recovery, or at least of recovery with some possible permanent defect. The patients may be noticeably peculiar, and may have perverted notions or ideas in regard to their friends, or on certain special subjects, but they are in other respects rational and capable of resuming their former avocations, and to a

large extent their former position in society. When the disorder has, however, passed into the chronic stage, it may take peculiar forms, one or two of which have been so often observed as to have received special names, and have been proposed as clinical varieties. One of them is the so-called insanity of negation (*delire des negations*, of Cotard), in which the patient denies everything—his own existence, the reality of things about him, etc. Still another type is that of a sort of secondary paranoia, in which the delusional ideas are most prominent, and while sometimes of a megalomaniac character, are yet generally tinctured more or less with the general depressive character of the original disorder. While recovery is not probable in these chronic forms, it sometimes occurs in these paranoiac types at least. In one case that came under the observation of the writers, a woman whose insanity dated from the seduction of her daughter, and began as typical melancholia, took on the paranoiac type after a few years, the delusions being of a rather fantastic type, though somewhat systematized. One of them was that she was compelled to swallow the whole world, which distressed her the more, the more it was ridiculed by others about her. She was amiable in disposition and inclined to be industrious, and as suicidal tendencies appeared to be lacking, she was allowed to return to her relatives on furlough. This was repeated more than once, and finally she received her discharge as safe to be at large. She was, however, kept more or less under observation, as her home was near the asylum, and she finally made a good recovery after a total of ten or twelve years of insanity. A noticeable feature in her case was that while previous to her recovery, which occurred with the change of life, she had become quite fleshy, with it she became quite thin, though muscular and wiry, and otherwise in good physical condition.

**Prognosis.**—From what has been already said, it is seen that melancholia is one of the specially curable forms of mental disorder. If all the mildest types are included,—the walking cases that do not come under the asylum physician's care and are only the office patients of the family physician or the neurologic specialist,—it is probably the most curable of all the forms of insanity. While they last, these cases are dangerous, especially as regards suicide; but a very large proportion of them, it is believed, recover without ever being generally recognized as insane. It is commonly estimated that about 50% also of the asylum cases of pronounced melancholia recover either completely or with very slight defect. Kraepelin, who recognizes it only as a senile affection, estimates his complete recoveries at 32%, and the more or less incomplete ones at 23%. He observed, however, that the prognosis was much better in cases under fifty-five years of age than in those beyond that age.

Some allowance must probably be made in the statistics for the possible inclusion of cases of the depressed forms of acute confusional insanity, which would unduly raise the percentage. The confounding of cases of periodic depressed insanity with true melancholia is also another possibility to be considered. Allowing, however, for both of these, we may still estimate with approximate correctness that a large proportion of cases of melancholia recover, even not including the milder and often unrecognized attacks. It has been already stated that there is no time limit to acute curable melancholia; more than any other form of mental disease it shows cures after a long duration of the symptoms, and the tendency to terminal dementia is less marked than is usually the case with the lapse of time and continuance of the mental derangement.

It is claimed that statistics show a seasonal variation

in the recoveries from melancholia; that more recoveries occur in the springtime than at other seasons of the year. So far as this is true, it is probably due to the more cheerful and brighter climatic conditions existing at this period, and the greater amount of open air and exercise allowable at this season, when also the oppressive heat of summer has not yet had any deleterious influence.

**Treatment.**—The treatment of melancholia varies with the character of the attack, its stages, and the opportunities and facilities of the patient's circumstances. There is probably no form of insanity that is more often the subject of home treatment than this, especially in the milder or slighter forms. A large proportion of these cases, in fact, get well without any treatment whatever except such as the patient can give himself. Some, feeling the need of change of scene, travel, and the effect is good; others deliberately work off their depression in their ordinary daily occupations, or with such diversions as they can devise for themselves. When, however, the disorder has become well established, the patient is comparatively helpless, and generally outside aid is required. An excellent thing for many of these cases would be a sojourn in a sanitarium or similar institution, where, without the name of being inmates of an asylum, they could have the regulated living, the oversight and attendance, and the medical treatment they require. Unfortunately, the expense of such a change of scene and surroundings is to many an insuperable bar to the treatment, and, if it cannot be met, isolation and removal from the ordinary conditions of living are advisable, and this can best be managed at home by the "rest in bed" treatment. It may be difficult to enforce this in the milder cases; but when the patient's melancholia is well developed, there will be good reason for it as a sort of needful restraint; and if the patient is sent to a

hospital for the insane, it will be in many cases the best treatment to be adopted there. At the patient's home it has the drawback of requiring close day and night attendance by those who can be fully trusted to be watchful and carry out orders, and these cannot always be obtained. Trained asylum attendants are better for these cases than ordinary trained nurses, in view of the constant watchfulness required; the latter do not always fully appreciate the necessity of this, and accidents may occur.

The first things to attend to in the care of melancholiacs are that they obtain proper nourishment and sleep, and have the constipated condition relieved, and the routine method of the rest in bed treatment attends to all these matters. The patient receives a thorough enema, is given a warm bath, and food is administered; the prone position and the above antecedents favor the giving of food, and it is sometimes possible to make the patients eat or accept their food as given them without resistance. In extreme cases, however, artificial feeding is generally required, and it can be done to the best advantage under these conditions. As the stomach is often or even generally disordered to some extent, it will be well to investigate its condition, if possible, and in many cases warm water lavage, with perhaps some safe disinfectant added, may be advisable. As these patients generally refuse medicine as well as food, both can be given together by the feeding-tube when necessary. Food should be given at least twice a day, and oftener if not contraindicated, if the feeding-tube has to be used, and should consist largely of milk and eggs. The bowels should be carefully attended to, and with the laxatives and enemata some intestinal antiseptic is often useful. Insomnia is combated by warm baths; in some cases also by mild alcoholic stimulation and opium, or other hypnotics.

The only specific drug treatment of melancholia that

has much testimony in its favor is that with opium in gradually increasing doses, as the patient gains a toleration of the drug. As much as forty or fifty minims of laudanum or other liquid preparation of like strength, three times a day, have been reached in this way as the regular dose. This, in cases suited for it, does not appear to increase constipation, but to have rather the contrary effect, and there is not usually a danger of producing a habit, or difficulty in stopping the drug when required. It is not by any means a specific, however, and in some cases it has a directly opposite effect from that desired. The administration of any drug in melancholia should be kept closely under the charge of the physician, and carefully watched as to its effects. As the case progresses toward recovery, tonics—quinin, iron, and strychnin—are often advisable.

## CHAPTER XII.

## THE TOXIC INSANITIES.

THE toxic insanities are included here in the general group of the acquired mental disorders, though, like the other members of that group, they may be, and often are, complicated more or less with heredity and degenerative taint. The fact, however, that they may occur *de novo* in normal individuals is a sufficient reason for their position in the classification. It is said, indeed, by some that alcoholic insanity is a degenerative type, that only degenerates become inebriates; but this opinion has not the support of the general experience and common sense of mankind. It is a common cause and origin of degeneracy, it is true, but it is not necessarily an indication of prior mental weakness any more than is insanity from lead or carbonic acid poisoning, or traumatic insanity. An inherited taint may be a factor in causing a man to become a drunkard, but he can also become one without it. The same is still more true of morphinic mental derangement, and of the toxin insanities, like paresis.

The toxic insanities fall readily into two clinical groups: the drug insanities and intoxications, and the toxin forms. The first of these is more distinct in its generally obvious causation; the second is less clear in its origin, and has not been so universally recognized as pertaining to this general class. The whole group is very illustrative of the difficulties of making a perfect etiologic classification of mental diseases, though clinically quite well marked and distinct.

The drug insanities are of special interest to the

alienist, since here we have a direct visible connection between cause and effect, and one that cannot be as easily established in any other of the morbid psychoses, except, it may be, in the insanities of organic brain disease. While we may admit that in many cases there was a defective original organization, a weakness that succumbed in time of trial and under circumstances in which a normal individual would have resisted, yet we can see and know that the insanity was the direct and immediate result of the intoxication. These insanities, moreover, have their distinct clinical characteristics that appear only with these agents acting as the cause.

## ALCOHOLIC INSANITY.

The effects of alcohol on the brain and central nervous system generally are matters of too common observation. We all know the symptoms of ordinary intoxication, but we are not always awake to the fact that even small amounts, well within the limits of that which it is claimed can be economically consumed in the body, have a decided, though not directly apparent, deleterious effect upon the function of the nervous system. Aschaffenberg's experiments upon the working capacity of type-setters with and without the ingestion of small amounts of alcohol demonstrate this fact. The action of alcohol being thus primarily on the nerve elements, it is the more easy to perceive the injurious effects of its long-continued or excessive use. Any marked cerebral intoxication produced by alcoholic excess is really a temporary insanity, but its brief duration puts it out of the category here considered. It is only when the alcoholic indulgence, either by its excess or individual idiosyncrasy, produces still more marked symptoms of mental aberration that we speak of acute alcoholic insanity, and only when its prolonged usage has given rise to permanent changes

in character and intellection that we call it chronic alcoholism.

The most familiar form of acute alcoholic derangement is the well-known delirium tremens, a condition that follows a protracted and excessive indulgence in liquor. It is more than a simple intoxication; it is a general systemic disturbance as well as a mental disorder, and a serious one, not infrequently terminating fatally. Two of its characteristic symptoms are indicated in its designation—delirium and tremor. The patient, generally after a protracted drinking spell, finds himself restless, sleepless, and tremulous, with a tendency to excessive irritability. This stage may not be passed if alcohol is discontinued and proper remedies employed, but it usually passes rapidly into the second stage, that of delirium. Up to this time consciousness and reason may be retained to a large degree; the individual may, indeed, not have presented even the ordinary symptoms of intoxication. The delirium is ushered in by the appearance of illusions and hallucinations, largely visual, though auditory, gustatory, tactile, and other sensory hallucinations are not at all infrequent. The commonest character is their disagreeable and alarming nature; the patient sees snakes, spiders, has ants crawling over him, feels as though his mouth is full of wires, smells bad odors, etc. Delusions and illusions of identity are common, and the intellectual involvement is shown in the inability to control attention and to rightly interpret external impressions. Many of the hallucinations are really illusions; actual perceptions are misinterpreted, and others are directly the consequence of external irritation of the perceptive organs. The unpleasant character of these impressions reacts upon the emotions, and the general mental condition of these subjects is one of fright or worry; this, with the motor restlessness, giving rise to extraordinary actions, and often to suicidal or homicidal attempts.

Conscious memory of acts may be lost, and the patient has later little or no recollection of what has passed.

The physical condition during this stage is profoundly affected; the appetite is lost, the secretions deranged, there may be even convulsions. The tremor is fine and constant, but generally observable. The usual termination is in recovery, but in some cases there is marked febrile movement, the temperature rising to 105° or even more, and in such cases death is liable to be the outcome. In ordinary cases there is little or no fever unless some complication, such as pneumonia or the severe meningitis above referred to, occurs. The treatment is simple; sleep must be secured, and this is in most cases best accomplished by the use of opium or morphin, sometimes combined with other hypnotics, such as chloral; the patient's strength must be kept up by judicious feeding, which may at times be attended with some difficulty, as the patient's stomach is liable to reject food, and his mental condition is often such as to make it no easy task to induce him to take food. It is often advised to use small doses of alcohol as a stimulant, but other stimulants, especially strychnin, are better and safer in every way. This is in severe cases; milder ones in fairly robust subjects will often recover with no treatment other than the withdrawal of alcoholics. If the case can be taken before the stage of full delirium, a mild sedative dose of bromid is often sufficient to put the patient on the way to recovery. As a rule, after the attack the state of health will require some medical care for at least a few days; more or less general nervous depression and derangement, showing itself in tremor, weakness, disordered cardiac action, etc., will be present. During the attack itself the subject will require close watching to prevent violence, and especially self-injury or suicide. Bed treatment (enforced) is advisable.

While the stronger alcoholic drinks are most likely

to produce delirium tremens, it is not impossible for it to occur after excessive use of what are generally considered the less strong alcoholic beverages—wines, etc. We have seen a well-marked though mild attack follow a debauch on hard cider in a prohibition farming community.

In degenerates we have at least two types of what may be called acute alcoholic insanity, quite different from delirium tremens, which is liable to occur in any one who indulges in prolonged sprees with excessive ingestion of alcoholics. These are acute alcoholic mania and the periodic attacks of dipsomaniacs. In certain predisposed individuals any pronounced alcoholic excess is liable to produce an attack of typical mania that may continue for only a short time, but is attended rather more frequently than the ordinary acute mania with a very decided moral deterioration. When the mania in these cases is subacute in its type, this is especially liable to be a feature, and such cases are often the most trying patients in a large asylum while they are inmates. It is a popular notion that delirium tremens is a common result of stoppage of habitual steady drinking, but there is little ground for such belief, and if such cases occur, they are very rare. We have seen, however, acute mania apparently thus caused, as in the following instance: The patient, a man of about forty, had been a hard steady drinker for sixteen years. His taking the pledge was followed immediately by an acute attack of mania, for which he was sent to the asylum. He had marked degenerative stigmata, the most notable one being a very pronounced funnel-breast, but he was muscular and very active, and in spite of his habits had always been a capable and energetic business man. His insanity, which was a first attack, was of the ordinary maniacal motor type, with, however, no complete impairment of self-consciousness, and during the whole attack and

after his recovery, which was rapid and apparently complete, he constantly expressed a determination to keep his pledge. He believed during his attack that it was caused by his change of habits and was a part of the fight he had to make against them. In this case the suppression of the alcohol seemed to be the exciting cause of the mania, as in the other cases continued excesses had the same effect. They are perhaps not properly to be considered as cases of alcoholic insanity except etiologically, as the disease itself is not so specially characteristic, and it occurs in already predisposed individuals, who might possibly succumb as readily to other causes. They are cases of degenerative mania from a special cause, possibly tinged more or less in their symptoms by that cause, but not perhaps to be called true cases of alcoholic insanity. They are mentioned here chiefly because they are likely to be included in the alcoholic insanities on account of their origin, and also because there exists a little more than a mere causal relation between them and the true toxic mental derangement. We can speak with some reason of an alcoholic mania in these cases, since alcoholic intoxication is its direct cause, and there is sufficient that is characteristic about it to associate it in our minds with this particular origin, knowing its existence.

## CHRONIC ALCOHOLIC INSANITY.

The continued excessive use of alcohol has its effects on the mental health in other ways than in producing acute delirium tremens or alcoholic mania. It is a matter of common observation that the steady hard drinker or the drunkard deteriorates morally; that his will-power is diminished; that he becomes a slave to his appetites, without the power and often without the desire to rise out of the rut of habit. It is not the same in all cases, but in some this deterioration is very evident; the individual becomes unreliable, untruthful,

without ambition or even the feeling of self-respect, and neglectful of the future and of the needs of himself and family. It is not necessary to be an abject sot to be thus demoralized; many individuals undergo this complete change of character without openly appearing under the influence of liquor, and we have seen this change occur from a habit of secret drinking alone, which in some respects and in some persons is even more dangerous than the open habit. It is not in accordance with custom to call these individuals insane, but they have made themselves mentally abnormal, to say the least. The tendency and almost inevitable outcome of this alcoholic mental and moral decay is in a sort of moral insanity, showing itself in vagabondage and quasi-criminality, and the victims may be regarded as only partially responsible, in some respects, at least.

The effects of the steady hard drinking are, however, not always the same. Some appear to escape the condition described above; they retain their judgment and energy, and appear like good citizens and capable business men. They cannot be regarded as altogether escaping the effects of their habit, and sometimes a peculiarly characteristic form of alcoholic insanity may develop. There is a certain degree of irritability and suspiciousness aroused in them, especially "when in their cups," and while they may be able to control this in public, in their families it is manifest. They misinterpret the simplest facts and build up complete delusions. One of the most frequent of these is that of conjugal infidelity, which is only the simple result of irritable jealousy, interpreting the natural disgust or precautions for self-protection on the part of the wife as the evidences of her unfaithfulness, and this, with the ill-balanced state from alcoholism, develops into a fixed delusion. This morbid suspiciousness, aggravated by intellectual weakness, builds up sometimes

from every trivial circumstance new evidence in support of the delusion. Chance sounds become illusions of hearing pointing in the same way, and sometimes there may be actual hallucinations excited by the morbid attention of the disordered brain. With this there may be complete self-consciousness; the patient is rational in other respects. These delusions may continue even if drinking is stopped, and it is not always easy to be sure that they do not exist at times as a sort of imperative conception after apparent complete recovery. A case like the following illustrates this very clearly: A hard-working carpenter, who was known as a regular drinker, though seldom or never openly under the influence of liquor, had—possibly aided by a fall in which his head was struck—a delusion of this kind develop to such an extent that he was considered too dangerous to be at large, and was committed to an asylum. His delusion was fixed and elaborately detailed, though extravagant; he believed nearly all the male residents of the village in which he lived were adulterers with his wife. In every other respect he appeared rational, and after a short detention at the asylum these delusions became less prominent, and he was placed on parole, and as he was an excellent workman, far above the average, he was soon given regular employment on wages. His delusions apparently disappeared, his name was taken off the books, and he became a regular employee, rented a house nearby and sent for his family, and seemed in all respects again his normal self. After several years' faithful service he suddenly attempted suicide by shooting himself in the head, giving as a reason the old delusions. The bullet from the small pistol did not penetrate the skull, and he was recommitted to another asylum, where he died shortly after. Another case similar in nearly every respect secured his release from the asylum and committed suicide within a month. This danger of

suicide or homicide has to be reckoned with in these cases; they may appear perfectly rational, and yet have this constantly in the mind or planned out, and for this reason they are cases that try the discretion of physicians and asylum superintendents perhaps more than any other class. A rather noted subject of this form of alcoholic insanity a few years ago called on a physician and shot him dead at his door. He had been an asylum inmate, but had been discharged not long before because the mental disorder was too little apparent, it was thought, to justify his detention, and the plea of insanity in his case was disregarded by the jury, who sentenced him to life imprisonment. His was undoubtedly a case of chronic delusional alcoholic insanity.

These patients, if the drinking habits are kept up, as they are liable to be intermittently, are occasionally subject to acute or subacute delirious or maniacal exacerbations; in the former type the delusions are most apt to be melancholic or terrifying, but they occasionally take on an exalted or megalomaniac character; the individual has unbounded wealth, projects extravagant undertakings, etc. We have seen a case that would easily be taken, both from the characteristic grand delirium, the tremor and thickened speech, for a case of paretic dementia, but for the known facts of its etiology and the rapid and complete recovery under treatment. An alcoholic pseudo-paresis has been described by Regis and others which includes such cases as the above.

In old cases of chronic alcoholism, with the mental deterioration there sometimes is seen a true progressive paresis with special characteristic features. The following case, while presenting peculiar features, is typical of this form in some respects: D. R. was the son of well-to-do but intemperate parents, both father and mother being regular hard drinkers. From childhood

he had been in the habit of using alcohol in some form, and at sixteen or eighteen he was practically a confirmed sot. When he was about twenty-one he became so troublesome, his mental failure was so apparent, that he was committed to the asylum as insane, and was in a condition of pronounced dementia—could give no account of his case, was unable to perform the simplest offices for himself, untidy and somewhat destructive in his habits. Physically he was well nourished, but decidedly ataxic; his speech was thick like that of a drunken man, and there was a peculiar stiffness as well as uncertainty in his movements. His pupils were equal, and normal in reaction, but there was a marked intention tremor of his hands, more noticeable at some times than at others. His general appearance was not so much that of a paretic dement as of a drunken man, and his mental condition also suggested this condition. He would be silly and elated, and then change instantly and be maudlin and weeping. He always wanted whisky; and if asked if something else, wine or beer, would not do, he would refuse—he was a high-toned gentleman, and nothing but whisky or brandy would do for him; all other drinks were "too thin." In spite of all care and treatment, his paralysis progressively increased and his general condition, mental and physical, deteriorated till dementia became almost absolute, and he was taken out by friends in a comparatively helpless state to die at home. The case is typical of a certain proportion of alcoholic paralysis, but not occurring in every subject. The drunken manner and speech of this patient were unique in our experience. There was no history of any other cause, and, indeed, no suspicion of any, except alcoholism and alcoholic heredity. His record at school, according to acquaintances, was a bad one as regards scholarship and drinking habits, but not otherwise.

The neurotic paralysis that resembles paresis, the alco-

holic pseudo-paresis, may appear as an episode of chronic alcoholism, or may be the result of a continued spree in individuals not habitual drunkards. In this last case it is often of short duration, and might be considered as a form of acute alcoholism, but cases are rather rare, and are noticed here with the more common form occurring in the course of chronic alcoholic dementia. Convulsions and apoplectiform attacks have been noticed in connection with both these forms of alcoholic paralysis, and an elaborate differential diagnosis is made by Regis between alcoholic pseudo-paresis and the genuine form. The real distinctions, however, and the ones most to be relied on, are the etiologic relations and the usual temporary nature of the alcoholic type.

Something might be said here of dipsomania, which has already been mentioned as a special degenerative type of alcoholic insanity. It falls more properly, however, under the head of degenerative than toxic insanities, and will be considered elsewhere with other types of periodic morbid impulse.

In conclusion, it may be said here that not all insanities caused by alcohol, or in which it is an etiologic factor, are to be counted among the alcoholic insanities. We have considered in this chapter only those forms that present certain special characters, either in their symptoms or their mode of origin, entitling them to be called alcoholic. Any powerful neurotic, for alcohol can be called such, is liable to disorder an unstable brain, apart from its immediate intoxicating effects. Its protracted usage is still more damaging in this way, and many cases of insanity occur, due more or less directly to this cause, in which the etiologic factor is not necessarily prominent either in the clinical symptoms or the pathologic lesions. Such cases are not recognized as alcoholic insanity, and they compose the larger proportion of the 10 to 20% of insanities that can be attributed to this cause.

**Pathology.**—Alcohol is classed popularly as a stimulant, and it does have this action in a transitory way, but its most striking effect is as an anesthetic and a vasomotor depressant, producing degenerative changes in the neurons and connective tissue of the brain, and in the heart, arteries, liver, and kidneys. The gross changes found in the nerve-centers consist largely of neuritis, atheroma and fatty degeneration of the blood-vessels, thickening of the membranes, inflammatory adhesions of the cortex and meninges, discoloration, effusions in the ventricles, and hemorrhagic foci, etc.

The prognosis of acute alcoholism is favorable as far as the immediate attack is concerned. Chronic alcoholism is not a promising condition as regards even temporary recovery; and if improvement occurs, relapses are the rule. The prognosis in chronic alcoholic dementia is bad.

**Treatment.**—Acute alcoholism is benefited by the use of such rapidly diffusible stimulants as liq. ammonii acetatis in 2-dram (8.00) doses every two hours during the day, with an abundance of easily digestible food, of which koumiss, peptonized milk, and the various predigested preparations of beef are examples; all the food the patient can possibly be induced to take and assimilate should be given. Eight hours sleep in the twenty-four should be secured, and for this purpose chloralose in 15-grain (1.010) doses is the most reliable, and should be used unless the enfeebled circulation contraindicates it; then sulphonal in 20-grain (1.33) doses, with hyoscin hydrobromate, gr. $\frac{1}{100}$ (0.00067), or chloralamid, 20 grains (1.33), or trional, 20 grains (1.33), or chloral, 15 grains (1.00), to be repeated in one hour if sleep does not follow. With the treatment by diffusible stimulants, food, and sleep may be used with advantage strychnin sulphate, gr. $\frac{1}{32}$ (0.002), once in six hours by the mouth. For the chronic form, alteratives are necessary in addition to tonics.

The iodid of potassium, sodium, or strontium in moderate doses, the hydrarg. chlorid. corrosiv., or the auri et sodii chlorid., all have some therapeutic power to diminish the rate of degeneration in the neurons, and to correct in part that which has taken place. Of these alteratives, the preference is for the auri et sodii chlorid., combined with resina guaiac.—a combination that is synergistic, and one that does not decompose the gold salt; $\frac{1}{20}$ grain to $\frac{1}{8}$ grain (0.003 to 0.008) of the gold salt, with 3 grains to 5 grains (0.18 to 0.30) of the guaiac, may be given one hour before meals.

In the chronic form strychnin, quinin, ferrum, and arsenic may with advantage be combined with the alteratives, the abundant feeding, and the hypnotics.

In the treatment of the alcoholic insane attention must be given to elimination by bowels, kidneys, and skin. The Turkish bath with massage is the ideal way of promoting the skin elimination, and small doses of hydrarg. chlorid. mitis, gr. 1 or 2 (0.006 to 0.0012) in divided doses, will usually give free elimination by bowels and kidneys. The action of the bowels may subsequently be maintained by the use of aloetics. An excellent combination is ext. aloes, gr. 1 to 2 (0.06 to 0.12); pulv. ipecac., gr. $\frac{1}{10}$ (0.006); ext. hyoscy., gr. 1 (0.06); at bedtime; and the kidney action may be maintained by the use of water with or without an alkaline diuretic, such as the citrate or acetate of potassium in 10-grain doses (0.66).

In the treatment of both forms of alcoholic insanity the administration of alcohol is contraindicated.

The confirmed inebriate can be really cured only by removing from him all possibility of obtaining liquor or by strengthening his will-power in some way, preferably by some strong moral impulse, religious or otherwise. The various cures that are so much vaunted at the present time operate largely in this way; they aid the victim's own desire to rid himself of his habit by

creating a temporary disgust for the liquor, and enforce it by suggestion and mutual encouragement. Temperance societies and revivals act in similar ways. Institutions for the care and cure of inebriates may be very useful, especially if they can exercise legal control over them for the necessary period of treatment, and they should not be luxurious retreats for loafers, but places where work and discipline are enforced. With suitable occupation, wisely supervised, due restraint and discipline, and proper medical care, such establishments probably would afford one of the best, if not the very best, means for treatment of the semi-insanity and weakened inhibitions of inebriety.

## MORPHINISM.

Next to alcohol, opium and its derivatives are responsible for the highest number of cases of drug insanity. Their effects are so agreeable in the beginning of their use, and have been so largely employed to alleviate pain, that it is not surprising that the habit of their usage grows on their victims till in the end mental derangement is the result. The stress of life at the present time favors the development of neurotic tendencies, and these, in turn, give rise to drug and alcoholic habits, the former not less serious in their consequences to their victims than the latter.

The opium, or more commonly the morphin, habit may often originate from its medical prescription for the relief of pain, but it is also often started independently or from association with other habitués. The latter factor is most evident in the opium-smoking habit introduced from the East, which prevails to a greater extent than is generally known amongst certain classes in the large cities. The commoner habit of morphin using, by the mouth or hypodermically, is, however, responsible for the great majority of the cases of actual insanity from these drugs.

The ordinary form of mental disorder from opium is, like that from alcohol, a weakening of the will-power, a lack of moral inhibition and of physical energy. The victim becomes indolent or irregular in his exhibitions of activity; unreliable, untruthful, and sometimes actively depraved, indulging in outrageous excesses. In addition we may see sometimes actual delusions and dangerous morbid impulses manifest themselves. Morphin habitués, like alcoholics, differ widely as regards the effect of the drug; some appear to be to a great extent immune to the bad effects of the drug, but in this country these are the exceptions. A final result of the morphin habit is actual insanity, generally, so far as we have observed it, of the depressed or melancholic type, but which has not always characteristic features indicating its origin.

The physical symptoms of the morphin habit are numerous—increased sensibility and irritability, loss of appetite and body-weight, insomnia, loss of sexual power, etc. The intoxication is not, like that of alcohol, a motor one; the subjects are quieter, not uproarious or dangerous, as a rule. The deprivation of the accustomed dose is accompanied with aggravated symptoms, sometimes vomiting, purging, extreme restlessness, bodily pains, sometimes hallucinations of a terrifying nature, all most intense for a brief period, and in some cases, where the heart is not sound, fatal syncope may occur.

A morphin habitué may confine his indulgence to it alone, but it is almost the rule that other intoxicants or drugs are also used. This is becoming more common of late years; formerly, the contracted pupils were a diagnostic sign of the habit, but latterly the use of atropin with the morphin is so common that it is no longer reliable. The morphinist may also be a sot, a cocain user, a slave to the chloral or other habits. Opium, as is well known, induces a certain tolerance

to its effects, and the tendency is therefore to steadily increase the daily dose taken; of morphin a dram or more may be reached daily, or the subject may use as many as a dozen or even more hypodermic doses each day, or drink laudanum by the ounce. Even with these habits it is not always easy to make a certain diagnosis in all cases from mere appearances, though there is a certain opium-eater physiognomy and complexion—a peculiar pallor—that may lead to a suspicion of the habit in many cases. A urinary examination may reveal the drug to the tests and thus aid the diagnosis.

The prognosis of morphinism is generally a serious one, and especially if actual insanity is its result. The melancholia of opium-eaters has not, in the few cases we have observed, been readily relieved, though the morphin habit was checked. In cases that reach only the semi-insanity of the confirmed opium fiend, while the habit may be broken off, the danger of a relapse is always to be considered. Opium or morphin habitués are notoriously unreliable, and the habit is likely to be resumed in secret when, according to appearances, everything is progressing well. They are also notoriously cunning in their plans to obtain the drug, and the closest watchfulness is required on the part of those who have to care for them. These facts should make one cautious in offering any opinion as to a permanent cure in any given case. While it is said that in India the habitual use of morphin does not shorten life (a dubious statement), and instances of centenarian opium-eaters have been reported, there is little question that the habit is disastrous in leading to less vital resistance and an earlier death.

The two most useful drugs for relieving the prominent symptoms of morphinism are strychnin sulphate and atropin sulphate. The strychnin should be given in gr. $\frac{1}{30}$ doses (0.02) every four to six hours; the atropin, gr. $\frac{1}{120}$ (0.0005) twice daily. The fluid extract of

erythroxylon in 1-dram (4.00) doses is of considerable service in relieving symptoms.

The morphin should, as a rule, in private practice be gradually withdrawn; it is in many cases a grave mistake to stop it abruptly, though this is practicable and time-saving in robust individuals with sound circulatory organs in an asylum where full control and ample assistance in the way of attendants, etc., can be had.

Much difficulty will often be encountered by reason of the derangement of the gastro-intestinal tract. The food should be given in the greatest abundance possible, and often should be predigested. Eggnog is often the best food that can be used, and four to six of these, each containing one egg and a glass of milk, may be given in twenty-four hours. Attention should be given to elimination by skin, kidney, and bowels; the hot bath and massage, the alkaline diuretics, with tinct. digitalis, and, if the bowels are loose, the subgallate of bismuth in 15-grain doses (1.00) every two or three hours; if they are constipated, the aloetic laxatives may be used.

It is, moreover, important in these cases to secure a reasonable amount of sleep, and this may be done by the method already described under Alcoholic Insanity.

According to Kane, the opium-smoking habit, while the most disastrous morally and financially of all the opium habits, is the least so to the physical health, and the easiest to cure. He advises the use of capsicum, digitalis, and cannabis indica in large doses, frequently repeated; the bromids to relieve nervous symptoms, used cautiously, however, and only for a very few days at the most; bismuth, etc., for the diarrhea and vomiting; chlorid of gold and soda, $\frac{1}{20}$ grain (0.003) every two hours; with fluid extract of gelsemium to relieve pains in the limbs; massage; hot baths; tonics, etc., and special remedies as indicated to produce sleep and

relieve bronchial irritation. Out-of-door exercise and steady occupation under watchful supervision, preferably in an institution, are necessary adjuncts.

## COCAINISM.

Erythroxylon coca and its alkaloid cocain, especially the latter, are among the most dangerous of all the drugs that enslave. It is said that the use of cocain is increasing, and that cases of insanity due to it are becoming more numerous. Its effects on the brain and nervous system are such as to make it, if anything, more tempting even than morphin, while its hold on the system is fully as great when the habit is once established. There is hardly any drug that so quickly drives away care and produces a feeling of well-being and satisfaction, or that more insidiously leads to excessive indulgence, and finally to mental derangement, as cocain. The mental manifestations of cocain insanity are often complicated with those of other drugs habitually used, especially morphin, for cocain habitués are very commonly morphin fiends also. Victims of cocain alone, however, are apparently more like those of alcohol than are those of morphin, and they are attended with somewhat similar physical and sensory phenomena—partial tremors, hallucinations, insomnia, muscular restlessness, and even incoordination. The patient has hallucinations in many ways similar to those of alcoholic delirium, and yet the conditions are hardly likely to be confounded. Mentally, the manifestations are irritability, violent impulses, change of character and frequently moral depravity, loss of will-power, foolish actions and speech, change of disposition and affections, so that not infrequently there arises antagonism between nearest friends, husband and wife, parents and children. There is a cocainic paranoia of jealousy with delusions of mental infidelity, suggesting that from alcohol, and closely resembling it. The intellect

and memory only fail later in these cases, but the nervous breakdown is inevitable, and finally complete.

The diagnosis is difficult without a knowledge of the cocain habit, but this generally reveals itself to close observation. The prognosis of chronic cases is not good, and if temporary cure is obtained the danger of relapses is ever to be considered.

**Relapses.**—*Treatment.*—The drug should be gradually withdrawn. Strychnin sulphate should be given in about $\frac{1}{32}$-grain (0.002) doses every four or six hours, with abundance of easily digestible food. Careful attention should be given to elimination by skin, kidneys, and bowels, and a reasonable amount of sleep should be secured by the method already described under alcoholism.

The patient, as well as the morphin and alcoholic habitués, should be kept under restraint for the longest possible time after apparent recovery, in order that the best opportunity should be had to invigorate the nervous system, so as to give them, if possible, the necessary power of resistance against the tempting qualities of these insidious drugs.

## OTHER DRUG INSANITIES.

Other forms of mental disorder from toxic agents are those from lead-poisoning, chloral, ether, mercury, iodoform, carbonic-acid poisoning, etc. Insanity from plumbic intoxication has been noticed largely by French authors, some of whom recognize a pseudo-paresis from this cause. The regular symptoms of lead-poisoning aid in the diagnosis in these cases, which are possibly more common than is generally supposed, or perhaps we can more safely say that this etiologic element enters more largely into the causation of insanity than is sometimes suspected. A certain degree of lead-poisoning is not an infrequent occurrence, as any practitioner can testify, especially in this time, when

lead pipes are extensively used in the water fixtures about dwellings. Lead-poisoning is often overlooked in cities like Chicago, for example, where the water-supply to the houses is by means of lead pipes, and the water pressure undergoes frequent variation to such an extent that not infrequently water cannot be drawn in upper stories. Much plumbic oxid is formed that may be imbibed with the water, and little by little in this seemingly mysterious manner plumbism is developed; peripheral neuritis, arterial degeneration, and sclerosis, one or all, may speedily follow and mental derangement ensue. The condition of the emotions may be depression or exaltation, followed by mental enfeeblement. The diagnosis is not always easy, unless the blue line pathognomonic of plumbism develops.

The indications for treatment are to secure elimination of the lead by cautiously administering iodids, rest, food, and moderate stimulation.

**Chloral Insanity.**—Chloral insanity is much less common than the drug insanities already described, yet such cases are too frequently met with. One characteristic of the age we live in is the common prevalence of insomnia. The restless brain activity of so many people; the long hours of brain working; the crowding of people into cities, and the great amount of preventable noises in cities; the prevalence of indigestion from poorly prepared and hastily eaten meals, all contribute to the common condition; and to relieve it many resort to chloral, undoubtedly one of the best hypnotics we possess, and little by little they drift into the chloral habit, and they suffer from the depressing influence of the drug on respiration, circulation, and the general nutrition; and, with it, mental deterioration, that may manifest itself either in maniacal excitement or melancholic depression, but in either case with a gradually developing fatuity.

*Diagnosis.*—This drug has such a powerful effect as

a depressant that the depressed condition of respiration and circulation will aid in diagnosis, but the history of the case must be the most important element.

The *prognosis*, like the other forms of drug insanity, is always uncertain, not so much as to relief, but as to permanency of cure.

*Treatment.*—The indications for treatment are to relieve the depression and improve general nutrition. The drug should be stopped immediately. Strychnin, cocain, and hyoscin hydrobromate are useful drugs, the first to overcome the general depression, the second and third to relieve the general nervousness and promote sleep. The same attention should be given to abundant feeding, and to elimination, as mentioned under the other forms of this class.

**Iodoform Insanity.**—The excellent results obtained by surgeons with this drug as a dressing for wounds, and its supposed harmlessness, have led to its very general and liberal use. Two or three drams of the powder has been not an uncommon amount used at a single dressing. The wounds healed kindly, but the patient developed so-called traumatic delirium, post-operative insanity, or died of so-called surgical shock.

The iodoform was rapidly absorbed and converted into iodin; the body soon became saturated, and the effects were largely manifested on the nervous system —first mental depression, then wild delirium, and finally acute dementia. Professor Nicholas Senn early observed these disastrous effects, and speedily called the attention of the profession to them, and the result has been a very much more cautious use of the powerful drug. The great characteristic of iodoform insanity in the early stage is depression, not only mental, but physical, and alcoholic stimulants freely used are indicated, together with attention to rest, food, sleep, and elimination.

The other drug insanities are comparatively infre-

quent. In some parts of Ireland, where a cheap commercial ether is used for the sake of its intoxicating effects, insanity is said to be occasionally the result, and a few cases have been reported in this country. Hashisch, or "bhang," a preparation of cannabis indica, is stated to be responsible for occasional insane furor in the natives of the Malay archipelago. Any powerful narcotic or stimulant, or otherwise neurotic drug, may, if used to excess, disorder the nerve-centers and produce derangement, but the most of such cases are best regarded as only of etiologic interest, and not as affording the basis for new types in the classification of insanity.

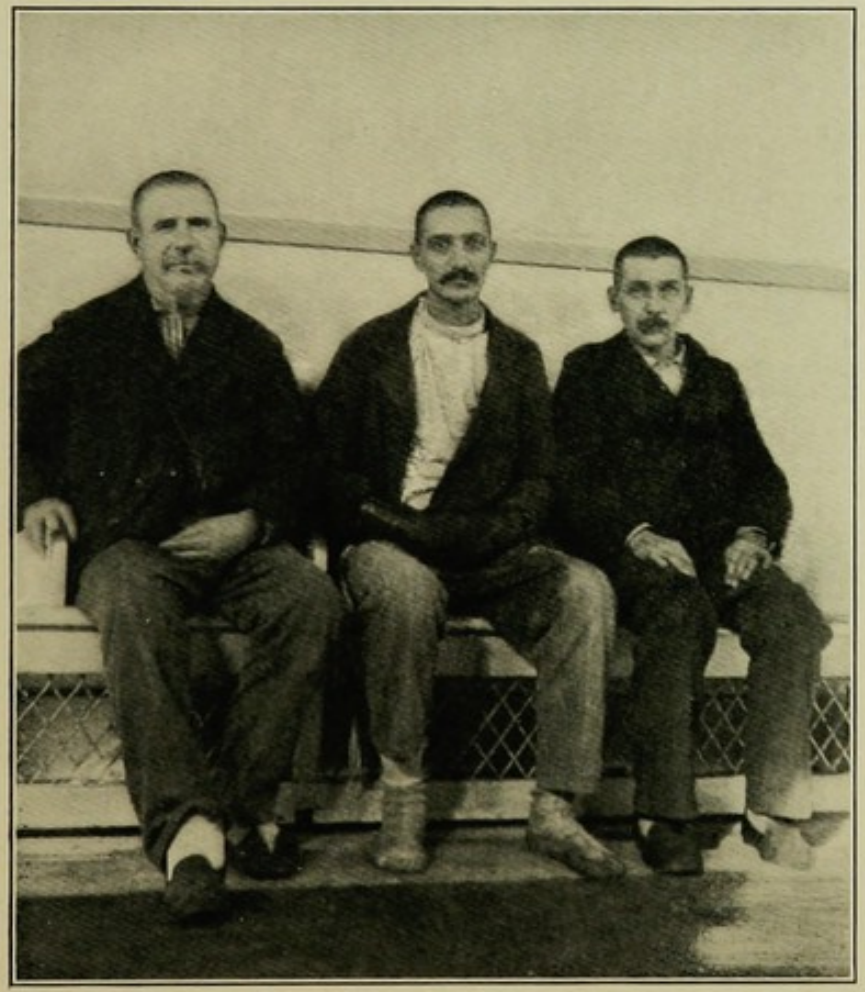
## CHAPTER XIII.

### GENERAL PARESIS, PARETIC DEMENTIA.

**Definition.**—General paresis, or paretic dementia, is a disease of the nervous system, and particularly of the brain, occurring during the active periods of life, characterized on its psychic side by a usually marked and generally progressive dementia, ordinarily attended with more or less unsystematized delusions and an expansive or a depressed emotional condition; and on its physical side by gradually increasing motor paresis and various irritative and paralytic motor and sensory phenomena, the whole tending to terminate in more or less complete dementia, motor and sensory paralysis, and death.

The above definition, lengthy as it is, does not by any means cover all the phases of this protean disorder, but simply states in a general way the leading features of the more commonly observed types of the disorder. There are exceptional cases, as will be seen when the mental symptoms are nearly absent, and there are others that are carried off the scene by convulsive or paralytic accidents before the usual motor symptoms have made themselves at all prominent. These will be discussed when describing the symptomatology of the disorder. The disease is one of mature life, not one of old age, though the organic dementias of advanced life may simulate it in some respects. Nor is it a disorder of early life; the cases in which it appears before full bodily maturity are exceptional.

**History.**—The recognition of paretic dementia as a disease, aside from some vague mention of certain of its symptoms by earlier authors, dates back less than



General Paresis.



General Paresis.

eighty years, to the publications of Bayle, in 1822, and Calmeil, in 1826. Since that period its investigation was for a number of years largely confined to the French alienists, but within the last three or four decades it has been the most extensively studied of all the forms of mental disorder. At present its literature is greater than that of any other type of insanity; it has been written upon in every aspect, and the number of articles now appearing upon it or some of its phases probably equals or exceeds that of those upon any other two species. At the present time it offers as many open questions for discussion as ever.

Notwithstanding this extensive literature, its general recognition in asylums is a comparatively recent thing, and up to within twenty years there were institutions that never reported it in their classification, not because they did not receive cases, but because they were not so diagnosed. While there has been an increase in its frequency beyond any question, it is also true that this increase for many years was magnified by the fact that cases before undiagnosed were beginning to be recognized. At the present time it has everywhere gained recognition, and is one of the forms of mental disease that is best known, by name at least, even by the general public.

**Etiology.**—Paretic dementia, as an increasingly frequent disease, has had much attention given to its etiology, and to-day it has a rich literature upon this point alone. At the present time the prevailing opinion amongst alienists is probably that in the vast majority of cases, if not in all, it has as an antecedent syphilitic infection, either inherited or acquired. This view has been steadily gaining ground within the past eight or ten years, and appears likely to be soon universally accepted. The exact causal relation of syphilis to the disease is even yet not perfectly clear, and it is looked upon rather as preparing the ground than as a direct ex-

citing cause. It is still contested by some writers, but their arguments are based upon apparently imperfect observation. It must be remembered that a history of syphilis is not always easily obtained, and that statistics are more likely to err on the side of its non-existence than on the other. In spite of this fact, however, carefully studied histories, using all possible reliable data, have shown that positive proof of prior syphilis can be obtained in 70% to 80% of the cases, and its probable occurrence be reasonably inferred or suspected in a large proportion of the remainder. The small percentage remaining is most safely left under the head of "not proven," as absolute proof of the absence of earlier syphilis is commonly out of the question as much as is that of its occurrence.

It has been said that syphilis is not usually a direct cause; in most cases it antedates the disease from five to twenty years, or even more. It is, in fact, long after any manifestations of the lues have disappeared that paresis begins; it has, therefore, been considered not as a late tertiary or quaternary syphilitic condition, but rather as a parasyphilitic disorder, one in some way dependent upon the prior specific disease, but not exactly the same in its essential nature. There are, however, cases of the disease, undistinguishable from it clinically, and sometimes pathologically, that follow recent syphilis which can here be considered as an exciting as well as a predisposing cause. It seems hardly correct to say, therefore, that paresis or paretic dementia is exclusively a parasyphilitic condition; the less so, indeed, since we sometimes find its clinical syndrome directly associated with indubitable luetic lesions, gummata, etc., of the brain. To say that these cases are not paresis, but brain syphilis, is begging the question; if they are practically indistinguishable from it in clinical history, progress, and termination, they are certainly paresis.

It is with our present knowledge, nevertheless, safest to admit the possibility of a very exceptional non-syphilitic causation of the disorder. Certain toxic agencies, other than specific infection, can occasionally, as we sometimes see, produce similar symptoms or conditions; but there are generally some distinguishing points, for the condition thus produced is a temporary or non-progressive one. There is some reason to believe that plumbic intoxication may occasionally give rise to a paretic dementia which is hardly, if at all, distinguishable from some types of ordinary paresis, but here the history will aid in the diagnosis, and even then it may not be always possible to exclude luetic infection. It is not practicable to differentiate them always by the fact of the curability of one and the incurability of the other, for these points are by no means always established. An alcoholic form of pseudo-paresis is not infrequent, but the symptoms are generally temporary, and the type easily distinguished.

The question as to paretic dementia occurring without antecedent syphilis can best be left as follows: In a vast majority of the cases of paresis we can demonstrate or reasonably assume the prior occurrence of syphilitic infection. In a very small proportion of cases it cannot be positively demonstrated, and may be denied in all the history of the case that is available or can possibly be obtained. There is, therefore, left an exceptionally small proportion in which it is unproved, and this fact alone prevents us from claiming lues as the invariably precedent condition.

Paretic dementia is said to be a rare or unknown disease amongst barbarians and uncivilized races; notwithstanding the very great prevalence of lues among the Hawaiians, there has been no case of paretic dementia in a full-blooded Hawaiian received in the hospital for insane at Honolulu since its establishment. It is certainly more frequent the higher the grade of civilization,

and it is increasingly frequent in modern times. There seems to be something in the stress of our civilization that favors it, and while some of the apparent increase may be due to its better recognition, there is little question but that it is becoming more frequent than was formerly the case.

Age has been noted as an element in the definition, but more should be said on this point. Paresis is essentially a disorder of maturity, not of adolescence or decadence. It is rare before the age of twenty, and almost unknown before puberty; the early occurring cases are invariably due to inherited syphilis. Its period of greatest frequency is in the fourth and fifth decades of life; it is rare after fifty, and though cases are reported in advanced life, between sixty and seventy, these are more probably cases of organic senile brain disorder, which may sometimes resemble paresis. It is preeminently a disorder of the prime of life; the very young and those who have reached middle age are more rarely its victims.

Males are more subject to paresis than females, but in the later statistics the proportion of the latter is increasing. The ratio between the sexes has been estimated at about six males to one female, but some more recent Continental figures give a much higher proportion of females—one to three or four. The increase of paresis among women is largely among the lower classes, though the higher are not exempt. Prostitutes are especially liable to the disease, and of those not prostitutes, married women. Of the three unmarried female paretics known to the writer, one was a prostitute, one had evidently borne children, though there was no admission or history of it, and the last was a waif without friends or history, and incapable of giving any account of herself; the only known fact that had any possible bearing upon her past was that she was tattooed, a very unusual thing in females.

Occupation has its influence apparently in the causation of paresis; the disease is rare in clergymen, as has been noted in foreign statistics, in which military officers appear as paretics in undue proportion. In this country, if any class of workers is especially liable to this disease, it appears to be that of commercial travelers and railway employees, and the wives of these are in a large proportion amongst the female paretics. It seems to affect those engaged in commercial pursuits rather more than professional men in our observation. It has been said that it is a disease of the higher or educated classes as distinguished from laboring-men or wage-workers, but this is not strictly true, for it affects all classes without regard to social or financial position or education, and this fact is becoming more evident as the disease becomes more frequent.

It has been said that certain nationalities or races are free from the disease; the Irish in Ireland and the Egyptians have been mentioned as free from it. The negroes in this country were, it is said, formerly exempt, but such is not the case to-day. In this country it certainly affects all nationalities.

Heredity figures very differently in different statistics as an antecedent or causal factor of this disorder, some authors, like Kraepelin, neglecting it altogether in this connection, while others give it a greater or less importance. Certain French authorities lay stress upon a congestive as opposed to a vesanic heredity, the patient's ancestors having suffered from congestive and apoplectic tendencies rather than from insanity strictly so called. In an examination of between two and three hundred paretics in the Eastern Illinois Hospital for the Insane special attention was given to this matter of heredity, and from all the facts that could be ascertained it appeared that there was only about one-half the proportion of heredity of insanity and nervous diseases among the paretics that existed in the

nonparetic patients. This included the so-called congestive heredity so far as could be ascertained, as well as the neurotic and vesanic heredity. In one patient there was an apparent direct homologous heredity from father to daughter, but whether this was a genuine transmission or only a coincidence cannot be positively stated. There are few such cases on record.

In this connection may be mentioned the so-called conjugal paresis, husband and wife both having the disease, either simultaneously or one after the other. These cases are not so uncommon; probably every large asylum has the record of one or more. In the cases observed by us the husband was generally the first affected, the wife's disease developing later.

Juvenile general paresis is also well known; but, as stated above, it may occur at any period after the eleventh or twelfth year, and probably even earlier, but most cases develop about puberty or a little later. It is invariably, we may probably say, the result of inherited specific disease.

One of the most frequent exciting causes of this disorder is undoubtedly mental overstrain, and more especially worry and anxiety. Some antecedent of this kind is found in a very large proportion of all the cases, and it is generally put down under the head of business troubles or reverses, or sometimes family troubles. Other common apparent exciting causes are excesses of various kinds,—alcoholic, sexual, etc.,—traumatisms, head injuries, insolation or exposure to excessive heat other than directly from the sun, etc. Intemperance alone has been considered by some as the chief etiologic factor; others have joined with it sexual excesses and worry, the often-quoted etiologic tripod. These are the exciting causes, but they alone are not capable of producing the disease; they have existed from all time, but paresis is a comparatively modern disorder. We must assume that some other

cause exists, either in the condition of our civilization or in the civilized race in its present stage of development. It seems to us at least possible that a partial explanation may be found in the demands made upon the individual by the present environments, and the fact that many who in former years would have lived a quiet, uneventful life are now thrown into surroundings of competition and stress to which they are unequal. In other words, the increase of general paresis is largely due to the excessive demands made upon the nervous centers in the conditions of modern life acting upon a brain weakened and prepared by a prior infection, in the vast majority of cases the virus of syphilis. We must also reckon physical as well as psychic strains; the frequency of this disorder and spinal degenerations amongst railway men, for example, may very possibly be due to the shocks, concussions, and strain upon the nervous apparatus by railway travel, which, singly imperceptible, must be serious in the aggregate as an exciting cause.

Summing up the etiology of general paresis, we have in it a disease that may unquestionably follow recent syphilis, and, according to the best statistics, is preceded in from 70 to 90% of all cases by syphilis; that is apparently communicable from husband to wife; that is most common in great centers of population and rare in rural districts. It occurs at an early age only in the subjects of hereditary syphilis. This disease is particularly frequent in the classes of men and women who are especially subject to venereal disease, and rare in those who from their profession and surroundings are presumably least liable to be thus affected. We find, also, that the antecedent syphilis in paresis is not of recent date, as a rule, but dates back from five to twenty years, and that the period of its greatest frequency is in the active period of life—in the fourth and fifth decades, after the system has fully developed and

before the period of decadence has set in. It is common also, we find, in the centers of modern civilization and rare or little known amongst barbarians or savages. Its direct exciting causes, aside from the predisposing one of toxic infection of syphilis, appear to be mental overstrain and excesses; and, secondary to these in importance, traumatism, insolation, etc. It may therefore be considered, in all probability, as a toxic disease, generally due to the toxin of syphilis; but this is called into action only by special conditions, favored by modern civilization and rare under the simpler and less complicated environments.

**Symptoms.**—The beginnings of paresis are generally obscure, and hardly ever come under the observation of the alienist. In a very large proportion of cases the first symptoms are indistinguishable from those of neurasthenia. The patient feels and acts as if suffering simply from nervous exhaustion; he feels incapable of doing his usual amount of work; his sleep is disturbed; he cannot fix his attention as well as he could; he may watch his symptoms carefully and worry over them to the detriment of his actual working capacity. Memory is apt to show signs of failure, and the patient makes mistakes, and does not correct them as he would in his normal condition. There may be increased irritability, aggravated by the patient's own recognition of his lapses and mistakes. Sometimes there are spells of absence of mind that are noticeable to friends, who often think the patient is suffering from overwork. With these psychic changes there are physical symptoms—headache is not infrequently complained of, the digestion is apt to be deranged, constipation often exists, the subject may be somnolent during the day and more or less sleepless at night. Occasionally at the early stage there are very pronounced and serious nervous symptoms. The first thing to call attention to the patient's condition may be a convulsion or apo-

plectic attack, after which the mental and physical deterioration may be decidedly more marked. In one case under observation the first noticeable symptom was an apoplectic attack causing temporary hemiplegia followed by aphasia, both of which passed off within twenty-four hours or a little more. In another there was a pronounced depression for a few weeks; then aphasia, followed by convulsions. These cases, however, are rather the exception. As a rule, the onset is very gradual and the symptoms often hardly distinguishable for a long time from those of one of the protean types of nervous exhaustion. There is often a slight but somewhat noticeable change in the facial expression, a sort of lack of expression, that occurs early; but this is not usually very marked till a later stage of the disease. This is probably due to a slight paresis of the facial muscles that becomes more marked as the disease advances. Other symptoms noticed at this stage are short light breathing during sleep, varied by occasional long expirations; also a stiffness of the thorax from periostitis of the sternum, making the respiration almost exclusively abdominal (Regis), ocular disturbances, myosis, pupillary inequality or irregularity, transient amaurosis, loss of pupillary reflex to light (Argyll-Robertson pupil), exaggeration or loss of knee-jerk, cutaneous anesthesia and hyperesthesia, ulnaris analgesia, etc. When we consider that the disorder is at this stage an incipient chronic meningo-encephalitis affecting more or less the whole convexity of the brain, the possibilities in the way of bodily and mental symptoms, if closely watched for, seem almost infinite.

As the disorder advances the mental symptoms become more marked, the loss of power of attention increases, the irritability becomes more pronounced, the patient shows some change of character; he may be moody and silent or exhilarated; attention to the

ordinary decencies and proprieties of life is relaxed. The moral character suffers, and the patient may commit some crime with no apparent sense of having done wrong. Frequently he indulges in extravagances that cause his friends to realize he is not his normal self and to take measures for his sequestration. Paretics in this stage of their disease are not, as a rule, dangerous to others; but if their natural disposition is unpleasant, it may be aggravated at this time or their irritability may become so increased as to get them into trouble with others. In the majority of cases their disposition at this time is generally happy and exalted; in a minority there is depression, and hypochondriacal symptoms are often very marked. The intellect may appear comparatively clear till many of the symptoms enumerated above are quite manifest, but usually there is very apparent mental deterioration manifest before the close of this, which we may call the first or prodromal stage of the disorder.

In a small proportion of cases the disease begins with spinal symptoms, and a diagnosis of locomotor ataxia may be made before paresis is suspected. The writers have known of more than one case in which this occurred, the ataxic symptoms later disappearing or becoming so slight as not to be readily perceptible or to be masked by the other more pronounced paretic symptoms.

The speech is rather early affected in most cases of general paresis, and its defect is marked, as a rule, to an experienced observer before the end of the first stage of the disease. It is not easy to describe the characteristics of the earliest disturbance of speech; it may perhaps be called a sort of thickness of articulation, readily appreciated when once heard, but difficult to specify how it differs from the normal. Later, when it is more marked, its characteristics are more readily defined. In the early stage it is almost imperceptible,

but a trained ear can often recognize it at once, before there is any such embarrassment of articulation as to interfere with the pronouncing distinctly of the most difficult words and sentences. A tremor of the lips and tongue can be detected in these cases, but this does not fully account for the speech defect, which is doubtless partially due to lesions of the motor center of speech. With the peculiar articulation there is frequently a slurring over and dropping of certain words that is likewise characteristic.

The principal difficulty appears to be in the pronunciation of the labials and dentals and of words containing these. "National Intelligencer," "round and round the rugged rocks the ragged rascal ran," and such single words as "Mitchell," "artillery," etc., are good tests in these cases.

The writing suffers also, and even more strikingly than the articulation; it becomes markedly tremulous, and the dropping or incompleteness of words is often noticeable. This also may appear in the first or preliminary stage of the disease, though it is then but slight. One of the earliest symptoms noticed in one of our patients was his failure to properly perform his work, that of a stenographer, while he remained rational in conversation and behavior for months after he had lost his position, though both writing and speech were apparently affected. In another case, that of a woman, her speech was so affected as to make it difficult for one unaccustomed, to understand her at all, and yet she could hardly be called beyond the first stage of the disease in other respects. Such a case, however, is exceptional.

In a few cases the speech defect never becomes so marked as to seriously embarrass articulation till very late in the disease, and then the speech is lost from the general dementia, rather than from any paralysis of articulation itself.

A prominent feature of the early stage of paresis in many cases is sexual excitement, and this, with the obtusion of the moral sense, may be the cause of serious crimes. More often a man whose character before was irreproachable shocks his family and friends by indecent or lewd behavior, or sometimes by a complete reversal of his former character in this respect. Others, while apparently rational, become kleptomaniacs, utterly disregardful of law or others' rights of property. One of the most rational paretics in the early stage of the disease among our patients was a most inveterate and cunning thief, a fact that was not discovered until after his death, which occurred suddenly in an apoplectic attack.

The duration of this first stage may vary from a few weeks to many months. Sometimes it cannot be said to exist at all; the patient may have, as already described, a convulsion or apoplectic attack and pass immediately into the more advanced stage. It may terminate in death from convulsions, or, as is more rarely observed, in acute delirium. Generally, however, it passes into the second stage of full development.

There is no one symptom particularly characteristic of this change, but it is marked by a general pronounced mental and physical deterioration. The patient who previously had been almost or, in some cases, quite rational, is now clearly insane, and the little peculiarities that have perhaps hardly attracted the notice of his friends are becoming pronounced features. The slight extravagances and moral slips of the earlier period develop into full-fledged delusions, not fixed, as a rule, but characteristically changeable and unsystematized. The dementia element is manifest; the patient is no longer cognizant of his disorder, but lives in an unreal world dominated by his exalted or otherwise affected emotions. These patients are kings, queens, or whatever their prior environment and education has taught

their imagination to fancy. The delusions are recklessly extravagant: a man may one minute claim to have staked out a mining claim over a vein one hundred feet wide of coined double eagles; he may claim to have hundreds of wives and thousands of children, and a little later to have been the most successful missionary ever known, converting and baptizing millions of the heathen alone and unaided, or the greatest general, prize-fighter, capitalist, etc. Much depends upon the natural vividness of the imagination; some are more quiet, and merely manifest a happy general delusive tendency, without any specially exalted ideas; they fall in readily with the notions of any one who converses with them, and while not less fully demented, are less actively irrational. In many cases the mental symptoms consist only in the evidences of a steadily but gradually increasing dementia, sometimes happy, sometimes apathetic or depressed. The patients are never actively deluded, but they show their mental weakness in every way, and it slowly but steadily increases until the absolute dementia exists. Still others are actively depressed; their delusions have often a persecutory tinge, and may in some cases be attended with auditory hallucinations. In these cases there is apt to be the same lack of consecutiveness and sometimes extravagance in the delusions that are observed in the exalted ones, but this is not always the case. The hypochondriacal fancies have an extravagance of character, and are probably based to some extent on perverted and misinterpreted organic sensations. The patients have terrifying delusions; they believe they are going to be tortured, hurt, that vermin are eating up their entrails, etc. This agitated type of depressed paretic dementia is not very frequent, but it sometimes is met with. In one patient observed there was a sort of double personality; he very frequently spoke of himself in the third person, but if it were suggested that this

person he was talking of must be dead, he would most vehemently deny it, and finally would end with repeating "I ain't dead" over and over again.

Another feature of this second stage—and this is one observed most frequently, according to our experience, in the depressed type—is the occurrence of sudden outbreaks of violence, generally of short duration. These are unusual, but they are not infrequent, and constitute a danger in this class of cases. In some cases these attacks are quite comparable to those of the epileptic insane, and their psychic mechanism is probably similar to those.

It is a fact perhaps worth mentioning that the extravagant delusions of paretics do not always prevent their appreciation of the absurdity of similar delusions in others. We have seen a paretic, in the stage of full development of this disease, sitting up and listening to the extravagancies of another similar unfortunate, and repeating to himself "The damned liar!" whenever the other's flights of fancy became at all extreme. His own delusions were not less outrageous, but he could still appreciate the falsity of such conceptions in others.

With the aggravated mental symptoms, the bodily symptoms become more pronounced. The muscular paresis and incoordination, which in the first stage are hardly noticeable, except to a slight degree in the muscles of expression and of speech, become decidedly evident. The face has a peculiar expressionless smoothness that catches the eye of one experienced with these cases instantly and is noticeable to one altogether inexperienced. The speech becomes still thicker and more characteristic, the voice is monotonous and expressionless, the penmanship soon becomes shaky and more or less illegible, the tremor involves the members as well as the tongue and lips, equilibration is affected so that stumbles and falls are liable to occur. The muscular power is not lost, but is weakened and

its control is defective; there are occasionally contractures. The pupils show reflex iridoplegia, often inequality, myosis, irregularity of outline, and later in the disease marked mydriasis. Vasomotor anomalies, flushings, rise of temperature, are common. The tendon reflexes (knee, ankle) are often increased, more rarely lost; the superficial reflexes are, in our experience, less commonly exaggerated. Fragility of bones is sometimes observed, as in tabes, and the breaking strain of the ribs is sometimes decidedly decreased (Campbell, Meyer).

With all this the patient's general nutrition may be good, and it is rather the rule for them to take on flesh at this stage of the disease. The appetite is apt to be excessive, and special care must be taken lest through haste, and probably to some extent through paresis of the muscles of deglutition, the patients choke when eating. Many accidents of this sort have occurred in paretics, and it is a good practice to have their food cut up fine to prevent their occurrence. Even that is not always sufficient, and some observation of their eating is always advisable, especially in this stage of their disorder.

The most striking phenomena of this stage, though they may occur in the preceding, are the apoplectiform and epileptiform attacks. These may occur many times. It is not uncommon to see patients temporarily hemiplegic either totally or partially, and it is the rule for nearly all traces of paralysis to disappear in a day or two, or even in a few hours, leaving, it may be, a slightly greater degree of paresis, however, than before the attack. The convulsions may be single, and followed sometimes by temporary paralysis; or there may be a regular status epilepticus, lasting for hours. We have counted as many as seventy-five or more fits one after the other, and after all had ceased the patient was hardly appreciably worse than before the attack.

The final stage of paretic dementia is marked by an increase of both mental and physical symptoms, but, as in the case of the second stage, there is no one phenomenon that characterizes the change, unless it be the general and pronounced tendency to untidiness. This is due in some cases to the advancing dementia, in others to both physical and mental decadence. In the progress of the disease, the paresis attacks the sphincters, the anesthesia becomes more marked, and the patients do not recognize the calls of nature. Apart from this symptom of untidiness, which may appear comparatively early in some cases, there are others that toward the close of the paretic's life are especially noticeable. Such are the grinding of the teeth from cerebral irritation, which is almost incessant in some cases, the aggravated paresis, the greater frequency of the epileptiform and congestive (apoplectiform) attacks, the circulatory disturbances, hematoma, edema, asphyxia or gangrene of the limbs, and, toward the last, the bed-sores, which may be of either cerebral or spinal origin, involving either the buttocks or the sacral region, and rapidly progressing, or may be simply the result of the depraved general nutrition, and occur at any point where pressure on the skin occurs. The mental condition in this final stage is apt to be that of complete dementia; the patient is unable to help himself in the slightest matter—to dress, or even sometimes to eat. Death finally closes the scene, most typically from general exhaustion (marasmus), or in a convulsive or congestive attack.

The average duration of paresis from its incipiency to its finale has been estimated as about three years, but there are wide variations in individual cases. The shortest duration we have observed was under two months from the first observation of anything wrong to the death that occurred in convulsions. It is probable, however, that in this instance there were dis-

turbances that were not objectively noted for some time prior to the patient's breakdown. The longest case continuously observed was something over seven years, in more than five of which the case was almost or quite stationary; a very well-marked case of mild exalted delusional insanity with hallucinations and paretic speech, but otherwise no very visible paretic symptoms. This case was remarkable for the long continuance of the second stage. After some five years or more of this, it passed into the final stage rather abruptly, and the mental and physical decadence was typical and progressive. It is not uncommon to see remissions, more or less emphatic, in this disorder, and these may last for years. Some cases of paresis have been reported as lasting over ten years altogether, including remissions. Long remissions are claimed by some authors (Mendel, Bremer) to be more frequent of late than formerly.

The question whether recovery can take place in paresis is by no means a settled one. Certain authors within the last ten years have reported cases considered by them as recovered, but the possibility of lengthy remissions should not be overlooked, and this rather obscures the question. Most authorities do not recognize the recovery as a rare termination in fully developed paresis, and while it may be admitted as perhaps possible, the chances are too poor to enable us to count upon it even in exceptional cases.

The typical modes of death have been already alluded to, but it may occur in many other ways. Death from suffocation from food is a constant peril in advanced cases, and they may also choke from swallowing other substances. We have known a paretic to fatally choke himself with his own feces. Aspiration pneumonia is another danger, particles of food or drink passing down into the air-passages. Intercurrent lung or renal diseases are not uncommon causes of death; heart failure

and blood-poisoning from septic absorption from abscesses or sores are other possibilities. Accidents are liable to occur,—falls, bruises, etc.,—and these may also be fatal.

The **pathology** of paresis has been very extensively studied. The macroscopic changes are very well marked and extensive, and are those of a diffused meningo-encephalitis, especially of the convexity of the hemispheres. The dura in a large majority of cases presents adhesions to the calvarium, especially in the vicinity of the median longitudinal fissure, and in the Rolandic and frontal regions, though the adhesions are not by any means confined to these parts, and may exist anywhere. The pia arachnoid is thickened and vascular; in old cases opaque and milky; the veins enlarged; in places it has a bright red inflammatory flush; the Pacchionian granulations are apt to be abnormally increased. Adhesions exist between the pia and dura, and between the pia and cortical substance, so that in removing the membrane, the latter comes away in patches, leaving marked erosions, which are generally most frequent in the anterior region, though they may occur anywhere over the brain surface. In advanced cases the convolutions are wasted and the brain generally somewhat atrophied. The ventricles may be dilated, and sometimes one or both may present a dark slaty color on their surfaces.

In the basal ganglia there may be macroscopic changes, cavities, capillary hemorrhages, etc.

The microscopic changes consist in alterations of the vessels, thickening and induration of their walls, so that sometimes we have felt the minute capillaries as bristling points on passing the finger over a fresh-cut section of the brain. It has seemed possible to us that all the morbid changes start in the vessels, the degeneration of the nerve elements and neuroglia proliferation being secondary processes. The close relation, how-

ever, of tabes with paresis, and the accepted nervous pathology of the former, suggest strongly a primary involvement of the nerve elements in the latter disease. The microscope shows changes occurring in the vessels and in the nerves very easily in the disease, and it is not always possible to say which antedates the other. In either case we can reasonably assume that a toxin carried through the tissues by the circulation is the primary cause both of the vascular and the neurotic lesions. The latter are constant. Occasionally with the typical paralytic symptoms gummata are found, especially in the vicinity of the basal vessels.

Mott, one of the latest contributors to the pathology of paresis, considers the primary changes to occur in the neuron, which, weakened by toxins, gives way under conditions of stress. With their wasting other toxic products (cholin, etc.) are given off, and these again react on the nerve elements through the lymphatics and the blood and set up inflammatory conditions in the vessels and cortex, producing the symptoms of the disease.

The spinal cord may also be involved in the meningeal disease, and there may be also degenerative changes in the posterior or lateral columns, or in both, and also in the peripheral nerves. The viscera may also show the lesion of tubercular or other disease; the kidneys, heart, and liver are often found involved in some degenerative processes, and numerous vascular degenerations appear elsewhere.

**Diagnosis.**—Much has been said as to the importance of the early diagnosis of paresis, but practically there is no possibility of a positive diagnosis in its earliest stages, except in those cases which come on suddenly, with the characteristic bodily symptoms among the first to appear. As stated already, such cases occur, though they are rather unusual. In a much larger proportion the earliest symptoms are indistinguishable

from those of neurasthenia, and any differential distinction between the conditions is impossible at this stage. It is only after the speech becomes affected and other paretic and mental signs develop that the diagnosis becomes certain. The physical symptoms may and often do appear before the mental impairment is pronounced, the latter being a later phenomenon, and cases may occur where this does not appear at all during the course of the disorder, the patient succumbing early to convulsive or apoplectic seizures. The positive diagnosis of paresis may be said to depend upon the physical features of the disorder; they may be slight and easily unrecognized by inexperienced individuals, but their existence is usually quickly noted by the skilled observer, who is then able to name the disorder. Only one or two common or comparatively common forms of mental derangement closely simulate paresis in these respects; these are alcoholism and plumbic insanity. In the former a pseudo-paretic dementia is not so rare, the paresis, the speech impairment, the pupillary symptoms, as well as the characteristic psychic symptoms, may all be present, and give rise to an erroneous diagnosis. There are, however, certain marks that serve somewhat to distinguish this form from the general disease, and these are the direct connection with alcoholic derangement, the suddenness of the onset, and, more than anything else, the equally rapid disappearance of the symptoms under proper treatment. It must be added here that there do occasionally occur cases of alcoholic paresis of a certain type that are not curable and are progressive, but these are not so likely to be confounded with genuine paresis. Plumbism is also said to cause a condition closely resembling paresis, but also often curable. It is said by Regis to commence abruptly, like alcoholic pseudo-paresis, and to differ from the genuine form in other respects—the less frequent

pupillary disorders, the tremor is more intermittent and spasmodic, the dementia is more apparent than real. The disorder is accompanied with the plumbic blue line on the gums, and other symptoms of saturnism, and is liable to recur under the influence of the same causes.

It is well known that the typical symptoms of paresis may accompany comparatively recent syphilitic brain disease, and these cases have been used as a last resort by the advocates of the existence of a specific pseudoparesis, largely on the claim that they are amenable to specific treatment. So far as our observation has extended, this is not generally the case; such instances have been usually as rebellious to treatment as any form of the disorder occurring many years after the last manifestations of luetic infection. We are therefore inclined to include these amongst the true paretics, from which they are clinically indistinguishable.

Still another condition that may give rise to errors in diagnosis is that of atheromatous disease of the vessels of the brain, which may cause symptoms resembling paresis in many respects. Cases of paresis reported over fifty-five or sixty years of age are open to suspicion, and should be carefully studied as to the probability of their being only peculiar forms of organic senile brain disorder. Other organic brain disease than senile atheroma may also give rise to symptoms of paresis; arteriosclerosis from any cause, disseminated sclerosis, and even brain tumor, as admitted by Kraepelin, may lead to a false diagnosis in special instances; but careful observation of all the symptoms will generally clear the case in time, and leave no doubt as to its real nature.

Some episodic conditions of paresis may easily be confounded at first sight with other forms of insanity: the depression in the early stages may suggest melancholia; maniacal attacks occurring early may similarly

cause error; the hypochondriacal phase of early paresis is especially liable to be wrongly diagnosed, and there is not invariably, as Peterson claims, a special paretic character to the delusions. Paresis may overlie any of the degenerative conditions, and such complications embarrass the diagnosis; or combination with paranoia or circular insanity is not altogether infrequent. The syndrome of catatonia may, as Worcester has recently shown, occur in paretics, and acute confusional delirium is, as already mentioned, a possible form of its terminal stage. It is often well to reserve an opinion in dubious cases till time and careful study have justified a positive diagnosis.

When paresis occurs in the young it may possibly simulate idiocy, as suggested by McDonald, and we believe also by some French authorities quite recently. Homen has published cases of congenital syphilis in the young, affecting several members of one family, that had some resemblance in their symptoms to paresis, and such cases may create confusion now that the possibility of juvenile paresis is recognized.

**Prognosis.**—This may be set down as pretty uniformly unfavorable. Cases of cure have been reported, but the possibility of lengthy remissions of the disease should be borne in mind in estimating apparent cures.

**Treatment.**—As paretic dementia is practically a hopeless disease, at least when it has become fairly established, curative treatment is generally out of the question, and the most that we can encourage ourselves to hope for is to alleviate symptoms, encourage the occurrence of remissions, and delay the progress so far as possible of the affection. It is sometimes said that early treatment may be effective, but for reasons already stated the recognition of the disorder in its early stages is rarely possible, if, indeed, it is ever so. The damage to the brain is already advanced, as a rule, before the diagnosis can be made.

With the almost universal antecedent of syphilis, it might naturally be supposed that a trial of specific medication would be in order, at least in the cases where the specific disease is of comparatively recent date. Some authorities mention this only to condemn it, but there are many cases in which, according to our experience, a cautious trial of specific medication with iodids may do no harm, and there are some in which it has seemed to be of some benefit. If it is employed, it ought to be carefully watched, and stopped if it shows the least sign of disagreeing with the patient's general health, or causing any aggravation of the paretic symptoms. Not very much is to be expected from its use in any event, even in those cases in which tertiary symptoms are still apparent. Considerable benefit has been claimed in times past from active counterirritation, even blistering the scalp to the extent of denuding and corroding the skull, but such measures are little used at the present time. Very recently Dr. G. W. Foster has reported a remarkable success with hydrotherapy in paresis; in six out of twenty-one cases thus treated a complete arrest of the disease was obtained for periods ranging from some months to three years and over. From his testimony the results of this treatment are the most encouraging of any that have been tried, and full details, as yet unpublished, are to be desired. Hydrotherapy in other hands has not always been so successful. The prolonged warm bath for half an hour to an hour, with perhaps cold applications to the head, is useful sometimes in the excited stage in cases not too far advanced, but shower-baths, cold baths, etc., are in our experience generally contraindicated.

The paretic in the active progressive stages of his disease is always best treated in an asylum or its equivalent. During the remissions it may be possible for him to be released temporarily, but he should al-

ways be under medical oversight. The excitement of outside life, the lack of regulation of habits, and, it may be, renewal of excesses, are all likely to bring on a relapse, and render paroling or furloughing this class of patients somewhat of a perilous experiment.

The symptoms that may occur from time to time of excitement, etc., call for appropriate treatment—sedatives, hypnotics, etc. In the congestive attack it may occasionally be useful to employ brisk purgatives and local applications to relieve the congestion, but abstraction of blood is undesirable. The condition of the bowels is always to be watched; any constipated state is likely to aggravate the disorder, and, on the other hand, paretics are occasionally carried off suddenly by choleraic-appearing diarrhea attacks. In the advanced stages when the patient is bedridden and untidy, constant care should be exercised to prevent bed-sores, which will sometimes, however, occur in spite of the most careful treatment. Occasionally they seem to be directly connected with cerebral or spinal lesions, and form rapidly appearing and extensive sloughs over the sacrum or the buttocks, but the more common form is that due to the general deteriorated trophic functions, occurring at any point subjected to pressure. Whichever way they occur, they form a troublesome complication, and one that helps materially to the final fatal termination. The utmost cleanliness, bathing with diluted alcohol, frequent changes of position, water or air cushions or mattresses, are at best only palliative measures in these cases. Attention should be paid also in paretic cases to the slightest suppurative inflammation, as a general pyemia or septicemia is often easily set up. On the other hand, in the second stage there is frequently observed an especially marked readiness of repair of injuries, but this is rarely, if ever, the case in the final stages of the disorder.

In closing the subject of paresis, we may recapitu-

late, at the risk of some repetition, the varieties that have been remarked in its symptoms and progress. The typical form with excitement and exalted delusions has been sufficiently described; so also the depressed and hypochondriacal form. The latter occurs, according to Kraepelin's estimate, in about 27% of all cases; we should estimate it at rather a less figure in our experience. If, however, the typical demented type is here included, a considerably higher percentage may be allowed. In this the dementia predominates, and the delusions and other active intellectual aberrations may be altogether absent. According to a recent writer (Bremer), this type is becoming more and more frequent of late years, and tends to replace the typical form. There are occasionally occurring cases in which the mental symptoms of the early stages are wanting, and the dementia comes on at once after an apoplectic or convulsive attack. There are also cases of paresis without these attacks of either kind, and others in which they are so frequent as to dominate the syndrome, and mental or emotional symptoms are almost completely lacking during the entire course, or so slight as to readily pass unnoticed. In other cases still, the earliest symptoms are spinal, and the disorder may be diagnosed as tabes, till these disappear and give place to the more typical physical symptoms of paresis. Cases like this are rather rare, but we have observed several such. In other cases the ataxic symptoms continue, though more or less masked by the advancing paresis. Still another form may appear quickly, and take on the symptoms of acute delirium, carrying the patient off in a few days or weeks—the so-called galloping paresis. Then we may mention the juvenile paresis, appearing generally at or near puberty in victims of hereditary syphilis. In these the symptoms may be more or less typical, but generally of the demented rather than the active or exalted type.

Lastly, we have the circular type, in which the form of the peculiar degenerative cyclic insanity is superimposed on the paresis.

The percentages of the different forms are thus given by Kraepelin: The agitated form, 11%; the demented, 40%; the expansive type, 15 to 16%; the depressive type, 27%. The other types are exceptional. In our experience we should give certainly a larger percentage of the expansive type as existing among paretics a few years ago, and a very much smaller one for the depressive type.

It must be remembered that the symptoms and the character of the delusions are largely influenced by the natural bent of the patient, and this is also true to a large extent with the type of the disease. Depressed forms of mental disorder seem to increase with civilization, and paresis falls probably in this into the general order of things.

Another notable fact is the increase of paresis in women, which is more marked in Europe than in this country. Here the ratio is still near the old mark—one woman to five or six male paretics; but the number of the former is appreciably increasing here also. It has been often observed that this increase abroad is chiefly amongst the lower classes, and in the large cities, and that a well-to-do female paretic is a rarity. In this country this is also true, to a certain extent, but women in good or fair condition in life, and of good education, furnish an appreciable proportion, and the disorder cannot be said to be exactly rare or exceptional amongst them.

## CHAPTER XIV.

## ORGANIC INSANITY.

ORGANIC dementia, as it is understood in our classification, includes those conditions of mental impairment without active insane delusions or active symptoms of either depression or exaltation, following gross lesions or disease of the brain, and including also a certain class of cases occurring in advanced life where many of the symptoms strongly suggest paretic dementia as it occurs in younger individuals. We include these because this appears to be the best place for them, and because they are etiologically distinct, in our opinion, from true cases of paresis. The usual effects of brain lesions beyond the merely temporary ones are a certain degree of mental enfeeblement or impairment, though in many cases this is so slight as to practically be a negligible quantity. An ordinary apoplectic attack may be recovered from so completely that no trace is apparent of its effect upon the mind. This is especially true of many cases of hemorrhages or embolism in the basal portion of the brain, involving simply the functions of some of the motor tracts. Repeated attacks, however, of this kind are apt to show their effects, and very extensive lesions may be serious in the mental involvement produced from the very first. Lesions in other portions of the brain affect the mind according to the organs or regions involved, and also in accordance with their extent. The mind may be a blank at once from the time of the injury, as in cases where a cerebral traumatism has completely destroyed memory and consciousness of the past life, which are subsequently restored by the trephining out

of the depressed portion of the bone, etc. Many of these cases are apocryphal, especially as regards the reported sudden cures after a lapse of several years, but it is altogether possible for the mental faculties to be completely and permanently obtunded by any lesion of sufficient extent and involving the higher centers indispensable to the action of the mind.

The symptoms following brain lesion vary from slight impairment, as already stated, to the condition just described, and not infrequently epilepsy with consequent dementia is a sequel. The cases here considered are, however, those of dementia in its various degrees, and loss of memory, of power of orientation, and of the higher inhibition are the most notable of the special symptoms. The subject may have lost all knowledge of events immediately after the lesion, while he may be able to talk and reason correctly as to matters immediately at hand. The impairment may be such that he may lose himself within a few steps from his own door, may neglect the ordinary decencies of social life, and in some cases may be unable even to attend to his own slightest wants. These patients are not usually dangerous except to themselves, and in that respect only through their helplessness and their inability to reason. Nevertheless, there may be suicidal tendencies, and from lack of self-control even homicides may occur; these, however, are so rare that they are not usually considered in describing this special form of insanity. One of the commonest types of organic dementia is that associated with the atheromatous arteries of old age, or, it may be, of premature senility. In some of these cases we have what has been already mentioned, a condition quite closely resembling paresis with its thickened speech, its unsystematized delusive ideas, and general physical weakness. In our opinion the cases of paresis that have been reported in individuals over sixty years of age are generally of

this type, and may or may not have been preceded by earlier specific disease. It is rare to see a typical paretic pass the age of fifty, and we doubt if paresis ever occurs after sixty. The differences are not so very striking to the ordinary observer, but in these aged cases there is a lack of the active delusional type that we see in the majority of those in middle or early life, and the general facies of the disease has a characteristic difference which is hard to describe, but nevertheless exists. If we were asked to be specific in regard to this, we could only say that there is a special senile character, and in the most of these cases we do not find the early antecedents of true paresis. There are also the various physical signs of senile arterial disease, the senile heart, the tortuous vessels, and the general symptoms of pathologic senile decay.

Syphilitic disease may produce an organic dementia with symptoms characteristic of the probable lesions that have occurred within the brain, such as syphilitic growths, syphilitic arteries with hemorrhages, etc.

There is no special characteristic sign which we can name of the dementia from hemorrhage, embolism, thrombosis, tumor, or traumatism, and the diagnosis of these conditions must be made by the history of the case and the special local and other symptoms in the motor and sensory spheres.

The treatment of organic insanity will vary according to the cause, and it is only in a few cases, where the injury is comparatively slight, or in some recent cases, and in cases where specific disease is known or suspected to exist, that the prognosis is hopeful. In the great majority of cases, and especially in those occurring in advanced life, the chances of improvement or recovery are practically *nil*. There are many patients of this class sent to asylums. They are easily cared for, though sometimes troublesome, and what has to be done for them is to make life as comfortable as possible,

give them such liberties and privileges as are possible, insure their cleanliness and proper nutrition, and protect them from the dangers to which they are liable from their weakness, lack of self-control, and their inability to care for themselves.

Many cases of so-called senile insanity are really of this type, and many cases of organic brain lesions, with mental disorder, have to be classed with other forms of mental disease. A large proportion of the epileptic insanity is truly organic dementia. The same is the case with some forms of delusional insanity which follow injuries, and especially those cases that are due to insolation, which often causes a peculiar type of delusional paranoia without marked dementia. The cases here included are only those in which dementia is the leading feature, and directly traceable to the cerebral lesions, and also often associated with the physical symptoms due to the lesion.

## CHAPTER XV.

## INSANITIES OF THE NEUROSES.

The insanities of this group are peculiar in being associated with special forms of nervous disease or with special symptoms, which themselves are not ranked among the mental derangements. It is not in our plan to discuss these disorders or symptoms, but only to describe concisely the psychic derangements sometimes associated with them. Epilepsy, hysteria, etc., so far as they are not directly associated with insanity, their symptoms, treatment, etc., are not considered, and this materially lessens the compass of our subject. Hysteria, it is true, is itself in a certain sense a mental disorder, but in its ordinary manifestations the mental symptoms are not usually considered as insanity, hence these will not be considered here. It is only when the mental changes become so decided that they pass well beyond the borderland region that they are properly called hysteric insanity; so in epilepsy the convulsions and the temporary mental obfuscation and all the manifold other peculiarities may occur and yet the subject not be fairly called insane. For the discussion of these the reader is referred to works especially on nervous disorders; they do not form part of our subject here discussed.

While these neuroses are largely degenerative, and their associated mental disorders are therefore to a great extent based on an originally defective and degenerate constitution, this is not always the case; the neuroses as well as the insanity may be acquired through disease, trauma, or otherwise. It has seemed

best to us therefore to treat of them here rather than in connection with the degenerative insanities.

## EPILEPTIC INSANITY.

Epileptic insanity includes all the mental disorders directly associated and connected with the epileptic neurosis. It thus includes a wide range of clinical symptoms, but in all cases they are more or less tinged with the special character stamped upon them by the brain disorder. The proportion of epileptics who are insane is not so great as is sometimes estimated, though some have gone so far as to consider all epileptics as to some degree mentally affected or abnormal. The fact that some of the world's greatest names are those of epileptics would not of itself disprove this, but the other fact, that every physician and, indeed, nearly every one knows, of average individuals who have suffered from the disorder or symptoms of epilepsy, is a stronger proof of its incorrectness. Probably one-half of the epileptics sooner or later suffer some marked mental deterioration if they survive long enough, and in half of these the change may go far enough to make them proper subjects to be called insane. In the other half the mental deterioration is not marked, though the victims are in a large majority of the cases seriously handicapped by their disease. In a very considerable proportion of cases the epilepsy is of rare occurrence, and in some it is merely an episode of a certain period of special stress, and is completely recovered from as far as future attacks are concerned. The great mass of average epileptics are hardly, properly speaking, insane. Many of them are mentally weak in certain directions; many are almost normal; and a few suffer really no evil effects, so far as their mental constitution is concerned, from their rare and episodic attacks.

Epileptic weak-mindedness, which may be called the first degree of epileptic insanity, is characterized by



EPILEPTIC INSANITY.

certain noticeable limitations rather than aberrations. The patients lack initiative; they are restricted in their ideas and tedious in their expression of them. Memory is unimpaired; intellection, within the limits of the patients' capacity, is fair; they appear to have no disturbances of consciousness whatever in the intervals between their fits. With this, however, there is often, and one may say generally, an irritability of disposition and a certain loss of self-control, showing itself in attacks of temper or an unpleasant peevish disposition. It is often said that the first signs of mental disorder in epileptics are seen in a change of character, and a special type of perverted emotionalism and disposition has been described as characteristic. According to this view, epileptics are generally in this stage either vicious and violent or cajoling and treacherous; in either case liable to violent explosions of temper and unreliable. This is true only to a certain extent; there are many epileptics who are of these types, and there are more, in our opinion, who are not. Even the characteristic irritability is not by any means universal; there are many mentally affected epileptics who are actually insane at times, whose disposition and character are excellent, and the general charges made against them as a class do not do them justice.

In many more abnormal cases the weak-mindedness passes into decided dementia of the stupid order, memory, general intelligence, going together by the board, till in the final stages the patient simply lives a sort of vegetative existence, unable to even care for himself in the slightest matters. This, however, is not characteristic epileptic insanity; it is simply an organic dementia of epileptic origin, of which it retains no special trace, except perhaps a still-retained peculiar irritability and the recurring convulsions.

The characteristic insanity of epilepsy is that directly connected with the attacks and coloring to a

greater or less extent the intervals between them. In a very large proportion of cases we can hardly call these patients insane during these intervals; they are rational; fairly intelligent; their recollection of events occurring during this stage and of previous events is good; they understand their condition and are willing often to do what they can to mend it; they exercise more or less self-control; in short, they are rationally sane individuals in all or nearly all respects. In some cases, indeed, one cannot call them at all insane or abnormal during these intervals, though they may be dangerously so, at times, in connection with their attacks. In many other cases, however, and in most after long continuance of the disease, there is a mental state or disorder of the intervals as well as of the attacks. Sometimes this is only a mild grade of dementia; the patient is simply weak-minded or semi-imbecile, often amiably so, but more often irritable and liable to fly into a violent passion on the slightest provocation, which renders him to some extent dangerous and requiring restraint. Frequently both qualities are combined; the patient is jovial and happy as a rule, but "ready to fight at the drop of a hat," as the saying is. One such patient, a happy, careless-dispositioned epileptic with very moderate signs of dementia, told the writer, we believe truthfully, that he had served at least forty bridewell sentences, mostly for fighting and disorderly conduct. His scalp was one mass of scars, largely, if not solely, obtained in this way, but in the asylum, under judicious management, he was a very tractable and useful individual.

Very often, however, the condition between fits shows a more manifest change of character or abnormality, and this has rather formed the popular opinion of the epileptic, as an unpleasant and morally as well as mentally deteriorated individual. We must remember that the chief symptom is irritability and loss of control

to a large extent, and this, superimposed upon the natural disposition, handicapped by the disease, and often aggravated by bad management and misunderstanding, and often by actual maltreatment, is not a favorable condition for the development of the more amiable traits. It is not surprising, therefore, that the epileptic is considered a rather unamiable character; it is more surprising that we find so many who are not such. Add to this irritability a certain degree of mental weakness, and the chances of unpleasant modifications of the natural disposition are increased. Many epileptics suffer from occasional hallucinations connected with their attacks of acute mental disorder, which will be described later, and these have sometimes an influence over them in intervals between. There is sometimes an offensive egotism, but this is no more frequent in these patients than in most other forms of chronic mental derangement, and it must be said in favor of the epileptics generally, that they are rather more sympathetic toward each other and toward others than the insane generally. Their inconsistent religiosity that has often been noticed to their disparagement is, in many cases at least, only evidence of an honest attempt to better their lives, baffled by their infirmities. It is not uncommon in asylums to see explosions of violent temper with profanity in patients when disturbed, for example, at their somewhat ostentatious devotions, and this has been remarked upon, somewhat unjustly, to their discredit. We have known violent, irritable epileptics to voluntarily seclude themselves on this account, and forego many privileges they appreciated, to avoid provocation that might cause acts they regretted. In some cases, it is true, there is developed a vicious or excessively disagreeable disposition; they are unreliable and treacherous, or peevish and childish, always wanting and asking sympathy or demanding attention in a most persistent and offensive way.

These cases are, however, in the minority, and opposed to them we have some rather admirable characters, in spite of their infirmities. It is common, and rather the rule, to find in the lesser grades of epileptic dementia a certain degree of obstinacy in small matters, which is very apparent, unless they are tactfully managed. This is one of the characters that specially marks this demented type, aside from the acute episodes.

When actual insanity other than the dementia described exists during the intervals between the attacks it is very frequently of a hallucinatory type, and generally attended with delusions. Often these are of a persecutory character; the patient hears voices abusing and insulting him, and finally gives way to a belief in their reality. A patient of this type, who had never been declared insane and was at large, complained to the writer that while he knew or thought he knew the voices he heard were unreal, yet he was in constant fear that he would do something under their direction that would get him into trouble. His disposition was good and he still retained self-control; his disorder was as yet a purely hallucinatory one, and he realized that it was sure to get the better of him sooner or later, as it doubtless did, though as he passed out of knowledge his later history is unknown. Another patient, who came to the hospital with a record of having been violent, was one of the best inmates; he was docile, industrious, and of a most excellent natural disposition. He was conscientious to a degree and perfectly reliable, and fully equal to an attendant in handling violent patients; he had the knack of managing them better than most attendants, and as he was of remarkable strength, he could master the most violent without exerting himself or injuring them. His sympathy and tact were also remarkable; apart from his disorder, he was almost a natural-born

attendant, and was considered a treasure in the ward. This was the more striking as he was a full-blooded negro, and had race prejudice against him, which, however, he generally conquered even in his Irish fellow-patients, by his gentle and tactful behavior. Yet this man would at times talk to himself at length in almost a whisper, saying such things as, "I don't know what they can have against me," and "Why do they treat me so? what have I done?" etc. He did not care to be overheard, and would not explain his trouble, but from his actions and manner, as well as *sotto voce* remarks, he was evidently severely troubled with auditory hallucinations. In his case the disease never advanced beyond this point; he was not demented, though limited in his acquirements, and he was not, while under observation, any worse in connection with his epileptic attacks.

Such cases as the above are, however, exceptional in their self-control as well as in their remarkably amiable traits, but they do occur among epileptics, and there are many others under tactful management who can be made to more or less approach them in these respects. Under the control of a rough or brutal jailer or poor-house warden the above-described patient would very likely have been troublesome, and his record of violence was probably due to such a cause. There are other cases in which the mental disorder takes on a less agreeable phase, and in which the patients are more morally than intellectually deranged. When this is combined with excessive irritability, these patients are particularly dangerous. Most epileptics are open to good influences, and often hysterically religious at times, but these fortunately exceptional cases have not these redeeming traits. They may be called cases of epileptic moral insanity, and their best feature is that, until they become too demented to be dangerous, they are generally amenable

to asylum discipline and not likely to do what in their idea might lead to inconvenient consequences. They are, however, evaders, unreliable, brutal to their weaker associates, and vicious when they see no disadvantage from their misbehavior. They are often masturbators, and in some cases most persistent ones, but this is also common in epileptic dementia of the ordinary type.

Another not very uncommon type is the whining, disagreeable epileptic, not characteristically violent except on rare occasions, but always persistently egotistic and demanding sympathy and attention. In some cases they are treacherous and hypocritical, and are generally trying to the patience of those that have to care for them or in any way to do with them. These two types are prominent enough among epileptics to be taken, together with the irritable dements, as setting the type of the whole class of insane epileptics—a manifest injustice, as they form only a very moderate proportion of the whole, and with good management, as will be mentioned later, their number is still further reduced. The incorrigible moral epileptic lunatics are rare exceptions.

The really characteristic epileptic insanity, however, is that appearing in connection with the epileptic attacks, or in their place—the so-called larvated epilepsy. This may appear before or after the paroxysms, or, as just said, may replace them; thus, we have pre- and post-epileptic insanity and the epileptic equivalent. The first named is not uncommon, and may show itself in exalted or maniacal conditions, or, as is more common, in depression appearing at varying periods prior to the convulsions. In some cases, also, there may be hallucinations of various kinds, or there may be only an excess of irritability, gradually increasing to an explosion of violence in some form or other. In this last case the patient may be entirely rational, and endeavor to control himself till finally the condi-

tion culminates in an explosion of violence beyond his control and often directly connected with the epileptic attack itself. The duration of this pre-epileptic condition ranges in different cases from a few minutes or hours to several days, or even longer; sometimes it may be considered as simply a prolonged aura, or in other cases as an independent attack of insanity of more or less brief duration. A very large proportion of epileptics have some form or other of pre-epileptic disturbance, but in the majority it does not go so far as to be actual insanity. Generally it is only a slight depression or a physical and mental restlessness, hard to describe, but very real to the subject himself. In many cases of pronounced pre-epileptic derangement there are hallucinations, sometimes disagreeable, but sometimes, also, agreeable, and even ecstatic visions or sounds are experienced in this stage. Dostoievski, the Russian novelist, who was a confirmed epileptic, is said to have had these ecstatic hallucinations, and to have declared that for this reason no amount of money could induce him to part with a single one of his fits and their blissful pre-epileptic sensations. It is possible that the visions of Mahomet and of Swedenborg and other modern prophets and saints are to be accounted for in this way.

In many other cases the sensations are very unpleasant. In one case under observation, the epileptic, ordinarily a very irritable and often rather unmanageable patient, suffered from the most terrifying feelings,—half-fledged hallucinations they might be called,—in which he seemed to be surrounded or attended by beings whom he could not appreciate by any of his external senses, but who were very real and terrifying to him. He would walk back and forth, praying for help and relief, and while not at all suicidal, was liable to do himself an injury in his frantic paroxysms of terror. He was conscious and would talk rationally, but was utterly unable, either at the time

or later, though his recollection seemed acute, to describe his sensations or explain the cause of his terror. Other more or less similar cases might be given, but this one will suffice.

The epileptic equivalent, or psychic epilepsy, is generally a sudden and often very brief attack of insanity, occasionally of melancholia, but more often, or at least more noticeably, of mania or furor. In other cases there is a temporary hallucinated condition, a sort of brief paranoia; and in still others, a sudden explosion of causeless automatic violence is the only phenomenon. The most typical cases are those of furor, in which the patient passes very rapidly into a state of violent mania or impulsive violence of short duration, and, as a rule, has no memory of his acts performed while in this state. In some cases the acts of violence appear purposive, and as if contemplated beforehand, but the amnesia is generally complete afterward. This is not always the case, for sometimes the patients have a perfect recollection of all their acts in this state. It has been often said by good authorities that these acts are always unconscious, and that unconsciousness is a necessary condition of epileptic manifestations. Leaving aside, however, the necessary distinction to be made between unconsciousness and amnesia, it is incorrect to say that unconsciousness is an essential feature of any form of epilepsy. There is, in the severer forms,—and in them we can include these larvated ones,—generally a loss and almost always a disturbance of consciousness, but in rare instances it is not safe to say that even this latter occurs to any extent; even in epileptic furor consciousness may be as perfect as is possible under such a grade of excitement, as is proved by observation as well as by the testimony of the patients themselves. Nevertheless, in most cases there is amnesia; at least, the patient recalls nothing of his acts after coming out of his

attack, and this is so much the rule that it may be presumed in all cases where there is not proof to the contrary. This form of epileptic attack is of very great forensic importance; a large proportion of the cases of temporary insanity with violence are of this nature.

The post-epileptic mental disturbance is the most frequent of the three forms, and therefore the most important. It is the rule that an epileptic fit, especially the *grand mal*, or fully developed epileptic attack, leaves after it some temporary cerebral disturbance; most commonly there is a shorter or longer stuporous interval, or there may be a severe headache and more or less mental confusion for a short time. When the case comes fairly under the category of post-epileptic insanity, the mental manifestations may be widely varying. We may see in rare cases an acute hallucinatory confusional state; in another, extreme depression; in another, motor excitement, as shown in epileptic furor, with a specially marked violent tendency; and in still others, a paranoiac state lasting from a few hours to several days or more. The epileptic furor is the most characteristic, and suggests in its phenomena some terrifying delusion or hallucination of the patient or some delusion of injury or attack by others. A peculiarity of these cases is the fierceness and vindictiveness of their attacks on others, which seem often utterly beyond reason and out of character. There appears to be a sort of moral deterioration in this state that thus manifests itself; the patient may be ordinarily amiable and docile, but in these attacks one becomes not only furious, but causelessly and viciously intent on injury to persons or objects that are in his way. This is not always the case, but it is sufficiently frequent to be considered characteristic, and to be mentioned as such in most of the text-books. One who has closely observed epileptics in this condition, however, can see individual traits even here, and it is worthy of

note here that, at least in a very large proportion of cases, there is not that reckless disregard of danger that is so commonly said to exist in the post-epileptic furor. The patient, however furious he may appear, is very apt to still retain some degree of prudence, and does not attack those who are likely to be dangerous to him. We have seen an epileptic in this condition completely cowed by another more powerful patient, and actually docile to a fearless and muscular attendant. In some few cases, however, they seem possessed with a blind, unreasoning furor, and are regardless apparently of consequences. These cases are very apt to be destructive to property in these states, and sometimes work off their excitement entirely in trying to wreck their room with its plastering and furniture.

The forensic importance of these conditions is very great, and much stress is laid upon the loss of consciousness as affecting responsibility. It should be borne in mind, however, that, whether consciousness is lost or merely clouded, or if amnesia only exists later, the condition is one of mental disease, and any remnants of self-control that may exist do not materially affect the case—the patient is legally irresponsible.

The **diagnosis** of epileptic insanity is usually easy; the obvious association of the convulsions which are almost always a prominent feature of the case, and in a large proportion of the cases the peculiarities of the mental derangement itself, are sufficient to cause its recognition. In no other form of mental disorder is the keynote of irritability so evident. There is also a peculiar facial expression to the insane epileptic that is recognizable by one familiar with them, not readily described, but very manifest. It consists largely in a sort of intense expression of the eyes and a forced look that is hardly ever, if at all, seen in others than epileptics. It may be said here, to aid the description, that this peculiar expression is to a certain degree

counterfeited in Delaroche's celebrated picture of Napoleon at St. Helena, engravings of which are common in this country. We are not aware that this resemblance was intentional, but the fact that Napoleon was said to be an epileptic makes it rather the more remarkable. As evidence that this epileptic facies is a real thing, it may be said here that one of the writers once took, by a rather primitive method, a composite photograph of nine epileptics. The very vague picture produced was shown, without stating the facts, to several persons in the asylum familiar with epileptics, but who knew nothing of its origin, and they all declared it, on questioning them, a very poor likeness of some epileptic or other, one or two of them recognizing in it a likeness to an epileptic patient not included in the number that contributed to its formation.

Much has been said about the identical character of the attacks in the individual epileptics, and to a certain extent this is a fact, and is also an aid in the diagnosis. The cerebral mechanism may, however, vary at different times in the same individual, and therefore the photographic similarity of symptoms is not always to be relied upon. The chief elements of the diagnosis are those mentioned above. There is a possibility of non-recognition of the epileptic factor in some cases of chronic dementia, delusional and other forms of insanity that were originally epileptic, but these hardly come under this head in their final condition, and in a general way it may be said that the diagnosis presents no particular difficulties.

The **prognosis** of epileptic insanity is generally bad. Epilepsy itself is so rarely a curable condition that when it has progressed so far as to produce insanity the result is generally considered hopeless as regards recovery. It is doubtful, however, whether we can rightly call it absolutely hopeless. The insanity con-

nected with the epileptic attack is not necessarily permanent, and when dementia has not already become apparent, there is at least a remote chance of cure. We have seen at least one epileptic with an insane record so far recover from his disorders as to be free from both epileptic attacks and mental disturbances for over three years, or as long as he was under observation. It cannot, of course, be said that there was a lasting cure in this case, but recovery was as complete as often occurs in many other forms of insanity. Reference has already been made to occasional cases of terminal dementia that originated in epileptic insanity, where the neurosis has disappeared for years. It is possible that epilepsy may sometimes exist and be associated with mental derangements and then leave the patient, under the influence of treatment, or for other causes, as is sometimes the case, and no serious mental disorder be left.

The chances of permanent recovery of reason in epileptic insanity are, however, so slight that the condition may be considered generally a hopeless one, and absolutely so when any degree of dementia has been reached.

**Treatment.**—The cases of epileptic insanity should be treated in a hospital for the insane or a special epileptic hospital; so dangerous are they, that the risk of their home treatment or their treatment in an ordinary hospital is too great for it to be undertaken.

The treatment divides itself into that of the violent manifestations and that of the interval. The careful observer can usually determine the approach of an attack; then isolation and restraint must be resorted to without delay; the attack usually soon subsides, and we doubt if any medication will cut short the duration of these manifestations or much diminish the violence, though hypodermics of hyoscin hydrobromate or morphin sulphate are of some service occasionally.

The most available time for treatment is during the intervals. The most popular drugs with the profession are the bromids of potassium, sodium, strontium, and ammonium; they are efficient, but they must be used with judgment. There is no doubt that some of the cases of epileptic insanity are the result of an unreasonable use of the bromids. A few cases of epilepsy have been cured by the bromids, many have been improved, and some have been irrecoverably injured. It is well in these cases to add to the bromids some cardiac stimulant, such as Tinct. cannabis indica ♏xv (1.00), or Tinct. hyoscyamus ♏xx (1.33); and the amount of bromids used should never be sufficient to produce much acne or complete faucial anesthesia. With this moderate bromid and cardiac stimulant an antiseptic, such as salol gr. j–iv (0.06–0.25), or bismuth beta-naphthol gr. v (0.31), should be given, and the diet should be carefully regulated, using only the most easily digestible food and reducing the nitrogenous intake to the lowest possible amount consistent with good general nutrition; the amount of sugar consumed should also be very small, as this interferes with the complete metabolism of the nitrogenous foods.

Careful attention should be given to elimination by skin, kidney, and bowels. Turkish baths, body massage, alkaline diuretics, and laxatives with colonic flushing, meet these indications.

There is some advantage in epilepsy in the counter-irritation of the nape of the neck by the actual cautery. We are sure that this plan of treatment is too little used in these cases; such irritation twice a week will diminish if not relieve headache, and certainly will prolong the interval between attacks.

It has been said above that some cases of epileptic insanity have doubtless been caused by the injudicious and excessive use of the bromids. This does not mean merely production or aggravation of mental failure,

but includes also cases of acute maniacal explosions due to the drug. That large doses of bromid could have this effect was noticed as early as 1869 by French authors and by Hammond, and attention was especially called to the fact by one of us in 1881, and in the discussion on his paper in the American Neurological Association the opinion was expressed by some that a certain proportion of cases of epileptic insanity in our asylums were merely cases of bromid mania. More recently this action of the bromids has been written upon by Weir Mitchell, Harriett C. B. Alexander, and others, and there is in our minds little doubt that these agents, either by the suppression of the attacks from their use, or from some special action of their own on the nerve-centers, do occasionally cause mania or epileptic furor. From cases observed by us, we also think it probable that they have been sometimes responsible for the dangerous insane symptoms of certain epileptics, who but for their use might possibly not have given cause for any suspicions of activeinsanity.

The moral treatment of insane epileptics is of the very greatest importance, and in some cases is practically all the treatment possible or effective. In hardly any other form of mental disease is tact in management more important or conducive to better results, for the time being. Some epileptics are too demented to appreciate it; a very few are incorrigibly bad, and only amenable to comparatively rigid discipline in the way of isolation and restraint amongst those they cannot or dare not abuse; but the great majority, while irritable and subject to violent fits of passion, are very appreciative of kindness and justice in the intervals of their attacks. They can usually be reasoned with and made to appreciate the fact that their disease renders them troublesome or dangerous to others, and that they must submit to the necessary rules and restrictions their condition demands. If

they once feel that their doctors and attendants are their friends, they are comparatively easy to control, if managed tactfully during their spells. It is best in all cases for them to know that they are under rules, and to expect that if these are relaxed in their favor, it is as a favor, and not as a right. There are many epileptics of this kind that can be allowed considerable liberty under supervision, but it is not advisable to allow this except as a special privilege, for if it is understood to be a right, the necessary denial at times will be sure to cause trouble. We must keep in mind the fact that epileptic irritability is very easily aroused, especially when they feel that they are wronged, and the keynote of their management is to make them feel that they are among friends who act only for their good. With such an understanding they are in most cases docile and manageable patients.

## HYSTERIC INSANITY.

Inasmuch as hysteria is a condition itself most difficult to define, it follows naturally that the definition of hysteric insanity is also difficult. We can say in general terms that various forms of insanity may develop upon a hysteric basis, and that in this respect it corresponds closely with its allied neuropsychosis, epileptic insanity. It differs from epileptic insanity, however, in being much more decidedly a degenerative type, as hysteria is itself more of a degenerative psychoneurosis than is epilepsy. The definition may be stated, perhaps as well as in any other terms, as follows: Hysteric insanity is to a great extent a degenerative psychosis proceeding from hysteria or colored by it in such a way as to be clearly distinguishable from other similar conditions of different origin or complication. Ordinary mania and melancholia are quite distinct clinically from the corresponding hysteric types,

and hysteric reasoning mania is characteristically different from hypomania.

The first and most prominent cause of hysteric insanity is heredity. In nearly every case there is a history of neurosis, insanity, or intemperance, and very often a direct heredity of hysteria. Where these are lacking, there is a neurotic congenital weakness in nearly every case. Aside from this, trauma may be considered the most efficient cause, but it is an infrequent one where the congenital predisposition is lacking. Other causes, such as exhausting sickness, toxemia, shock, etc., are probably only effective, at least to any extent, as secondary to predisposition and heredity. Traumatic hysteria has a forensic importance that renders it prominent, and thus has given, it may be, the impression that the cause is itself more frequent than it really is—that is, as an independent etiologic factor. When traumatism causes insanity in an individual with this degenerative hysteric predisposition, we will be very likely to consider the development as due to it more than is actually the case. It is the degenerative factor, not the accidental or exciting cause, that is the real basis of the disorder.

Hysteria itself is a mental disease; its striking characteristics are overactivity of the emotions and impairment of intellectual and volitional power, with frequently an enhanced acuity of the perceptions. Those unfortunate people who are its victims are, therefore, creatures of impulse, controlled by their feelings and not by their reason. This very mental condition is so close to insanity that it is not always easy to draw the line of demarcation, and it is, therefore, not surprising that hysteria frequently develops into unquestioned insanity. When this occurs, the manifestations are like the parent stock; impulsiveness, unreasonableness, extreme selfishness, excessive sexuality, suggestibility; illusions, hallucinations, and delu-

sions, especially in the visceral area, are common. The landmarks of hysteria can sometimes be found, such as faucial anesthesia; tremor of the closed eyelid; tenderness under the left mammary gland, at the epigastrium, over the left ovary; limitation of the field of vision, and are invaluable in differential diagnosis.

Hysteric insanity is very frequently recurrent, the attacks occurring at intervals under special conditions, such as menstrual periods, etc. It may take either the maniacal or the melancholic form, each, however, colored by the general pre-existing neurosis, as indicated above. Hallucinations, dreamy states, illusions, etc., are not infrequent in these conditions, and there is in some cases quite a resemblance to certain types of epileptic pre- or post-paroxysmal delirium. The characteristic feature of even these cases is often the effect of observation and sympathy upon the patient, and their openness to suggestions in some direction, even in their apparently fully developed mania or melancholia. We might call the attacks in these cases a shallow or superficial type as compared with the intensity and reality of the genuine forms, though sometimes the resemblance is very close. There may be, and often are, destructive tendencies in these states, but the outrageous violence of the epileptic is seldom, if ever, observed.

In other cases we have trance conditions and catalepsy, and seeing ecstatic visions, as in some of the noted visionaries, and there is a wide range of conditions that seems to be on the borderland of hysteria and epilepsy—apparent conditions of double consciousness, somnambulistic states, etc.—that can probably be best included under this head. The exact tendencies of hysteria itself are not clear, and we cannot, therefore, say positively as to the correct reference of some of these conditions or symptoms.

The most typical form of hysteric insanity is the

hysteric reasoning mania, or, as it might be called, hysteric moral insanity. In this all the specially characteristic moral weaknesses of the hysteric subject are prominent, together with many of the physical and other stigmata of the condition; and with these, a more or less complete retention of the reasoning power and a certain misdirected self-control, so to speak, a sort of perverted and abnormal will-power. These patients are egoistic to the extreme, and are the most annoying to those who have to care for them or live with them of almost any class of the insane. They are excessively notional and full of projects; they often show a marked and perverted sort of religiosity; are apt to be full of a sort of unpleasant self-righteousness and sometimes an ostentatious professed philanthropy. Some of these patients at large are for a time active workers in church matters or in public or private benevolences, but their moral and emotional perversion soon makes its appearance and destroys their influence and usefulness. Attention is what they demand, and it is impossible to satisfy them with enough of it; they are full of imaginary bodily ailments and have undoubtedly many marked sensory hallucinations, or what may be so called, of disease in various organs, and are the most persistent drug habitués if they have the opportunities. Their sleep is very commonly disturbed; their appetite variable, though generally sufficient for their nutrition. The typical nagging woman is often a mild form of this phase of hysteric reasoning mania, not pronouncedly insane enough to be sequestrated in an asylum, but showing many of the characteristics of the class. When the condition is so far advanced as to require asylum treatment, there are generally some marked delusions perceptible at least, and the perversion of character is such that it is impossible, as a rule, for the patient to be endured by friends or relatives.

A rather typical case of this kind that came under

our care illustrates the form rather better than any general description. She was a woman of about thirty, of very fair physical development, unmarried, of neurotic heredity, though her family history did not, we believe, include any instances of actual insanity. She had been, a number of years, an asylum patient, and was considered a particularly troublesome one, not on account of violence, but because of her peculiarly captious and discontented ways and constant demands for special care and attention. Her general bodily health and nutrition were fair, but she had constant ailments to complain of, was persistent in her demands for hypnotics of one kind or another, and came nearer to being a chloral habitué than any patient in the asylum. As she was not at all inclined to run away, she was allowed her liberty about the grounds, but demanded the privilege of visiting the wards other than the one she was in, and was permitted by the superintendent, for the sake of peace, to have a key to her ward. With this she went about as she pleased, and professed to direct the work of certain rather demented patients who submitted themselves to her direction. This unusual privilege did not satisfy her, however, but every day she came to the superintendent with her grievances and demands, stopping him wherever she met him and holding him in conversation as long as possible. If anything went wrong, if her demands were not satisfied, she would refuse to eat, or sit around "like patience on a monument" in some conspicuous position where she thought her ostentatious grief could attract attention. At times she could go for days apparently without eating, but it was never thought necessary to forcibly feed her, as she always came to her meals again, and it was thought, at times at least, she ate secretly from stores she had managed to obtain in some way or other. She threatened suicide at times, but was never taken seriously, and unless

her death was suicidal, which was not suspected, she never really made any attempts. The erotic element was not prominent in her case, but she was, in her way, exceedingly religious, though her conduct was very inconsistent with her pretension. She would get together a half a dozen almost totally demented patients and have a prayer-meeting, she taking all the active parts, and sometimes was, it is said, exceedingly personal in her prayers in remarks about those whom she deemed were worrying or abusing her. Typical hysteric attacks, convulsions, etc., were not frequent, if they occurred; but modified hysteric phenomena, such as apparent trance states, etc., occurred at times, and there was a very decidedly marked tinge of hysteria in nearly all her actions. It is probable that many of the complaints she made represented feelings that were real to her, but in almost all voluntary acts there was the usual apparent self-consciousness and striving for effect that is common in these hysteric patients. The moral deterioration of reasoning mania was here peculiarly hysteric in its manifestations of calumnious charges, complaints of abuse, etc.

Many of the cases of blackmail and false accusations against physicians may be credited to this form of hysteric derangement in females, and we have known one or two striking instances of the kind. One, a young woman well connected, but cut loose from her family and rather repudiated by her relatives, used to frequent doctors' offices and have hysteric attacks there, and in one or two cases, at least, attempted to get up compromising situations, and once succeeded so far as to give considerable mental uneasiness for a time to a rather prominent physician. There are cases on record where still more serious consequences have resulted; men have been convicted of crimes of which they were innocent on false testimony of hysteric women.

While this special form of mental disorder is by far most frequent in the female sex, it is not unknown in males; of course, in these cases the symptoms are somewhat modified, but it occurs only in men with somewhat abnormal and feminine mental organizations. In some of these, sexual perversion is a notable symptom, and it seems probable that this hysteria is at the bottom of many cases of this abnormality. In male hysteric insanity we see many of the same tendencies to morbid emotionalism, eroticism, false accusations, the exaggerated suggestibility, certain kinds of delusive conceptions, occasional threats or apparent attempts at self-injury or suicide, refusal of food, etc., that we observe in the female, but actual hysteric convulsive attacks are very rare, and the well-marked hysteric physical stigmata are also uncommon. Male hysteric insane are more likely to be suicidal or homicidal than are the females.

Something may be said here in regard to traumatic hysteria, which sometimes amounts to a kind of insanity, showing itself in an exaggerated valuation of physical disabilities and a certain moral weakening that leads the individual to overact and sometimes simulate. There are probably sometimes actual hallucinations and certainly delusive conceptions. These cases may be regarded as rare, though hysteria from this cause is common. They have chiefly a forensic importance.

The diagnosis of hysteric insanity is generally easy; the earmarks of hysteria are too evident to be concealed. The hysteric attack itself and the subsequent or associated mental disturbances have a certain resemblance to epilepsy, but the distinction between them is generally easy, at least if closely and continuously observed. There is seldom or never the purposeless violence of the epileptic, and while absolute unconsciousness is not so invariable in epilepsy as has been commonly stated, it is sufficiently the rule to

serve as a diagnostic sign in most cases. There is a wide difference between even the acute maniacal type of hysteric mental disorder and that of epilepsy. It must be remembered, however, that hysteria is to a certain extent a frequent complication of epilepsy, and this may sometimes lead to some uncertainty as regards special symptoms and particular attacks. In such cases, where doubt is serious it is more probable that we may have hysteria complicating epilepsy than the reverse condition. The diagnosis from adolescent insanity will be noticed when considering that type of derangement.

The prognosis of the acute attacks, in themselves, of hysteric insanity is generally favorable, but they are not a good sign as regards the outcome of the general condition. Considering the disorder as largely a degenerative psychosis, we cannot say that the prospects of complete and permanent recovery are the most hopeful. As regards hysteric reasoning mania, its prognosis is distinctly bad, and its tendency is ultimately toward dementia.

The development of the insanity is sometimes due to anemia or an auto-intoxication, or both combined, and the early recognition of these pathologic conditions and their correction may result in recovery. The treatment for this purpose should be mildly alterative, tonic, and laxative; as an alterative, the auri et sodii chloridum gr. $\frac{1}{10}$ (0.006), with pulv. resina guaiacæ gr. iv (0.25), one hour before meals; and as a tonic, ferri sulphas gr. ij (0.13), sodii carbonas gr. ij (0.13), ext. nucis vomicæ gr. $\frac{1}{5}$ (0.0012), sodii arsenas gr. $\frac{1}{20}$ (0.003), after meals; as a laxative, ext. aloes gr. j (0.06), pulv. ipecac. gr. $\frac{1}{10}$ (0.006), ext. hyoscyami gr. j (0.06).

These patients at the beginning of the acute attacks should be put to bed and given daily massage and faradic electricity, and from time to time colonic flushings. The menses usually stop, and this is a cause of

much disturbance of anxious mothers, under the mistaken notion that this failure is the sole pathology, and they often demand earnest measures directed to this function. The suppression of the menses is not the cause of the insanity, but the result, and so soon as reason is restored menstruation will resume; and all local treatment, unless there is positive evidence of disease, should be avoided, because it will not benefit but usually will aggravate the case. These cases, as already stated, have much sexual erethism, and the manipulation of the organs, while it may give them pleasure for the time being, only exaggerates the disturbance then present.

Cases of hysteric insanity are best treated in a hospital or sanitarium; the removal from old influences, the judicious control and oversight, are essential. The hopeless cases of reasoning mania, with some progress toward dementia, can be better managed in an institution, and outside they are very inconvenient and sometimes dangerous members of society. The possibility of suicide is a serious matter for consideration in a few of these cases, and there is in all a danger of trouble from the uncontrolled impulses to *outre* or vicious actions. Moral treatment is not always very successful, but it is always important; these patients should be managed kindly but firmly, and it is often disastrous when conduct toward them that too much humors or in any way encourages their marked desire for sympathy or attention is adopted. Regular useful employment is one of the first things to be insured where possible. The suggestibility of these patients, if it can be properly utilized, may be a valuable aid in the treatment, and the good effects of many remedial agents, such as electricity, hydrotherapy, etc., can be greatly enhanced in this way. There are few mental disorders where so much depends upon the tact and good judgment of the physician as in this.

## OTHER FORMS OF NEUROTIC INSANITY.

There are still one or two forms of mental disorder associated with or dependent upon general conditions or neuroses that deserve mention, though possibly not a place in the classification as distinct species. Neurasthenia is one of these general conditions that has given its name to forms of mental disorder, but this falls generally, in our opinion, better under the head of exhaustion or toxic insanity. It is also used sometimes as an adjective prefix to certain borderland conditions dependent upon original structural and functional nervous defects, which will be noticed more fully elsewhere. Choreic insanity is another type often included here, and the mental derangement is so clearly associated with, if not produced by, the disorder that the term is to a certain extent justified. Chorea is, as Berkeley and others have shown, in all probability dependent upon an infection attacking the cerebral and spinal gray matter, and it is not at all improbable that this process involving the cerebral cortex may affect intellection as well as the motor function. While it is possibly not infrequent to have a slight mental impairment in chorea, actual insanity is rare, and is met with only in the severe cases, probably in not more than 0.5 to 1% of the total, and then only when the insane predisposition happens to exist in the heredity. The so-called chorea major, however, is a sort of choreic hysteria, that, while a pronounced psychosis, need not be here considered.

Apart from its direct association with the neurosis, choreic insanity is not specially characteristic in its symptoms; its manifestations may take on almost any of the types met with in the forms of mental disease. There may be, and very frequently is, a confusional hallucinatory delirium; indeed, this is one of the common types. In extreme cases we may have stupor of

a very marked type. In the form called chorea insaniens, or at least in the most typical cases, the mental derangement is a sort of acute delirium, with high temperature, that may terminate fatally in a few days or may moderate and end either in recovery or a more or less permanent dementia, or in some other insane type lasting for weeks or months and even years. Delusions and a paranoiac state may sometimes occur in chorea, and the delusions or hallucinations are rather more likely than not to be of a terrifying character. Melancholia is not so frequent as mania-like conditions, but the depression is apt to be extreme, and the suicidal tendency marked. The diagnosis is usually easy if the chorea is recognized, but it is not improbable that some cases of chorea have been overlooked in asylums, the motor symptoms having been masked by those of agitated melancholia or acute maniacal confusion or of mania. This can happen, of course, only when the observer has been very superficial or the motor symptoms have nearly disappeared. After the choreic symtoms have disappeared there is nothing to particularly denote the origin of the derangement, unless there be present the jerky inconstant character of the delirium claimed by Clouston to exist in these cases.

The prognosis of the insanity of chorea is variable. It is fairly good in the mild cases or those in which there is only a moderate mental impairment or mild loquacious mania; in such the mental may generally be expected to subside with the physical symptoms. In the acutely delirious and the stuporous ones, on the other hand, it is bad, the majority failing to completely recover, and the mortality is also high in these, especially the delirious cases with excessive temperature. A guarded opinion should be given, as a rule, in pronounced cases of maniacal or melancholic insanity with chorea.

The treatment of these cases of insanity demands

absolute rest in bed, relief of the distressing insomnia, tonics,—especially arsenic, a drug that has a more specific influence over chorea than any other,—and judicious feeding. If the condition of the circulation will admit of it, chloral is the best sleep-producing remedy, and when the circulation is too feeble to warrant its use alone, tincture of hyoscyamus may be combined with it. These cases are often benefited by the use of alcoholic stimulants; the anesthetic and force-giving qualities of the drug have been of service. Port wine, freely used, is of signal service. To secure the specific effect of arsenic it should be given in gradually increasing doses to its fullest physiologic effect; quinin, iron, and strychnin are also usually indicated.

Hypochondria is a symptom that may occur, and even be the apparently predominant feature of certain stages, in more than one well-defined species of insanity, so that its existence alone, or its prominence even, would not justify the recognition of a special hypochondriacal type or species in every case. It may be the dominating note in the delusions of the early stages of paresis, or the first phase of typical systematized paranoia. In fact, it is almost the rule in the latter, at least to a certain extent, though it is not always prominent as such; the introspection may take only a partial bend in that direction. It is not unknown in some forms of melancholia, especially in the aged, and it is often an early symptom of senile derangement.

Aside from these conditions, however, there are certain cases that can be best classed as specially hypochondriacal, and that do not develop into or occur in the course of other definite types of mental disorder, which can, therefore, be best classed as a type by themselves, a true hypochondriacal insanity. These are recognized as such by certain of the Italian school, while others, French, German, or American, have of late years been inclined to reject their specific rank.

The patients of this class are usually markedly degenerates.

**Hypochondriacal Insanity.**—The basis of this form of insanity is hypochondriasis—a true neurosis closely allied to hysteria and neurasthenia and close to insanity.

The essential characteristic of the neurosis is perversion of the organic sensations and persistent introspection. The various organs of the body often present an activity of which, in a state of health, we would be unconscious, but become to these unfortunate people painfully conscious, and their whole being is given to the contemplation of the sensation, and in conjuring up the most serious possible pathologic conditions. Thus, an abnormal sensation in the stomach becomes in their active imaginations a cancer; a discomfort in the lungs or heart becomes tuberculosis or valvular disease. Much of introspection circles around the sexual system, and perfectly normal seminal emissions become most serious and dangerous symptoms of disease. One patient could not eat because the stomach and intestine had been passed at stool; another could not be induced to make any exertion because the lungs had been coughed up years before. The diagnosis must be based on the history. The prognosis is unfavorable as to cure except in the few cases in which the hypochondriasis develops at the climacteric period. The prognosis as to life is good; the writer had one of these patients under observation for nearly twenty-three years, and then she died of a pneumonia following la grippe infection. This patient's perversion centered around her stomach and uterine system; no meal was eaten without an elaborate argument as to the food that should be taken, and after the decision was made serious apprehension arose as to beneficial effects that might follow. Every menstrual period was a serious time, although the function

was normal; there was the greatest apprehension of hemorrhage or obstruction. One doctor after another is consulted in such cases until finally one is found, it may be with quackish proclivities, who agrees with the patient and doses with drugs, thereby fixing and exaggerating the illusions and delusions.

This disposition to inquire into organic sensations and exaggerate them in introspection begins often early in life and grows with the growth of the individual, until finally the whole life-work is occupied in the painful contemplation of these visceral conditions. Hypochondriasis is much more common among men than women.

The symptoms of these become more and more exaggerated, until there can be no question of their insanity, and of their irresponsibility. They frequently lose their identity in whole or in part; personality is based in part upon cenesthesis, and the perversion of this leads to its disorder. This loss of personal identity may be complete; one of these patients imagined that his body was dead and that his ego had taken possession of another; finally the doctors were summoned and a trained nurse was usually in attendance.

The treatment in the ordinary cases consists simply in meeting symptoms as they arise and in making the patient comfortable in various ways by anodynes and by suggestions.

The cases that develop at the climacteric can often be benefited by attention to elimination, often so deficient at this period of life; and by such tonics and alteratives as will improve the general condition, by rest, massage, faradism, and later by judicious exercise and occupation.

## CHAPTER XVI.

### INSANITIES OF CRITICAL PERIODS.

By the insanities of critical periods we here understand those mental disorders directly connected with special periods of development or of the appearance and disappearance of important functions. Not all critical periods are associated with insanity, properly so called, that is characteristic in any way, or that calls for special notice here. Thus the second dentition, the passage from infancy to childhood, is a very important period of human development, but no author has yet attempted to include a special type of the insanities of this period. Nevertheless, it is at this special time many of the permanent degenerative stigmata begin to appear, and changes undoubtedly occur that lead later, in many cases, to profound physical and even mental defects. They are not, however, prominently noticeable at this particular age, and we therefore have no insanity of dentition even among the more elaborate etiologic classifications. The mental development at this period is undisturbed, and while brain changes certainly occur, they are not such as to affect the individual's mental health at the time.

It is different at the next great critical period, that of puberty and adolescence. Here the system has to accommodate itself to new functions and relations, and an entirely new range of mental activities is opened up. The imagination, the emotions, as well as the intellect, are stimulated and widened in their scope, the individual becomes, at it were, a new person, responsibilities are increased, and the intellect taxed as never before. In this stage of life, which really covers many

years, from the early awakenings of the sexual instinct to fully developed physical maturity, mental breakdown is a possibility and frequently also a realized fact. This is the chief critical period of human existence as far as the risk of mental derangement is concerned.

The climacteric, or change of life, when the reproductive activities cease, is usually also reckoned as a time when there is special liability to mental breakdown, and climacteric insanity in women has a place in nearly all our etiologic classifications of mental disease. This change is, however, in our opinion much more generally a physiologic one than is that of the instalment of this function, and should, therefore, be less likely to be attended with so serious a derangement as insanity. In perfectly normal individuals this change ought to occur without disturbance, but such are rare, and there is very frequently, in the readjustment of the physical functions, a disturbance of the mental operations that in extreme cases or in those predisposed extends to actual mental disease. We cannot here, however, as in the case of insanity of adolescence, point out special characteristics of the mental derangement of this period that are so constant and recognizable as to give us a well-defined species. Climacteric insanity has, therefore, only an etiologic reason for its distinction, and our notice of it will, therefore, be more general and brief than that of the other types to be described as appertaining to critical periods.

Lastly we have the period of the decline of life, with its attendant physical and mental decay and failure. Here we have mental disorders of various types, but so related by their common causation that we can often recognize them as characteristic. Senile insanity, or rather senile insanities, have, therefore, a recognized place in our classification.

## ADOLESCENT INSANITY (DEMENTIA PRAECOX, HEBEPHRENIA).

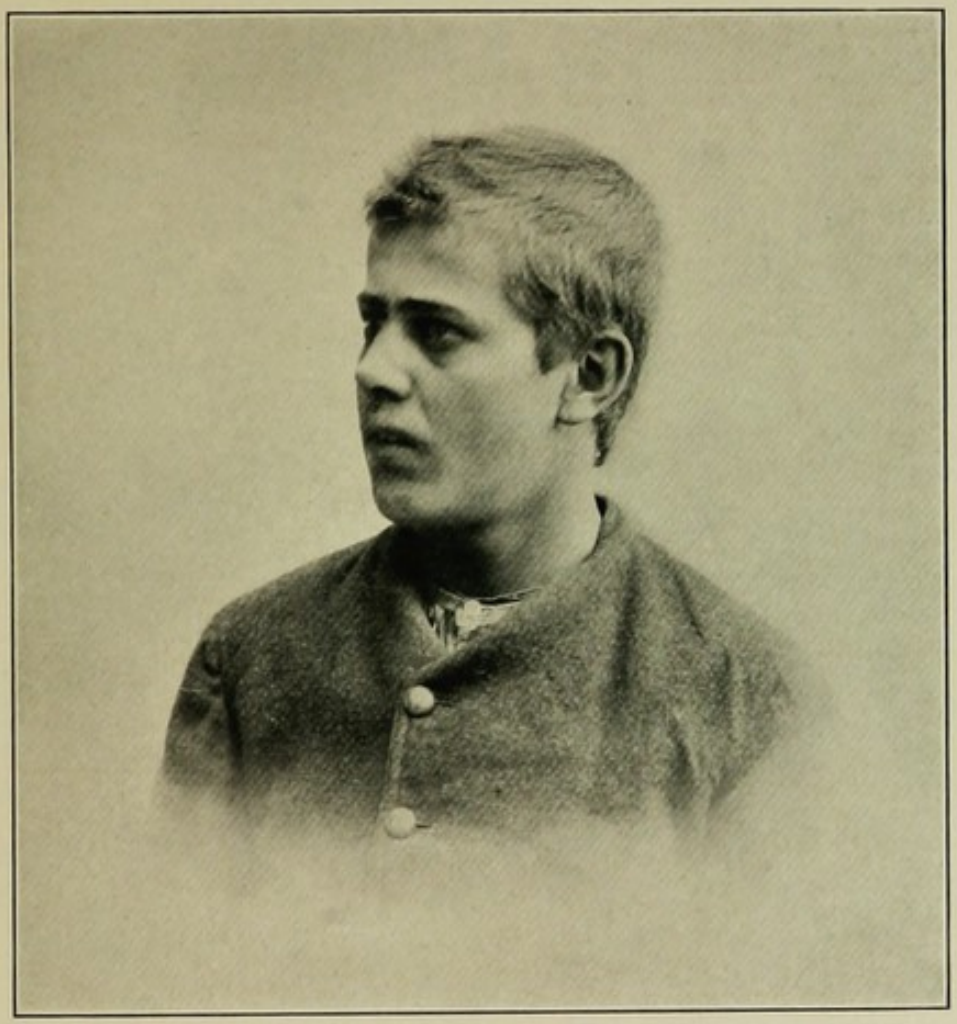
The term adolescent insanity, as here used, covers a rather wide range of mental disorders which have been described by authorities under various names,—pubescent insanity, dementia præcox, hebephrenia, catatonia, etc.,—which all seem to us best included under one general head. The term adolescent is chosen as probably the best one to designate its general character, though in this it is not exact, as its incidence in time covers the whole period from puberty to early adult life. It is preeminently the insanity of development, or rather of its disorders; its dominant characteristic is the tendency to dementia, and it is on this that its definition must be based. Adolescent insanity is a group of morbid mental symptoms occurring at about the period of sexual development, with, in general, a somewhat characteristic affective type, tending to ultimate dementia with a more or less rapid course. Including, as we do here, not only the ordinary type of pubescent insanity, but also catatonia and some forms marked by delusional symptoms, a more close and accurate definition is not practicable. It is a species better described than defined, but one that exists and is familiar to the practical alienist.

It should be said here that there are sometimes considered under this head a number of borderland conditions that occur more or less frequently during the period of sexual development, but which we exclude, believing them to belong more properly elsewhere. Besides a common sort of pseudo-melancholia, some forms of sexual hypochondria and neurasthenia are to be reckoned among these, though the former is sometimes hardly anything more than a worrying about sexual matters due to misinformation and terrifying statements of quacks. True adolescent insanity is

preeminently a degenerative psychosis; these forms are not at all essentially connected with any real degeneracy inherited or acquired. The same may be said of some conditions due directly or indirectly to sexual bad habits or vice; they only require the cessation of their cause to insure their disappearance. Insanity from masturbation may occur, but it is generally in predisposed individuals, and the vice only an exciting cause, when it is not, on the contrary, simply an effect or symptom of the disease.

The form of derangement elsewhere described under the name of original paranoia, in connection with other paranoias or delusional insanities, has some apparent claim to be considered here. Appearing, as it does, during this period of developmental stress, and being also a peculiarly degenerative type, it might seem that it could also be properly reckoned as belonging to this group of adolescent derangements. Its nature and cause, however, are different; while its subjects are markedly defective, bordering even in some respects on imbecility, the condition is not a rapidly progressive one, if progressive at all, and its symptoms are widely different from those of the forms here under consideration.

It should also be noted here that not every case of mental derangement occurring between puberty and the twenty-fifth or thirtieth year is one of adolescent insanity. While this period has its own types, well marked as we believe, it is also a stage of life in which any mental weakness is liable to reveal itself in other non-typical ways. Many cases of recurrent or periodic insanity make their first appearance about this time, hysteric derangements may also date from this period, and under conditions of special strain the confusional or delirious psychoses may occur. Congenital paretic dementia may and generally does have its earliest manifestations about or near the age of puberty, and, in



HEBEPHRENIA.

short, almost every clinical species of insanity except senile dementia may appear during these ten or fifteen years. They may even be colored to some extent by the age peculiarities, but they are not therefore necessarily adolescent insanity. The type with all its variations is a peculiar one, and may be considered as a species by itself. It may be considered as a special form of mental breakdown under the strain of sexual development at the period of puberty and shortly after, in subjects naturally defective and predisposed. Other forms of insanity occurring at this time under the same conditions of stress are accidental, but in the genuine adolescent insanity the failure is an almost inevitable consequence of the inability of the organism to meet the special demand. Kraepelin compares it with a tree that has sufficient soil for its growth to a certain point, and that when this is exhausted it fails. The comparison is not an inapt one, and assists in the comprehension of the actual state of the case in this disorder.

From what has been said above, it will be easily seen that the etiology of adolescent insanity is a comparatively simple matter. According to our conception of the disease, it is based on an originally defective nervous organization, and is particularly an insanity of the degenerates. This, of course, applies mainly to the fully developed form. The abortive and borderland conditions are, of course, not here included.

**Symptoms.**—The initial symptoms of adolescent insanity are widely different in different cases. There is most often, however, a preliminary depressed stage, sometimes hypochondriacal, the patient's consciousness being self-centered on imaginary conditions of disease. In others these are self-accusatory tendencies, as in melancholia, and in still others persecutory delusions; they feel themselves slighted or overlooked, and dwell moodily on their lack of proper

estimation and the slights or even insults they have received. Occasionally there are decided suicidal tendencies, and an attempt at self-destruction may be the first thing to call attention to their mental derangement. Sometimes these attempts are made in such a way as to show a foolish and apparently half-hearted intention; at others the attempts are really desperate and sometimes successful. The morbid acts may take other directions; assaults, arson, and even homicide may occur. Again, the patient often sleeps poorly, is variable in appetite, complains of headaches, suffers often from constipation, feels dull and mentally incapable, tires easily, and presents other signs of an apparent aggravated neurasthenia. Or there may be evidence of hallucinations, and active delusions; but very frequently the insane or violent acts, such as those mentioned, have no obvious reason, and the patient will give none. In some there is an obtrusive religiosity in the early beginnings of the disorder; the talk is all in that direction, and much time is spent in reading the Bible or religious books. The most characteristic feature of this early, generally depressed stage is a sort of childishness or weakness of thought or action, a lack of good judgment corresponding to the age, and inability to correctly estimate conduct even in the matters where it would seem their general mental defect ought not to influence them. There is in some of these cases almost from the first a marked weakness involving judgment and acts before the intellect has yet become so noticeably clouded as to betray their condition in other ways. A foolish emotionalism is often an early symptom, laughing and crying without adequate cause or any cause at all. Again, in others an offensive and silly egotism is an early marked symptom, and, indeed, this is sooner or later prominent in a large proportion of the cases, especially in males. They swagger and show a tendency to assert themselves un-

duly, are impudent to their elders, and inclined to defy authority. Sometimes they show decided erotic tendencies, and masturbation is common. A silly theatrical manner is common and a very apparent unduly exalted notion of their personality. These symptoms may occur before marked exalted delusions are manifested, but these often accompany them, and are occasionally very prominent.

In other cases the attack may begin suddenly with maniacal excitement, which may continue for a considerable period or pass into a sort of stuporous or depressed condition. As a rule, the motor excitement is not so excessive as in acute mania, and it may have a close resemblance to the agitated form of confusional insanity. Sometimes there is a confusional dementia, so to speak, at the beginning, the most marked phenomenon being mental confusion, which is likely to soon change into one of the other forms mentioned above. In fact, there is almost no clinical symptom of incipient insanity that may not be reproduced in the early stages of adolescent insanity, but in all or nearly all cases there is sooner or later a pronounced tinge of dementia or mental weakness apparent.

As the case progresses the mental hebetude becomes more apparent, though there may be remissions, and even apparent return to the normal condition, to again relapse, and generally the second stage is worse than the first. There is sometimes in the advancing stages with the dementia a pronounced anesthesia, and the patients may mutilate themselves, pull out their hair, or do other similar acts, which are also observed in other forms of insanity, but in our experience rather frequently in this. Destructive acts are common, but, as a rule, these patients are not violent enough to be difficult to control. These acts are apt to be utterly irrational, as are often also their answers to questions, though these latter sometimes appear comically con-

ceived. A young woman of this type, who could not carry on, apparently, a connected conversation of half a dozen sentences, replied, in answer to the question how she reached the asylum, that she somehow got aboard the cars, and as she had on a plush skirt and the seat was also plush she was unable to rise; the supervisor or town officer who accompanied her, she said, was a stock-dealer, and therefore found it in his way of business to ship her. Another patient, a young man, one night pulled out nearly every hair on his head and body, and when asked why he did it, said he wanted a finger-nail shave. He could not say anything more, apparently, and that was the brightest remark he ever made in the advanced stage of the disease then existing.

A rather characteristic feature of many cases, before the mental weakness has become too pronounced, is that, with the varying emotional state, changing suddenly from depression to exhilaration, and vice versâ, these patients are often absolutely indifferent as to their condition, even when still capable of apparently appreciating it; however discontented they may appear to be as to immediate conditions, they do not worry about their future or the prospects of their disease. They live in the present absolutely, even when still retaining to a considerable extent their mental faculties and seemingly recognizing their surroundings and the fact of their being considered insane. This indifference is also noticeable later, when their minds become apparently more clouded; they often make no sign of caring for their comfort or whereabouts, though occasionally they act on an impulse to escape. We have known an apparently rather typical case of this form of insanity to make his escape unexpectedly by breaking out through an unguarded window; he was found drowned a day or two later, presumably a suicide. There is an uncertainty about this special type of

dementia as to acts, etc., that needs the special watchfulness of whoever has the care of its subjects.

Kraepelin has described a form of mental disorder that may possibly fall into this general class of adolescent dementias, consisting of a paranoiac delusional derangement of rapid course terminating in a demented confusional condition. It begins, according to his description, with restlessness, headache, emotional depression passing rapidly into a delusional state with ideas of persecution. Later, or early in some cases, there are megalomaniac ideas, often unsystematized, and the patient falls shortly into a condition of confusional dementia which becomes permanent. The morbid symptoms have in some cases a resemblance to those of paresis, but the course and outcome are different and the physical symptoms are wanting. From its special course and the fact that it often occurs at a more advanced age, he distinguishes this form from adolescent dementia, while recognizing its relations to it. We have not recognized this type as clearly shown in cases under our observation, but it is a very possible one, and is mentioned here as a form that may be met with in practice. It is certainly not frequent in the cases of insanity met with by us.

Another type which we here include under the general head of the insanity of adolescence is recognized by a large number of authorities, especially among the Germans, as a distinct species; it is the so-called catatonia, or insanity of muscular tension. This form begins usually with a melancholic stage, much as in the ordinary type already described, with preliminary neurasthenic symptoms, headache, insomnia, etc., passing gradually into a more or less acutely depressed state, with sometimes also hallucinations and delusions of a depressing or terrifying nature. With this, there may be occasional attacks of agitation, and even violence, or these may form almost the earliest phe-

nomena of the disease. Sooner or later, sometimes after maniacal symptoms have appeared or before, and oftener perhaps with a stupor or semi-stuporous condition, the special symptom of this type makes its appearance—a muscular stiffness or tension varying in degree in different cases from merely a slight rigidity, making the movements stiff and somewhat awkward, to a complete waxy flexibility in which the patient is like a jointed lay figure and the limbs retain any position in which they are placed till gradually by the force of gravity they become relaxed. This symptom is not altogether peculiar to this special type of insanity; it may rarely appear to some extent in stuporous and melancholic states, but in no other is it so constant and manifest as in this. It probably indicates a peculiar irritation of the motor cortical centers, and possibly also a morbid derangement of the inhibitory apparatus. Another symptom, likewise characteristic of this type, and also indicating special irritability of a cortical center, is that which has been named "verbigeration." The patient talks constantly or by spells without regard to sense, the sound alone guiding his remarks; a continuous flow of words, each one suggesting another, and more usually similar in sound or termination and without any connection otherwise whatever. In extreme cases one or two words or phrases or a few meaningless syllables will be repeated over and over again; in others, a short sentence may be consecutive, and be followed by another rhyming with it or only words of similar sound. In one or two instances where the speech-centers seemed less acutely involved, and less out of relation with the intellectual functions generally, we have observed a sort of rhyming mania in which rather striking rhymes were occasionally perpetrated.

These patients in their stuporous or depressed stages are often exceedingly untidy; they pay no attention whatever to the ordinary calls of nature, and have to

be attended to in every detail. Often, too, they show a complete paralysis of the appetite, and may even resist feeding, so that artificial feeding has to be resorted to. Another peculiarity is the liability in these cases to sudden spells of agitation or violence, which subside also as quickly. With these depressed or stuporous stages also certain body symptoms are noticed. The body-temperature may be subnormal; Kraepelin reports seeing it as low as 33.8° C. (92.8° F.). Their limbs are cold and there may be a passive edema of the lower extremities; the pulse is slow and weak, the skin harsh and dry, or there may be at times profuse sweat and ptyalism. The thyroid has been reported as enlarged, and the various symptoms of disordered nutrition are present, the general sensibility appears diminished, the skin reflexes weakened or abolished, while the deep ones may be increased.

There is no regular order in the stages, according to our experience, except that the first stage is apt to be one of depression and is followed by the phenomena of muscular tension and stupor, etc. Most commonly there is a melancholic stage, which is gradually transformed into a brief period of moderate maniacal excitement with beginning rigidity, which, as the stupor appears, becomes more pronounced. Later there may be another maniacal stage before the patient passes into the final dementia. In no well-marked case exhibiting the characteristic symptoms of muscular tension and verbigeration have we observed more than one complete cycle of these stages; in all there was either a passage directly into a lasting demented condition, or it followed a brief recurrence of mania or a partial remission and repetition, or the patient was carried off by some intercurrent disorder before it was fully developed. The following case illustrates this type in one of its types of manifestation:

B. J., aged twenty-one, American, of German parent-

age, druggist by profession, had his first attack of insanity at nineteen. His habits as to alcohol, etc., were good, but he was said to have been a masturbator for some time. His heredity was bad; his father was insane and his mother was hysterical. On admission to the hospital he appeared to be thin in flesh; his skin looked unhealthy and the perspiration was rather odorous; his movements were slow, but there was no visible motor defect. Temperature was normal, pulse 80, tongue clean, appetite and sleep normal, bowels rather irregular. There was no apparent local disease. His speech was slow, and when asked simple questions, he would say that he could not remember, or something of the kind, and appeared as if suspicious. His general expression was a sort of half stupid smiling one, but his actions and manners showed that he was suspicious as to the examination and of those around him. His history was that of a retiring, abnormally bashful youth, of good habits except masturbation, which he admitted. The first symptoms observed were marked depression, with suspicion of his friends and others, which had increased up to the time of his commitment, though the depression was less marked. He had never acted violently and was considered harmless; his habits were cleanly.

It was evident that his refusal to answer questions was partly at least due to his suspicious disposition, but there was also some slowness of intellection. His condition remained unchanged for nearly three months, when he began to appear brighter, and after a couple of days of incoherent noisy excitement he became more rational and natural in manner. For several weeks this improvement continued, and finally, except for a slight degree of hardly normal exhilaration, he seemed perfectly well, talked rationally, wrote letters to friends, etc.; then he passed rather suddenly into a stuporous depressed state, and his whole muscular system became

quite rigid, though not absolutely so. While this still lasted his mental condition passed into an agitated melancholia, in which he would throw himself down on his knees and cry and pray for considerable periods of time. This stage passed off in about a month into a violently maniacal condition in which he became very noisy and profane, was sleepless, and part of the time refused food, though forced feeding had not to be employed. His appetite then became very irregular for a short time, when he began to eat and sleep well, though still excited. The muscular rigidity still showed itself in a sort of stiffness and awkwardness of movement and the symptoms of verbigeration became quite marked; he repeated strings of German words of similar or suggested sound. There was absolutely no sense in his monologue, so far as it could be made out, and some of it was apparently only articulated sounds mixed with repetitions of German and occasionally English words. This condition lasted for many months, during which his bodily functions were carried on normally and he gained in weight and apparent physical health. It then graduated into a state of noisy dementia with occasional spells of destructiveness and untidy habits, and ended finally in a condition of nearly complete dementia without stupor, but never speaking coherently and only occasionally whistling or gesturing to indicate that he had any special mental activity whatever. No special change occurred after this as long as he was under observation, a period of five or six years.

Another patient, a female, whose insanity was first diagnosed as mild melancholia, developed strong nymphomaniac tendencies with the oncoming of a maniacal phase of her disorder, and from this passed into a condition of rigidity so pronounced that for nearly two years she could be put into almost any position and her limbs would retain the attitude given them until, after twenty minutes or more, they were brought down

by the force of gravitation. For the greater part of this time it was necessary to feed her mechanically. The verbigeration symptom in this case was replaced by a rhyming tendency, nearly everything she said being in rhyme and not altogether incoherent. When asked, for example, how she felt, she would say, "Misery and grief and me cannot get relief"; or how she was treated, she would answer, "Don't get enough to eat and they keeps me whipt and beat," or something else similarly expressed in rhyme. This symptom was marked for a short time only, just before passing into the rigid stuporous condition, which was more marked and lasting in this patient than in any other under our observation. It is not the rule, according to our observation, for the changes in this catatonic insanity to progress through more than one cycle, but in this case it appeared as if the patient was going to repeat her earlier experience. Before, however, she reached a second stage of stupor with rigidity she was carried off by an intercurrent disorder.

Remissions may occur in this form of derangement, but they are not so frequent as in some other forms of insanity, and have generally, in our cases, been rather short, usually of only a few days' duration at most. They occur, of course, only in the earlier stages of the disorder, and are absent when the dementia has become pronounced. An apparent cure may occur in the milder cases, but it seems doubtful whether any real recovery without decided mental defect ever occurs in this or in the other type of adolescent insanity after it has once become well established. The outlook for these patients as regards a perfect or permanent cure is generally bad.

It has been customary of late years for most writers on insanity to consider this form as a separate species, a well-defined clinical entity. There are some grounds for this, and we have hesitated somewhat in combining

it with ordinary adolescent insanity under the one head. If we consider all cases accompanied with muscular rigidity as belonging to this type, we will have to admit that it occurs at more advanced ages than would naturally be expected in a species especially attending the changes of youth and early maturity. The catatonic symptoms, however, may occur in other conditions differing rather widely from the general syndrome here described; it may occur in hysteric and epileptic states and other insanities, even in the organic dementia of old age. Moreover, the present type in nearly all the cases we have seen it had its beginnings, at least, within the period we have assigned as that of adolescent insanity. We have also observed cases that suggested transition forms between this and the typical adolescent forms, while we have ourselves never seen a well-marked case with the characteristic symptoms well marked of muscular tension and verbigeration in a person over thirty years of age. It appears to us that it can be better classed as a special form of adolescent insanity than as a species, hence its inclusion here. It may have special exciting causes; it is said to frequently originate after childbirth in young women, but the real cause in the vast majority is, we think, the failure of a degenerate brain to meet the strains attendant on development, especially sexual development in youth or early maturity.

The general course of all adolescent insanity as here understood is toward more or less complete mental breakdown. In some cases this is rapid and pronounced, in others it may appear slowly or be incomplete, but in nearly all, if not all, the deterioration occurs and is sufficiently manifest. In the catatonic cases there may be, as stated already, an apparent temporary cure, but its prognosis is also bad.

Clouston, whose conception of adolescent insanity is different from ours, including some of what we call the

borderland conditions, as well as the non-characteristic types occurring at this period, says that about 60% of cases recover. This is certainly not true of the disorder as here understood and considered.

The **diagnosis** of adolescent insanity is, as a rule, not difficult in typical cases. Where the insanity begins in early life with the well-marked character of a silly dementia pervading all the symptoms, and when the later course of the disorder is complete dementia, the case, if watched, is generally readily classified. So, too, in the typical catatonic case, with its changing phases of depression, excitement, stupor, with rigidity and the characteristic remissions and verbigeration, there is little difficulty. When first seen, however, before the case can be watched for any time, it is possible to confuse these patients with maniacs, simple melancholiacs, confusional delirious cases, and paranoiacs, according to the special symptoms manifested at the time. In most instances, with care, the differences can be detected; the maniacal and melancholic symptoms are less intense than in the typical forms; the delusions less systematized and fixed than in paranoia; and in all cases the rapid tendency to dementia is a valuable guide to the diagnosis. There will be probably most difficulty in distinguishing adolescent insanity from some forms of confusional insanity, but the course, causes, and history of the case will generally aid the observer to come to a correct conclusion. There is some resemblance often to certain types of imbecility, and that form we have described as original paranoia, which is a sort of imbecility, has some resemblance in the time of its appearance, but its evolution is altogether different, as also the mental syndrome, and the presence of marked degenerative stigmata is also a prominent distinguishing characteristic. The manner of onset of the insanity and the peculiar theatrical manner often exhibited by these patients are,

with the rapidly appearing dementia, and with the age at which it appears, sufficiently striking to make the diagnosis usually easy.

The **treatment** of adolescent insanity is generally symptomatic; there is no special or peculiar line of conduct indicated. The same attention must be given to nutrition, elimination, and the securing of rest and sleep as is required in other forms of insanity with corresponding symptoms. In most cases hospital treatment is advisable; at any rate, some change from home surroundings and associations. These patients are not safe to be at large, and should, therefore, be under supervision, which can best be given in a hospital for the insane. Generally, as has been already said, neither the excitement nor the depression is so intense as in acute mania or melancholia, but in some cases sedative drugs or measures may be required at times.

The prophylaxis of this type of insanity is naturally suggested as possible, but too much must not be expected in this direction. If it were always possible to foresee the outbreak, or even to diagnose it early in many cases, more could be done. When a liability to this disorder is suspected, careful training, avoidance of mental strain, overstudy, and abnormal sexual excitement, and a healthy normal life, largely out-of-doors, with due care as to the physical health in all particulars, probably give the best chances of avoiding it. We can, however, make only general recommendations, and have to remember that, as a rule, we have here the evidence of original imperfections of the higher nervous centers that handicap the individual even more than in many other forms of mental disease. It is essentially, in all its forms, a degenerative type of insanity.

## CLIMACTERIC INSANITY.

The insanity occurring at the climacteric period has not, in our experience, any specific characters; it is simply mental breakdown from inherent weakness occurring during or brought on by conditions of physical ill health at this time. Melancholia is perhaps the most frequent type, but other forms are not rare. In some cases the change from active sexual life to the comparative quiet of normal post-reproductive existence has a beneficial effect, and some very striking recoveries from insanity of long duration have been observed at, or rather after, the change of life. The mental stress of this period may also, though rarely, be observed in men as well as in women, and a recent author (Bombarda) has called especial attention to this fact. In neither sex, however, is the type of insanity uniform or characteristic.

## SENILE INSANITY.

A certain degree of decay of the mental powers is a natural consequence of advanced age. It may, therefore, within certain limits, be considered a normal change, these limits being marked by slight failures of memory or capacity for mental work. Exceptional individuals preserve their mental with their physical powers apparently intact or but very slightly deteriorated to an age long after the average man has shown signs of weakness or breakdown, and in a somewhat larger proportion of cases the intellect seems to preserve its powers in a more or less enfeebled physical organization. The average man, however, begins to feel that he has passed his best days at sixty to sixty-five, and in a very great many instances even earlier. The memory is not what it was; the capacity for original work, the ambitions, are lost to some extent, and as age advances this is still more apparent to the individual and those



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about him. This is only the normal course of old age; it falls short of mental disease.

In many cases the changes are still more marked, the loss of mental power is very clearly evident, and we say the man is in his dotage or his second childhood. This is the milder type of senile dementia, that is hardly reckoned as mental disease. When it is still more pronounced, when the sufferer is incapable of self-guidance or care, and especially when he loses the ordinary natural inhibitions on conduct that are essential in society, dementia is recognized by all. A not uncommon form is that in which the patient can control himself and appear even sensible when talking of the remote past, but loses himself completely as regards more recent happenings or the events of the day, in which he may take an apparent interest, but forget as soon as they are past in time. The mental machine is still good for repeating its old tasks, but can do nothing with the present or the new. In many of these cases there is clear evidence of organic disease of the cerebrum; there may have been apoplectic attacks, temporary spells of aphasia, vertigos, or convulsions. There is frequently in these cases irritability with depression that may make the patient dangerous to himself or others. A typical melancholia may be an early symptom; indeed, Kraepelin considers this form of insanity characteristic of beginning senility. It is certainly a common type of the insanity of advanced age, but in our experience may also often occur in its typical form in the young, and cannot, therefore, be counted as exclusively a senile disorder. Another common, or not very infrequent, type is a sort of moral deterioration leading to offenses against the law and against good morals, or making the subject a nuisance to his family and friends by his outbreaks and transgressions and his unpleasant irritable disposition. In some cases the mental derangement of senility will

take the form of delusions of persecution, the enemies and persecutors being members, it may be, of the patient's own family. Cases have occurred where such delusions have led to disinheritance of children, and the apparent mental soundness on other points has defeated all attempts to break the will and defeat the injustice. Patients of this kind often become the victims of designing women, and make silly marriages, to their own and others' disadvantage. There is scarcely any foolish act that may not be committed by those suffering from some of the forms of incipient senile dementia; a noted statesman becomes the victim of a spiritualistic swindler; a distinguished scientific physician may indorse arrant quackery. The chief characteristic features are a weakened judgment, a lack of control of impulses, a childish caprice, and often a marked ethical insensibility.

We may, when considering the more advanced forms of senile mental derangement, make a distinction between those associated with well-marked organic brain changes and those where these are not manifest. In the former class we can put those cases where hemiplegic or apoplectic attacks, paretic conditions, speech defects, pupillary symptoms, such as irregularity, disordered reflexes, etc., exist. These are common, and occasionally give the case a strong suggestion of paresis, which is aided by the extravagances and delusions with the progressive mental enfeeblement. It is probable that the majority of the cases of paresis reported at over fifty years of age, if not indeed all of them, can be better referred to this form of organic senile dementia. Indeed, we believe that all such cases over sixty are of this class. In the more advanced stages the dementia very commonly becomes complete, and the patient lives a merely vegetative existence, requiring close personal attention for even the ordinary organic functions to be properly carried on.

When the insanity is not connected with gross brain disease other than those conditions usual in old age, it may take on any form—melancholia, mania, delusional paranoia, acute delirium, circular insanity, or gradually advancing dementia. The melancholic cases are most common, and there is less of a special character to the derangement than is common in the other forms. In many cases the melancholia is typical, with precardial distress, self-accusation, tendency to suicide, and all the other characteristic symptoms. These cases are, however, in our experience mostly in early senility, before the brain changes have become so advanced; that is, in the sixth and the early part of the seventh decades. In more advanced years the depression is not so serious, in its manifestations at least, and the suicidal tendencies and agitations are less prominent. Nevertheless, the suicidal impulse may be strong in these cases when the depression appears to be only moderate, and all due caution is needful, as the unexpected may happen at any time. We have known a patient of this sort, whose mental condition was hardly one to suggest such a tendency, to strangle himself with a torn strip of cloth in his bed, a performance that must have required unusual determination and a very persistent impulse.

Maniacal conditions are much less frequent, and vary in type from mild hypomania to a rather high grade of excitement, though the extreme forms are seldom seen. In these conditions there are not infrequently delusions of a puerile or childish nature. We have seen a patient of nearly seventy years of age, physically well preserved, and active, in a state of mild maniacal excitement full of notions about fighting Indians and trapping and mining in the West, like a boy under the influence of too much dime-novel reading. He staked out mining claims over all parts of the asylum farm where he could go on his walks, and was a constant

source of anxiety lest he should secure something dangerous in his outings, not so much with the idea of using it against his attendants as against the savages he was preparing to meet when he made his escape. He had to be constantly searched whenever he returned from an outing, and on several occasions made his escape and secured corn knives or something similar from barns and outhouses. He was by no means really dangerous, but on one or two of these occasions he succeeded, to his own satisfaction, in terrifying persons he met, and once had a whole village in an uproar. He was usually easily recaptured, but his accounts of asylum treatment, when on his escapades, were enough to set up a legislative investigation, and it was not considered desirable to have him at large. As he was very evasive and cunning in his way, he several times made his escape, but was always heard from immediately, as his performances quickly revealed where he belonged. In this case, as in some other similar ones, the patient made an approximate recovery, and was not heard from again as insane, at least, not for a number of years.

In other cases we may have a senile confusional delirium, a paranoia, or circular insanity; they are simply ordinary instances of these types of insanity occurring in and colored by senility. The natural senile changes in the brain may favor any kind of mental failure in predisposed individuals or under conditions of special stress, as at other periods of life; and when they occur, put on them the special stamp of senile insanity, which is liable to be, as in the case above mentioned, a sort of childish weakness; the memories and tendencies of the earlier life still remaining and predominating over the more recent cerebral acquisitions. Thus we see in some of these cases curious tendencies to collecting rubbish, trifling objects, etc., returning, as it were, to the tastes and fancies of

childhood. The prevailing note in the senile insanities is the non-realization of the present and the renewal or survival only of the past.

It is difficult to draw any arbitrary or exact line between the functional insanities, so to speak, of the aged and those connected with gross brain disease. It is only the very evidently casual affections, influenced by heredity acting with the mild general cerebral impairment of senility, that can be properly said to be unconnected with the graver changes. In all cases, of course, there must be senile impairment, but in these it would not have revealed itself in insanity but for these other causes. In the greater proportion the mental disorder is itself the direct cause, and the effect may show itself in the various ways above described. In addition, one or two other forms may be here mentioned, such as the hallucinatory delirium that sometimes appears in this condition, which resembles acute delirium, and may be accompanied with febrile temperature and other signs of maniacal inflammation. It is not always fatal, and is one of the features that counterfeit paresis in some of its manifestations.

The pathology of senile insanity, in a general way, may be said to be that of arterial degeneration involving the nutrition of the brain. "A man is as old as his arteries" is an approved medical saw, and, we may add, he is very often insane in proportion as his cerebral arteries are diseased. The pathologic findings correspond with this view of the nature of the condition; we have wasting of the brain, atrophy of the cells, thickening and loss of elasticity of the arterial coats, with frequent miliary aneurysms, and minute hemorrhagic effusion. In the advanced cases of these conditions we may find thickening of the membranes, evidences of old inflammations, etc., and in the gross organic cases we have hemorrhagic foci and patches of softening, and sometimes organized clots and false mem-

branes. There is hardly any form of gross cerebral disease that may not reveal its old lesions in the autopsies of senile insanity. It is often the case that the outbreak or appearance of mental disease in the aged is seen as the apparent immediate result of some injury or disease that may itself leave its special traces or modify those otherwise produced.

The diagnosis of senile insanity is usually easy; the fact is that almost any appearance of mental disorder at an advanced age is apt to be so far colored by the senility as to be deserving of the name. It is only in those cases that occur comparatively early, in the sixth and seventh decades of life, that we are likely to question their proper reference. It must not be forgotten, also, that there may occur insanities in special cases of unusually vigorous individuals at a very advanced age that have nothing about them absolutely characteristic of the changes of old age. Thus, we have seen a circular insanity in an old man which was in nowise very dissimilar to that occurring in much younger persons; it was of the severer type, with decided mania in the exalted stage and nearly complete stupor in the depressed phase. These cases are, however, comparatively rare, and even they are not usually so free from the tinge of senility as was the one above mentioned. Melancholia in the elderly is not specially dissimilar from that in the young, though it has not so often the symptoms of extreme agitation. It is in those cases that resemble paresis that a mistake is, we think, most often made, and reference has already been made to the probable false diagnosis in many of these cases.

It is not possible to always draw the line between the ordinary symptoms of senile mental weakness that cannot properly be ranked as insanity and those of actual mental disease. This should be kept in mind; a man may be weak in memory, especially of recent events, and may, in fact, be an example of the sudden

or incipient form of dementia of old age in some respects, but still be, in the main, of "sound and devising mind," as the legal language expresses it. This is a matter of importance in will cases, and the nature of the will itself, in such instances, is often strong evidence. If it shows unreasonable likes and dislikes, or signs of delusions, it may be conclusive if sole evidence of disordered intellection. The moral defects noted in other cases, the immoralities, obscenities, financial extravagances, etc., may be the only symptoms that make us certain that the case passes over the border of sanity into that of unquestionable mental disease. The patient in this, as in other cases, must be compared with his normal self, and while allowance is made for the general and usual changes of senility,—the changes in memory, in the emotional capacity and control,—any marked differences in character will go far to place it on the wrong side. It must be remembered, also, that senile delusional insanity, like that of earlier life, may develop without very observable general or special failure in other directions.

The treatment of senile insanity may be given briefly. It is mainly symptomatic. In cases of general mental failure the most that can be done is to protect the patient from injury, watch his wanderings, and attend to his bodily necessities. In the acute psychoses of old age the treatment is practically the same as in the similar forms in younger patients, due allowance being made for age and physical condition. The suicidal tendency in melancholia is to be especially guarded against, the more as it may be less evident than in younger patients. Organic dementia, and cases showing very decided atheromatous conditions of the vessels, have, of course, their own special indications and cautions. The senile dement especially needs a kindly but firm control; he is commonly easily managed, but may be very trying to his caretaker.

## CHAPTER XVII.

### DEGENERATIVE INSANITIES.

We understand by the degenerative insanities that class of mental disorders associated with and caused by more or less permanent and incurable structural or functional defects, usually congenital and hereditary. We say more or less permanent and incurable because, while in the great majority of cases they are permanent and incurable, it is not intended to deny the possibility of changes taking place, under favorable conditions, such as to correct or compensate for the defects. The predisposition to insanity through general weakness or lack of resistance of the organism is, of course, not included here; the difference between the two conditions is that in the one we may have a weak or weakened brain, while in the other the condition is that of original lack of balance in some respect or other, revealing itself either in more or less serious and permanent mental aberration, or in erratic breakdowns, occurring from time to time. The one is like a machine of general inferior workmanship or worn out; the other, like one that is badly constructed in some special part, affecting its working either generally or at times. It does not necessarily follow that these insanities are always incurable, though that is their tendency; there is a possibility that the defects may be in some way compensated for and the mental workings become normal. In many instances, indeed, the degenerative defects may be only slight and the patient never entirely overstep the borderland of sanity; he may be only regarded as eccentric or a crank, or subject to moods and spells. More will be said in regard to this point when discussing some of the special

types of this general class of mental disorders. In a large proportion of cases, however, the condition is manifested in recurrent or cyclic attacks of mental disorder occurring sometimes after shocks, mental strain, etc., but also very frequently without obvious cause. In other cases the insanity takes on the form of systematized delusions, and in still others the condition graduates into imbecility through such types as the *originäre verrücktheit* of certain German writers, moral insanity, reasoning mania, etc. A characteristic of this group of insanities is the very general bad neuropathic or insane heredity; they are the most hereditary of all insanities.

There has, as has been already stated, been a general confusion of some of these types with confusional insanity, or perhaps we should express it that confusional insanity has been confounded in some of its types with the commoner simpler type of degenerative recurrent insanity. It is the merit of Kraepelin that he first clearly pointed out the distinction, and recognized the fact that acute mania in its typical restricted sense is properly a degenerative type. We do not here follow him in every particular, but must recognize this fact, which is of importance in estimating the future course and probabilities. A prominent feature of what we may call the lighter forms of the degenerative insanities is their tendency to recurrence, and this may be regular and periodic or irregular, the latter being the character of what, for convenience' sake, we here take and consider as the least markedly degenerative, recurrent maniacal insanity, or simple mania. There is an occasionally recurrent form of melancholia also, but that, when not associated with the maniacal type, is generally, in our opinion, a form due to general neurasthenic weakness in this direction, and not a true degenerative type. An individual may be neurasthenic and naturally below tone, as, in fact, many are, and true melan-

cholia of this character forms an occasional episode in his existence, under conditions of stress and overwork. If there is a true degenerative periodic or recurrent melancholia, it is most probably a modified or disguised form of circular insanity with special predominance of the depressive phase. Cases of this kind occur in which only close observation can distinguish the phase of excitement, which nevertheless exists, though not to the extent to render mental disorder very noticeable except to a skilled observer.

The neurasthenic phobias and obsessions have been recognized by some writers as pertaining to the degenerative insanities, but this is by no means the universal rule; they may occur in individuals who are, to no marked extent at least, degenerates. They are, it is true, most frequently associated with a defective or neuropathic constitution, in which the normal inhibitions to their manifestations or continuance are lacking, but this is not by any means invariably the case. They are best to be considered as a class by themselves, so far as they fall, by their intensity and degree of development, into the actual insanities.

Hysteria is also to be regarded as a degenerative psychosis in many of its aspects, but it is only in its extreme manifestations that it falls within the definition of insanity. Hysteric insanity has been noticed in connection with certain other special neuropathic types, already mentioned in a special group of this general division of mental disorders.

## RECURRENT DEGENERATIVE MANIA.

While Kraepelin, whom we follow in placing mania in this general class, has given it the name of periodic insanity, we prefer to use the term recurrent, as better indicating its manner of reappearance. "Periodic" implies a regular return at stated periods;

"recurrent" only indicates its tendency to recur, and the general permanent tendency to attacks.

**Etiology.**—The most striking general etiologic fact is the hereditary character of the disorder. When the family history is fully ascertained, it is almost universally found that there has been in the ancestry some degenerative taint, often a direct heredity of insanity or eccentricity verging on mental disorder. In a few cases this cannot be found, but there is frequently, then, some manifestation in the collateral lines that shows the defective nervous organization. In some instances it is possible that a marriage may occur between persons of normal constitution, but so unsuited to each other as to cause serious brain or nerve defect in their offspring, who are, as a result, subjects of this or some other degenerative type of mental disease, without any history of direct ancestral heredity. Such cases are unusual, however, and, as a rule, the record indicates the source of the taint. The immediate exciting cause of an attack of mania may be any one of the ordinary direct causes of insanity—moral or emotional stress, or shock, ill health, the puerperal condition, etc. It is easy to see how any one of these may give rise to the mental disorder in a thus constitutionally predisposed subject. It is a striking fact, however, that in many cases of mania no direct exciting cause whatever can be found for even the first attack. Subsequent attacks may or may not have provocation; not infrequently they occur without warning or apparent reason. The subjects frequently show an instability and excitability of character, but this is not always apparent, nor are there always visible marked degenerative stigmata. The attacks have been said by some to occur in the spring months more than at other times in the year, but such generalizations from partial statistics are not very valuable. The fact that mania has been generally confused up to the present

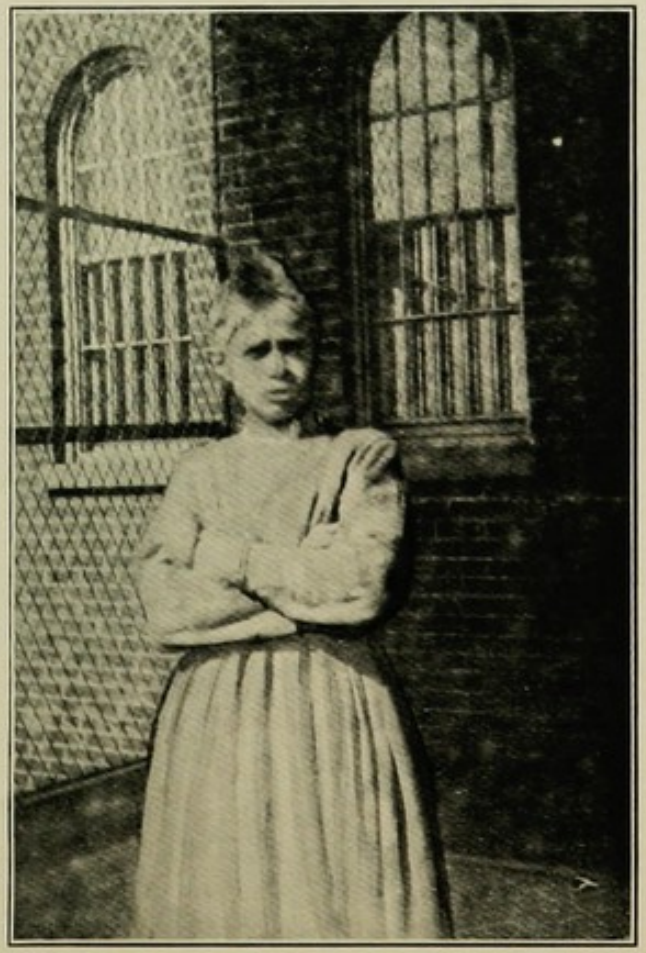
with the excited types of confusional insanity makes them practically valueless.

**Symptoms.**—The earliest symptoms of simple acute mania vary much in different cases. Often, perhaps generally, there is a stage of restlessness or mild depression preceding the attack for from one to several days, or it may be weeks, but this is often wanting or impossible to be detected. Its occurrence is an indication of the general cyclic tendency of these degenerative insanities. When this is absent, as appears to be sometimes the case, the onset is often immediate and abrupt; the patient passes more or less rapidly into the state of full-fledged motor and mental excitement. In most cases, however, there has probably been some derangement of the bodily functions, not always very obvious, such as insomnia, more or less pronounced, or at least some disturbance of sleep, and constipation is evidently a very common antecedent. Sometimes there is a period in which oscillations of quiet and mild excitement succeed each other, gradually developing into the complete attack. In the most typical form the onset of the symptoms is exceedingly rapid; it may be, as it were, instantaneous; in one case known to the writers the first observable symptoms were the patient's throwing her effects and money out of a car window as she was traveling, and in many instances the outbreak is apparently as sudden as this. We say apparently, for the initial symptoms of unlooked-for outbreaks may easily pass unperceived, but there are probably many cases, as is more often observed in recurrent attacks, where there are practically no premonitory signs whatever.

Whether gradual or sudden in its beginning, the mental condition soon becomes characteristic; the ideation is greatly intensified, the ideas tumbling over each other, so to speak, in their rapid evolution; the attention power lengthened so that the patient is alive



MANIA.



MANIA.

to every fleeting impression, but the possibility of its steady concentration absolutely lost, the result being ideorrhea without system and general mental exaltation and deranged excitation. With this mental there is also emotional excitement, the general type of which is lively and cheerful rather than otherwise, though there are sudden and rapid emotional changes; the patient may be maudlin one moment and hilarious the next. There is usually also a great exaltation of self-consciousness and a feeling of power, and all these reveal themselves externally by incessant action, a constant flow of words, and very often tendencies to destroy articles in their surroundings, their clothing, etc. This may be due in part to a feeling of restraint by these objects, but it is usually accounted for as a symptom of the general intense motor excitement and unregulated impulses. The patients laugh, dance, sing, or cry, often keeping up an intense disorderly bodily and mental activity for long periods without rest or showing any signs of exhaustion. The moral inhibitions are commonly lost, and the sexual impulses are likely to be exaggerated, so that refined and religious women may be profane and indecent in gesture and language. The perception unguided by judgment and the random ideation give rise to various illusions, which are a characteristic feature of this form of mental disorder. The patient is, as Regis says, acting a dream, each impression starts a new train of thought and mental illusions, and every new name or face calls up a train of associations which, with the sensory exaltation and hyperesthesia that exist, creates the wildest self-deceptions. Those about them are recognized as other persons than they really are, and even as animals or reptiles, etc. Sometimes these illusions are terrifying, often they are not, but in either way they form the starting-point for new mental and bodily activities. Actual hallucinations are rare in true mania, and when

they do occur it is only in very advanced conditions of the disease, or from some special cerebral complication; they are in no way characteristic of it, as they are of acute confusional insanity. In mania we have the cerebral mechanism running away with itself; in confusional insanity it is working badly from general or special breaking down from overstrain; and this comparison holds good throughout in their clinical manifestations.

The bodily symptoms of acute mania are well marked and prominent; the incessant tendency to action, the wild and often hilarious manner and expression, are noticeable at first sight. Sleep is almost invariably affected; the patients seem, at least, not to sleep at all, except under the influence of hypnotic measures or drugs, for days or weeks at a time; the appetite is capricious and frequently lost or exaggerated, the digestion disordered, the tongue often somewhat furred; constipation is likely to be the rule in the beginning, but later there may be some looseness of the bowels. While there is often a hyperesthesia of the special senses of sight and hearing, the general sensibility and that to pain or temperature are frequently lowered, so that the patient pays little attention to heat or cold, and is unmindful of bruises or injuries. In some extreme cases othematoma may occur, but this is very rare. The sense of muscular fatigue is especially lacking in the excitement, and the patient keeps up his activity under conditions that would be impossible for him in health, and for almost incredible periods of time. Maniacs are not abnormally strong; there is no actual increase of muscular power, for they are easily handled by careful but skilled attendants, yet they are able in their excitement to accomplish feats that seem impossible, and would be to the ordinary individual. A woman weighing not over ninety to a hundred pounds, for example, has been known, within

the space of a very few minutes, to tear the stops of a window and to loosen the iron guards from their screw fastenings, with her hands alone, a task that could hardly have been done in less time by a carpenter with his tools. Dr. Clouston tells of a woman who in one night tore up and unraveled her clothing, and in another twenty-four hours had constructed a complete and tasteful garment from the materials. Such or similar feats are not uncommon in the observation of asylum physicians, and show the motor hyperexcitation and lack of sense of fatigue of these cases. The pulse is, in the highest stages of excitement, naturally somewhat accelerated, but in the quieter moments it may be nearly normal; at no time in ordinary cases is it febrile. The bodily temperature is not usually much increased, and in excitement with destruction of clothing and exposure it is sometimes markedly subnormal. The bodily secretions are affected; the perspiration may be profuse and offensive, the urine scanty and more toxic than normal. There is liable to be an excess of uric acid sediment. In women the menses are generally suppressed, and in both sexes there is likely to be an irritation or excitation of the genesic sense, leading to acts of indecency and frequently to excessive masturbation.

In the condition of extreme excitement the consciousness is disordered to the extent that the patients afterward have often only a very indistinct recollection of their acts, but in many cases it is remarkable how much they can recall. The memory does not suffer so much in this as in confusional delirium or other forms of insanity with excitement.

**Hypomania.**—In the above we have endeavored to describe typical acute mania, but not all cases conform to this type. In some instances the disorder stops short of the extreme excited phase, though characteristic enough in other respects and readily recognizable

as of the same general species. In these cases there is the same intellectual hyperexcitation and motor activity, but to a lesser degree; the ideation is not so tumultuous and disorderly, nor are the activities so ill regulated. The patients in the least pronounced form of the disorder appear only as abnormally bright and quick-witted; their mental action is exalted, but not entirely beyond their control, and their manner and behavior indicate exaggerated self-consciousness, with a usually hilarious and mischievous tendency. The higher inhibitions are, as a rule, more or less in abeyance, the moral sense in particular, and while the patient's reasoning powers may appear greatly exalted, his memory enhanced, and his faculties for work increased, there is generally in these cases such lack of good judgment and of reliability that performance is far below promise as regards any useful outcome of the energies, and these are not infrequently badly misdirected in a moral point of view. These are cases that in their mildest type may not be taken for insane at all, but merely considered as especially brilliant individuals, even more intellectually endowed than ordinary mortals. There is generally, however, something inconsistent and foolish in their acts, and their self-feeling is so pronounced that their mental morbidity is sooner or later detected. Usually this is early manifest, and perhaps in the majority of cases isolation is resorted to. We say perhaps, because we have no statistics as to the frequency of this condition; it certainly comes more rarely under the observation of asylum physicians than the typical maniacal frenzy or acute mania properly so called. It is possible that the mildest forms occur more frequently than is supposed, and being transitory, they pass off without attracting attention other than to give the subject a reputation for being of unequal capacity and disposition, or subject to "odd spells." When it affects con-

duct decidedly, as is sometimes the case, it forms what has been called the insanity of acts; another type of this *mania sine delirio* that is hardly yet fully recognized. There is reason to think that a condition of this general type may sometimes become chronic, as it were; in one case known to the writer the individual subject to this condition found a means of sobering himself by stimulation, and became a habitual, almost constant, drinker, thus undoubtedly shortening his life materially. When to a certain extent under the influence of liquor, he was a sober rational individual; when without liquor, he was very noticeably flighty and erratic in speech, manner, and acts, though witty and brilliant. As he himself remarked, he was never sober unless he was drunk, and was always drunk when he was sober.

The involvement of the ethical impulse varies much in these cases, though, as stated, there is generally some deterioration. In some cases it is very pronounced, while the intellect is unimpaired, or its powers apparently enhanced. This constitutes one form of the so-called moral insanity, and a very typical one. In fact, a large proportion of the degenerative insanities can be included in, or are closely allied to, these milder types of recurrent degenerative mania.

Every gradation may exist between the acute mania first described and hypomania. The degree of excitement varies widely, as does also the self-control and the ethical and intellectual impairment. Some patients show a very marked degree of motor excitement; while still comparatively rational, they want to do the work of two, and succeed to a large extent, without apparently suffering undue fatigue. In these milder forms the bodily symptoms are usually very much less marked, the sleep is less often disturbed, the appetite is more regular, the patient may, in fact, be apparently in robust health, but there are apt to be some abnormalities of sensibility; there is less sense of

fatigue than normally, for example, and there may be other physical signs, such as some digestive disturbances, constipation, abnormal appetite, etc., and masturbation is frequently excessive.

The course and duration of acute mania and hypomania are, as a general rule, much the same; both have alike a tendency to recovery. Simple acute mania may last from a few days or weeks to several months or even longer, but the average duration is under six months. Attacks of hypomania are, in our experience, even shorter on the average, but occasionally we meet with cases of very long duration, in which the conditions seem to have become chronic without at least any rapid deterioration mentally. When ordinary acute mania passes into the chronic condition, which is indicated by a more moderate degree of excitement, there is generally a marked mental deterioration and some delusive tendencies, and an improvement in nutrition and in the bodily symptoms. The secondary condition is properly a terminal dementia, colored a little by the special degenerative defects that underlaid the original disorder. This, however, is the exceptional outcome in the original attack; the usual rule is the more or less gradual quieting down of the excitement, the more normal ideation, and return to the normal condition. In many cases of this form of insanity the return to reason is abrupt, the cure being apparently complete in a few hours or days. In rare instances the excitement may continue with remissions for over a year, and recovery from the attack, with possible defect, then occur. Commonly the earlier, single attacks of mania leave less of the mental impairment than might be expected from the intensity of the symptoms, but their frequent repetition is finally attended with more or less pronounced psychic deterioration. The recurrence may be long delayed; in fact, it is not an absolute certainty in any case, but it

is so much the rule that it may be confidently looked for to occur sooner or later. In most cases the natural physical exhaustion after an acute attack is the most apparent serious consequence left on the return to reason, but the physical recovery usually quickly follows mental improvement.

Death is exceptional as a result of acute mania, but it may occur from the exhaustion of the intense and continued bodily and mental strain alone. More commonly it is the result of some accidental intercurrent complication, most commonly in the lungs, but sometimes sepsis from injuries which these patients are liable to receive and which are sometimes difficult to properly treat. Infection is not always possible to avoid, and may have already occurred before the patient comes under any proper care.

The patient's recollections of the attack after recovery are apt to be more or less confused in the severer cases, at least for the periods of highest excitement, but there may be quite complete memory of the leading events of the larger part of the time. In the milder forms of hypomania there is, of course, no particular defect in this regard.

**Pathologic Anatomy.**—In the few instances that come to autopsy there are, as a rule, no characteristic macroscopic lesions found. Some hyperemia is commonly met with of the meninges of the brain, but not much more. In the older and long-continued cases and after many recurrences there may be more marked changes, corresponding to those of the terminal dementia, to which these cases are tending. In hypomania, so far as anything at all has been observed, it is only a lesser degree of hyperemia to that seen in acute mania.

**Diagnosis.**—The forms of mental disorder with which mania is especially liable to be confused are the agitated forms of acute confusional insanity, and this

has been already noticed, to some extent, in speaking of that species of mental disorder. The absence of hallucinations characteristic of confusional disorder, the occurrence of the attacks without such adequate cause as in the latter, the marked ideational excitement instead of the confusional delirium, which present quite a different picture, are the most striking points of difference noticeable in the greater number of cases. The physical condition of the patient is also to some extent a guide; the loss of the fatigue sense is more prominent; the motor excitement has also its special character; it is more purely motor, and not so dominated by hallucinations or delusions. In those cases where the onset or the disappearance is sudden, these also are characteristic. If one bears in mind the chief features of the two disorders, the diagnosis will not generally be very difficult to any acute observer.

There are certain phases of pubescent insanity, the excited stage of the so-called catatonic insanity in particular, that have some resemblance to this form, and may under certain conditions possibly lead to confusion. In the well-developed pubescent type, however, there is a pronounced element of dementia that is wanting in ordinary cases of mania, to say nothing of the special characteristics of verbigeration and muscular tonicity which may be manifest to some extent even in the excited stage.

The early stages of paretic dementia are another possible source of diagnostic error, more commonly simulating the milder than the severer types of mania. There may be a similar disordered ideation, and, still more, abnormalities in the affective sphere and moral lapses. There is commonly, however, in paresis an extravagance and a delusional tendency that are hardly characteristic of mania, and close observation will often reveal physical signs at this stage that betray the

nature of the disease. A little longer observation will make the diagnosis certain.

**Prognosis.**—The prognosis of mania as far as the earlier single attacks are concerned is generally good. Indeed, it is rarely otherwise under proper care. The recovery may be delayed for months, but in true acute mania it is to be confidently expected. Some attacks are over in a few days. As regards the prospect of future freedom from attacks, on the other hand, it is not good; hence the propriety of the term recurrent insanity that we have applied to it. According to Kraepelin, who has given the point very particular attention, in a thousand cases which he was able to trace in their future history, in only one was there no recurrence of the disorder. In all the others sooner or later other maniacal attacks or circular insanity appeared. Somewhat similar testimony has been given by others who have specially studied this phase of the question. It is true, as he says, the interval between the attacks may be long, as much as ten years, or more, but he finds it usually much less. We are, in his view, to estimate the single or rare attacks in this disorder at about the same pathologic value as the rare and isolated attacks of epilepsy in certain patients with an epileptic constitution; they are only very marked evidences of the continuously existing underlying constitutional degeneracy. We have not ourselves made statistic studies of the recurrences in true mania, but our experience has been such as to make it seem highly probable that Kraepelin, Van Taalman Kip, and others who have maintained that recurrences are nearly constant in this form, are not far from correct. That there may be instances where only a single attack occurs is probable enough; the same is true of epilepsy, that other striking manifestation of cortical instability. It is possible, moreover, that in some instances, probably rare, the tendency may be outgrown during the long time of

freedom, and a practically perfect cure occur. Such cases, nevertheless, do not affect the general correctness of the view that there is in this disorder a profound degenerative constitutional defect.

Recovery with mental deterioration or defect is less frequent in this form of insanity after first attacks than in primary confusional insanity. The disorder seems to leave less permanent damage than is often the case with the acquired insanities, and it is remarkable sometimes how little apparent intellectual defect is left after an attack. There is more apt to be some moral deterioration left, for a while at least, and this is sometimes rather striking. The patients often have a more or less complete recollection of their acts, and a certain conscious taint from the lost higher inhibitions is apt to remain. A clergyman, for example, who was seized during the excitement of a revival, became exceedingly profane and obscene during the height of his disorder, and after his recovery, while apparently normal in all other respects, appeared to have for a time no special religious sympathies or tendencies whatever. This was rather an extreme example, but in a lesser degree the same phenomenon is not infrequently observed.

After many repeated attacks general mental deterioration is the rule, and this is the more probable and rapid in appearance if the attacks are severe and the intervals short. It may also follow a single very severe or prolonged attack, and while recovery may be apparently complete, there may still remain for a time some impulsive tendencies that show a lack of perfect function in the higher mechanisms of the brain.

As said before, death is a comparatively rare termination of an acute maniacal attack. It may occur, however, from general exhaustion by the intense mental and motor activities in very severe cases, and more frequently from some complicating or intercurrent dis-

order. When we consider what in some exceptional cases these patients go through, even with the best of care and other judicious treatment, it is not remarkable that fatal exhaustion sometimes occurs, the more specially when it is remembered that in many cases in the past, and sometimes even now, the exposure and strain undergone are almost enough to apparently break down the strongest constitution.

Individuals certainly run some risk, and the chance of complicating disease from exposure or overstrain must always be kept in mind in the acute form. An important symptom of recovery is increase in the body-weight, occurring together with mental improvement. This has possibly been overestimated, but it is still a point worthy of close attention.

The **treatment** of acute mania is mainly along sedative lines; removal of all irritating or exciting factors, internal as well as external. Removal from home and accustomed surroundings is imperative, and the change to the atmosphere of a well-ordered asylum or hospital has in itself a most valuable therapeutic effect. One of the first essentials is to attend to the condition of the bowels, which in the majority of cases are constipated; to do away with any auto-intoxication that may exist; and also, we believe, to put an end to a possible reflex irritation that is mechanically set up by an overloaded colon. Soon after reception, it is a good practice to give a warm bath, prolonged for twenty minutes or over, followed by a thorough irrigation of the lower bowel, and then to give a full meal of milk and eggs beaten up together or of meat broth, and put the patient to bed. If this can be timed so as to have this occur near the regular hour for sleep, so much the better. The patient will often go at once to sleep and get a good night's rest. When the excitement is not too intense, this treatment can be continued, the patient being kept in bed under constant watch for

several days or a week till the excitement has decreased. If sleep does not come easily, recourse can be had to drugs; the bromid of sodium alone in 30- or 40-grain doses in water may suffice in some cases; in others sulfonal, 15–30 grains (1.0–2.0 gm.), or hydrobromate of hyoscin, $\frac{1}{100}$ grain (0.0006 gm.) or less hypodermically, may be required. The latter, however, is of less value as a hypnotic than as a sedative to the motor excitement, and its use may better be deferred till daytime if needed for this purpose. A combination of hypnotics is sometimes useful, given not together, but at timed intervals apart, so as to obtain the best effects. For example, sulfonal, whose action is slow, taken a little while before bedtime; and a dose of some more rapid hypnotic, like chloralamid, immediately on retiring. One of these puts the patient to sleep and the other keeps him from waking as soon as the effects of the last given dose have worn off. Chloral was formerly the standby as a hypnotic, either alone or in combination with other sleep-producing and sedative drugs, such as the bromids, hyoscyamus, conium, etc., but of late years its use has very largely decreased. If employed, it should be in very moderate doses, as the large doses formerly used were sometimes found dangerous, and it often happens that a careful and complete diagnosis of the heart condition, which is an important matter with the use of this drug, cannot always be satisfactorily made in a case of excited mania. In extreme cases it is very difficult to administer hypnotics by the mouth, and hyoscin hypodermically will have to be used. Any hypnotic that is used should be carefully watched as to its effects, and it will often be found that a prolonged warm bath, with perhaps cold applications to the head, is a far better sleep-producer than any drug.

Good nourishment is one of the most important features of the treatment of mania, and if the patient's

bodily strength can be kept up, the motor excitement is of comparatively secondary importance. The tendency of most attacks is toward recovery in time, and nature only needs assistance. These patients need attention; their bodily functions must be looked after; to be kept warm, which is not always an easy task; to be protected from exposure, and so far as possible to have every source of irritation and excitement removed. Sometimes it is well to let them work off some of their excitement by movement; certain cases appear to do best in this way. Mechanical restraint, so much used formerly, is, as a rule, irritating to these cases, and its employment should be avoided as far as possible. In the best asylums it is almost entirely dispensed with.

The milder forms of mania—hypomania, or mania *sine delirio*, reasoning mania, insanity of acts, and maniacal moral insanity—call for moral treatment more than medicine. Some legal restraint is advisable when it can be authorized, and a firm but just and kindly control is always best. These patients are conscious of their acts and of the legal irresponsibility to a very large extent, and are frequently hard to manage, but they respect a power which they know they will have to obey. The hospitals for the insane, with their facilities for classification by numerous wards, and their regulated mode of life and means of keeping facilities for mischief, etc., out of the way, are generally able to control these cases, though it may be difficult at times. According as the case approaches the type of acute mania the usual medicinal and other measures come in play, and in all cases attention to the condition of the bowels, the nutrition, and sleep is essential.

Before leaving the subject of mania it may be stated that there are many cases in which it occurs in a mixed form or superimposed upon some other type of insanity. It may and sometimes does complicate an already

existing paranoiac insanity and also certain forms of imbecility. Acute confusional insanity, the form that has in the past been most mistaken for it, may in a degenerate have a maniacal tinge, thus complicating the diagnosis. Ordinarily, however, the tumultuous ideation and illusions of the one are fairly well distinguishable from the confused hallucinatory delirium of the other, in spite of the common characters they may appear to possess.

## CIRCULAR INSANITY.

By circular insanity we understand a condition of degenerative mental disease consisting essentially of alternating attacks of mania and of depression, with or without an intervening state of normal mental functioning. The difference between circular insanity and mania is a clinical one, and also to some extent an arbitrary one. In mania we often have, and some authorities consider it the rule, a brief period of depression preceding the excitement, and in circular insanity one or the other phase may be abbreviated or unduly extended, so that gradation between the two is possible and is sometimes observed. It has been already remarked that some cases of apparent periodic melancholia are really cases of circular insanity, with a very short maniacal phase.

Circular insanity, while it has been considered a comparatively rare affection, is, if we include all its grades of severity, a rather common form of mental disorder. Mild cases are often met with that are not recognized by the laity, and which go about their ordinary avocations without exciting serious suspicion of the mental soundness. They are regarded as eccentric and subject to moods, but their general self-control and reasoning power save them from being counted popularly amongst the insane. It is only when the disease is so

well developed that the patient is no longer master of himself that it is generally recognized.

**Etiology.**—What has been said as to the etiology of mania applies equally well to the form under consideration. The most prominent and important element, and it is commonly said that it is present here even more often than in other insanities, is a homologous heredity. We cannot say that this has been notably the case in our observations; any one form of degenerative heredity has appeared to be as relatively frequent as any other. In many cases no apparent cause is observable, or the first attack may follow any one of the ordinary disturbing factors—shock, traumatism, involution, etc. It is often said to be more frequent in females than in males, a statement that is probably more true of the well-developed forms than of all cases taken together. The milder walking cases of circular insanity have, in our extra-asylum experience with the disease, occurred more frequently among males than in the other sex. The disorder is more especially liable to first appear in the third or fourth decade of life, but it may occur at any age. One of the most well-marked cases we have seen was in a man, eighty years of age, who had been insane in one way or another for many years. It may have existed in a milder form for a long time before it finally is recognized by the patient's friends as insanity, but not every subacute case ends this way.

**Symptomatology.**—It is generally difficult to say under which phase the first beginnings of circular insanity appear; often the patient has alternating spells of excitement and depression, gradually increasing in severity, for some time before the changes are recognized as actual mental disorder. In a very large proportion of cases the maniacal phase of circular insanity is of the milder hypomaniac type, while the depressed stage may be more marked, and the patient's case is diagnosed at first as melancholia.

There is no regular rule, however; there may be an aggravated maniacal condition that is first recognized as abnormal, but more commonly, we think, the melancholic phase is first prominent enough to betray the patient's mental aberration. In this depressed phase, which may appear suddenly or gradually, the patient is often a striking example of pure emotional depressive insanity. There are no delusions; there is full self-consciousness of his condition; he is simply though acutely depressed, without energy or ambition, and existence is painful, though these cases are comparatively seldom suicidal in their tendency. Sometimes they are querulous and willing to state their complaints, but this is not the rule. There are comparatively seldom the active self-accusatory delusions of ordinary melancholia, and if these do appear, it is generally at a well-advanced stage of the disease. There may be self-accusations and feelings of unworthiness, but they are less prominent or frequent than in ordinary melancholia. The more common tendency in the severer types of the melancholic stage of circular insanity is toward an apparent stuporous condition; the mental and physical depression may appear extreme; the patient seems in a raptus melancholicus, unmindful of all about him, neglecting to answer the calls of nature and soiling his garments, eating irregularly or refusing food, but allowing himself to be fed without resistance, and occasionally showing the catatonic muscular rigidity to a greater or less extent. Sleep is broken and scanty, and the general physical condition rapidly deteriorates. The most typical melancholia of circular insanity, however, in our opinion, is a milder type than the above; there is a moody silent type of depression which is not always acutely melancholic, a sort of general psychic inhibition with more or less pronounced emotional tinge. Sometimes the patients appear more moody and sulky than

melancholy, or simply torpid both mentally and physically. In some cases, in fact, where the excitement is intense in the maniacal phase, and the cycle is brief, the depressed phase sometimes appears to be only the mental and physical reaction, without any really marked emotional tinge whatever. The patient sits or lies quiet and indifferent to all around him; he may be moody and inactive, apparently dozing much of the time. When aroused, he will perhaps briefly answer questions; he goes to his meals and eats indifferently what is given him; he may need attention to make him take ordinary care of himself, to answer calls of nature, and keep out of harm generally. In other cases the patients look out for themselves fairly well, act as if they realized their surroundings, but are simply mentally and physically inactive, with just a tinge apparently of emotional depression. In the great majority of cases of circular insanity, in our observation, the depressed stage has a certain peculiar character, different from that of ordinary melancholia, and resembling more the semi-stuporous phase of confusional insanity, but usually without the confusional and hallucinatory delusive character of the latter. It is more a pure mental and physical inhibition with a more or less evident affective depression. This is not so pronounced as to be generally diagnostic in individual cases, but the general impression left by observation of a number of cases is of this nature.

In certain cases where the depressed stage is more prominent than the excited stage, the resemblance to ordinary melancholia is more apparent, but here also the apparent semi-stuporous condition is apt to predominate. Delusions of unworthiness may exist, and even hallucinations, but these latter are, in our experience, rare. A very marked predominance of the depressed stage and corresponding shortening of the other will indicate, or at least suggest, a neurasthenic

or exhaustion element in the case. The more closely the mental state approaches ordinary melancholia, the closer the resemblance also in the physical condition—the disturbances of sleep and digestion, the irregular or scanty appetite, the loss of weight, etc.; these occur in most of the depressed phases, but are less marked in the milder cases.

The excited or maniacal stage varies widely in its type. As already remarked, the hypomaniac form is probably the most common, but this varies much in its intensity, from an apparently mild intellectual exaltation to a most troublesome type of insanity of acts and moral insanity. The patient may indulge in the most outrageous extravagances of conduct, he may be apparently inspired by the very spirit of mischief and malice, and yet be so clear-headed as to be able to convince a judge or jury that he is perfectly sound mentally, and to avail himself of every possible legal technicality in securing or insuring his liberty. He may apparently fully appreciate his own acts and recognize their nature, but be to all appearances perfectly unprincipled as regards them, and have sufficient cunning and self-control to keep himself clear of legal consequences. A young woman, whose sole object during this stage seemed to be to keep the ward in trouble and effect as much destruction of property as was within her ability, used to say she was not insane, she was just "mean," and knew it as well as anybody. Another patient, a lawyer, who varied his amusements from threatening and attacking attendants and smashing windows to writing elaborate petitions for habeas corpus for other patients, was always ready to claim all his advantages from his legal disabilities in excusing his conduct when he cared to do so. These patients are very difficult to manage at times, their moral deterioration with their perfect mental self-consciousness seriously aggravating the situation. If at large,

they are liable to commit minor offenses, to disgrace themselves or their families, and their erotic tendencies are sometimes especially manifested by improprieties, and sometimes, with women, by seriously compromising behavior. Not every case, however, shows this pronounced moral defect; in some mild cases the excitement is worked off by legitimate occupation, as in the case of a business man whose depressed stage was mild and not altogether disabling, and who during the excited stage was a very successful and exceedingly active commercial traveler. In other cases the excited stage has many of the characters of the grand delirium of paresis, and this may lead to errors of diagnosis, the more probable since an irregular circular type of paresis is sometimes recognized. Delusions, while not the rule, sometimes are detectable, and may be fixed and prominent. The pronounced maniacal type of the disorder is, however, very distinctive, and readily separates it from ordinary paranoiac types. A patient in our care maintained that he was the Messiah; the delusion was ever-present, and dominated all his ideas, though his exalted religious notions did not prevent a very decided moral deterioration that coexisted with it. He was a considerable portion of the time in a rage at some person for not duly recognizing his Messiahship, and was not choice in his language in addressing him. In still other cases where the mania is yet more pronounced, the mental and bodily activity is incessant; these are generally short cycle cases. One patient of this kind whose maniacal phase lasted about ten days apparently never slept during this period; was continuously engaged in endeavoring to destroy his clothing and articles about him during the day, and would spend his nights making a sort of flour out of the straw of his mattress. He was only manageable when his activities could be diverted in some such comparatively harmless way; a tick full of straw would

thus be reduced every night by him into a pile of fine chaff. Still another case would talk incessantly for several weeks at a time, day and night, never caught napping, though it would seem impossible he could go so long without sleep. In both these extreme cases the depressed stage was a sort of semi-stupor, and the emotional symptoms were not very noticeable.

The change from one phase to another in some instances is very abrupt; it may occur during sleep, the patient going to bed after a day of lively maniacal excitement, and waking the next morning more or less intensely depressed. It more rarely occurs suddenly in the daytime. The separate phases may be of varying duration—days, months, or years; but the average is probably considerably under a year. The longer the attack, the more gradual the changes and the more probable the occurrence of an intermission or lucid interval between. This, however, is by no means constant, even in the long attacks, and in many instances each stage passes gradually into the other without any real period of apparent mental soundness between them. In still others the depressed may pass directly into the maniacal phase, or vice versâ; then follow lucid intervals, and this cycle repeats itself over and over again. The duration of the normal period is also very variable; frequently it is very short; it is only seldom that it is long, but this occasionally happens, and it may even continue for such a period as to constitute an apparent cure. Indeed, we have seen cases go through two or more cycles, and then appear to recover and remain well for long periods of time; in fact, as long as they have been under observation. Whether a complete cure ever occurs is exceedingly doubtful; at least, understanding by such a complete transformation to the normal mental condition without special liability to a recurrence of the disorder. In this regard circular insanity and mania are alike; both are of

the same type of degenerative psychoses. The two disorders are less different than they at first appear, and merge into each other to a very marked extent. This distinction between them is, as already said, purely a clinical one, and of the two, circular insanity is probably the most pronouncedly and typically degenerative in character.

While mental deterioration is not rapid in circular insanity, as a rule, the tendency is gradually toward terminal dementia. In patients who have long been the subjects of this form there is usually a very well-marked mental aberration, and the comparatively lucid intervals are often apt to be so short, if they occur at all, as to be hardly observable. Even in these cases, however, the degree of dementia is not so decided as in many other forms of insanity. Death may occur possibly from exhaustion in the severer attacks, but this is rare; usually it is from some complicating disorder, rarely from suicide.

The pathologic anatomy is practically unknown of the milder forms; when an autopsy is afforded in these, the complicating disorder is likely to be responsible for any brain changes observed. In the very excited stage we will probably find some degree of cerebral hyperemia; otherwise, no constant lesion can be predicated. In the cases of long duration the changes of chronic insanity or terminal dementia may be more or less apparent.

The **diagnosis** of circular insanity is easily made after observation of one or more of its cycles, but the special phases alone may be readily mistaken for some other forms of mental disorder. The maniacal phase may easily be taken for an attack of simple acute mania, which is practically the same thing while it lasts. It may also in its hypomaniac type be confused with the early stage of paresis, but in the latter the hypomania is less pure and mental weakness and exalted delusions

are apt to be pronounced. It is only in those cases where a degenerative taint underlies the paretic dementia—or, stated better, the latter is superposed upon a degenerate constitution and the toxic and vesanic forms are combined, as in the so-called circular type of paresis—that any confusion can long exist. The physical signs of paresis, on which we now so much depend for its diagnosis, are, of course, wanting in circular insanity, and this alone will sooner or later settle the question in ordinary cases. The insanity of pubescence often takes on a double form, as in the so-called catatonia, but the progress to dementia is rapid, and the characteristic symptoms of muscular tonicity, verbigeration, the absence of pure maniacal excitement, as in circular insanity, are distinguishing features that reveal the true nature of the case with any close, continued observation. The depressed stage is easily mistaken for melancholia, and often only close observation, or the occurrence of the cyclic changes, will enable one to make a correct diagnosis. The pure simple depression is rather characteristic, and to one who is accustomed to these cases, something may be sometimes determined by this and some other features, hard to define in the type of the melancholia. In those cases with self-accusatory tendencies or delusions of unworthiness the diagnosis in this stage is difficult and almost, or quite, impossible. In the stuporous or semi-stuporous cases there may be confusion with the similar-appearing forms of acute confusional insanity, but there are not the hallucinations or the confusion so typical of the latter. When these cannot be determined as existing, a mistake is excusable, till on the further development of the case its true nature is apparent. The purely apathetic cases, where the patient appears to be only reacting from the intense excitement of the acute stage, can only be confounded with certain forms of dementia, but here

the cycle is, as we have seen it, generally so brief that any continued misunderstanding of the case is practically impossible.

The treatment of circular insanity may be summed up in a few words. It is purely symptomatic; the case must be treated as each emergency indicates. Sedatives and hypnotics can be used to quiet motor restlessness and secure sleep, and moral treatment, in the way of a kindly but firm control, is often very important in the hypomaniac types. During the depressed stage the usual treatment for such conditions is indicated, and while these cases are probably, as a rule, less suicidal in their tendency than is the case in ordinary melancholia, they should be carefully watched and guarded. The condition of the bowels, and of digestion and nutrition generally, is to be looked after carefully in all stages, and forced feeding may be occasionally required in extreme cases. By attention to these matters we may materially modify the symptoms and possibly shorten the attacks and lengthen the lucid periods.

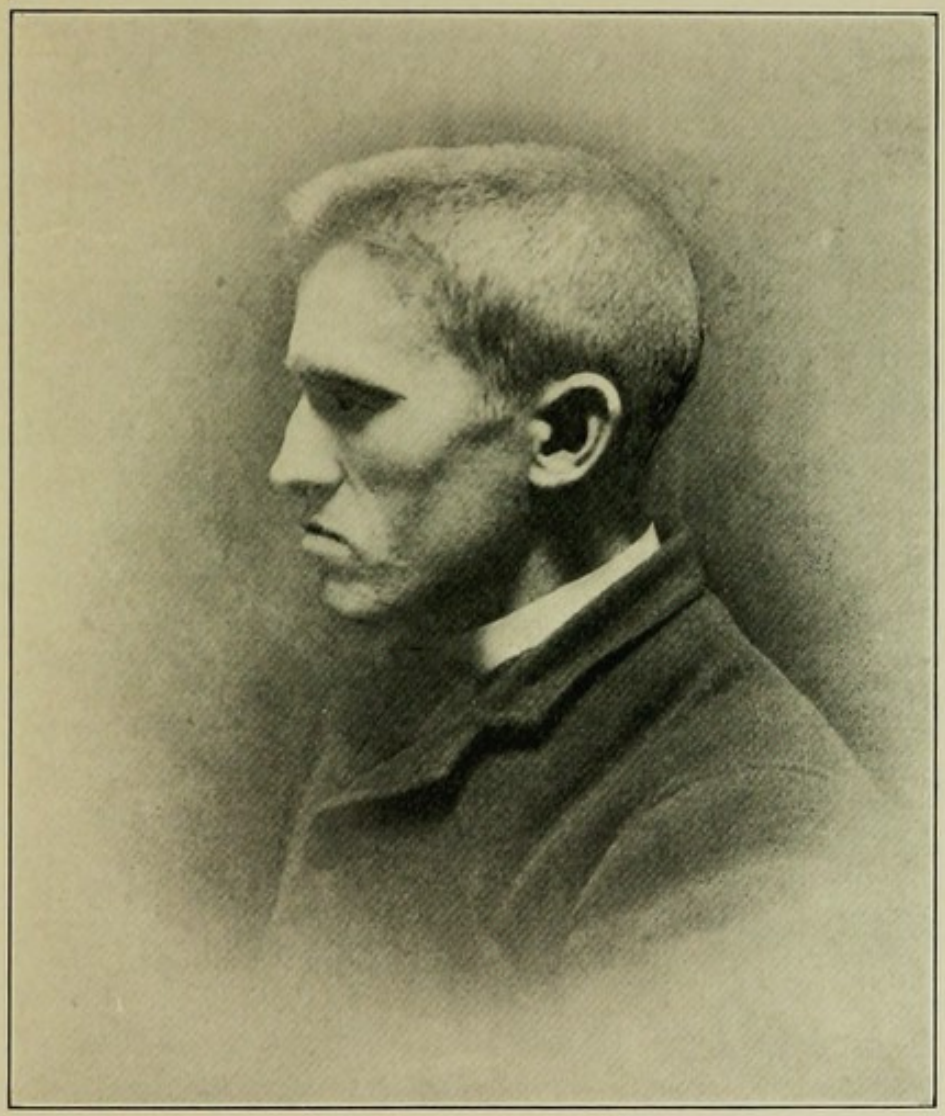
## CHAPTER XVIII.

### DEGENERATIVE INSANITIES (Continued).

#### PARANOIA.

The term paranoia as commonly used has rather a wide signification, covering, as it does, a wide range of conditions characterized especially by the existence of fixed or systematized delusive conceptions without any primary or conspicuous involvement of the emotional or affective faculties. Various authors have thus used it, including, as will be seen, mental conditions ranging from imbecility, on the one hand, to almost perfect, though in some directions perverted, intellection. Others have variously modified the concept and have divided it up in groups, according as it it accompanied with degenerative stigmata, or with or without hallucinations. Some extend the term to include the secondary delusional insanities already mentioned in connection with various acute primary mental derangements, and which will be noticed more fully when we come to speak more particularly of terminal conditions of mental disease. Some authors also recognize an acute form of paranoia which will be discussed later.

Recognizing all these facts and different views on the subject, it is evident that the definition of what we here propose to understand by the term must be fairly stated before describing the condition. We prefer a rather comprehensive definition to one more definite and limited, since the included morbid mental states graduate into each other, and therefore our conception of paranoia is a rather broad one. We recognize, however, certain well-marked types, widely differing in their extremes, yet so shading into each



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other that it does not appear best to consider them as absolutely distinct, or to give them distinctive titles, except as varieties of the same condition. We do not, moreover, include under this head the secondary delusional insanities, which have with it only the common symptoms of delusions and hallucinations. Acute paranoia is not, in our opinion, to be considered as a distinct form; it is probably a brief episodic derangement of a degenerate brain, or an aberrant form of toxic, pubescent, or other insanity. It is quite within the limits of possibility for the symptoms of delusional mental derangement to appear temporarily in a predisposed individual, and such cases are sometimes observed.

We here include under our general designation of paranoia a class of cases that resemble the type in some respects, and that are perhaps commonly included under this head, but that differ from it in the fact that the apparent delusions are voluntarily self-cultivated in an extremely degenerative organization, where judgment and intellection are especially weakened by natural defect, and which is more closely related to imbecility than to any other type of mental failure. This type will be considered under the head of original paranoia.

The definition here offered is as follows: Paranoia is *a chronic form of mental disorder, on a more or less pronounced degenerative basis, characterized especially by systematized delusive conceptions, without essential involvement of the affective nature, other than may be due to the character of the intellectual aberrations, and not ordinarily accompanied by any rapid or general failure of the reasoning faculties.* The presence or absence of hallucinations is not essential in this definition, and we do not recognize a special type or species in which these are frequent and characteristic. Hallucinations are common; in fact, they exist in the majority of cases,

but are not essential, and are therefore not included as a characteristic feature in the definition. It has the advantage of being comprehensive enough to cover the rather wide range of variations of this type, which clinically show an infinite number of combinations of symptoms, all, however, having to a certain extent a terminal tendency to general mental failure, but this may not appear for many years after the full development of the disease. In some cases, indeed, it never appears to any extent; the patient is as clear mentally in many respects as he ever was, and his reasoning powers in fields unaffected by his delusions unimpaired. Mental failure as a terminal condition, while perhaps the rule, is not an essential feature of the disorder.

The causes of paranoia are seldom evident, though its onset may be attributed to any of the moral or physical causes that give rise to mental disorder. These are, however, only the apparent exciting causes; the real beginning of the disorder frequently antedates them; and in any case they only call out the latent predisposition. In nearly every case where a history can be obtained there will be found a morbid heredity either of insanity, intemperance, or some cerebral or nervous disease or degenerative defect. While we cannot say that paranoia may not develop in a person with apparently normal hereditary antecedents, it may be safely premised that it never appears in one who is himself perfectly normal, in the sense of being so free from all pronounced degenerative stigmata, mental or physical, as to be considered an average mentally and physically sound individual.

The beginnings of paranoia are seldom well defined. It is usual to say that there is a first stage of hypochondriacal depression, a "stage of subjective analysis," in which the patient is disquieted mentally; in which he studies his own morbid sensations, real or imaginary, attaches importance to the most trivial symptoms,

begins to analyze his own thoughts and feelings, and to worry over them in secret, and to apply to himself morbid interpretations of events occurring around him, and of the sayings of others. With this tendency he may have actual hallucinations, though these are less frequent than in the later stages of the disease. More commonly, however, we find that there has been observed in him certain peculiarities, dating back months and even years, which were little remarked at the time, but are recalled by friends and acquaintances after the fully developed mental derangement has become manifest. The subject goes about his ordinary business, and appears only odd in manner, or a little eccentric in certain ways, for a long time before any one really recognizes his condition, or suspects that anything whatever is seriously amiss. The hypochondriacal symptoms may be so slight or obscure as to be unrecognized as such, and the patient's self-control so well retained that whatever he may feel himself is only revealed accidentally in unguarded moments, and is then only noticeable to close observers or intimate friends. It is probable that there is in most cases a stage of this kind when the patient's ideas are centered on his feelings and suspicions, when he is troubling himself, privately it may be, about the significance of this or that event to himself, and worrying over morbid egotistic fancies till they affect his whole mental life, and often, to a noticeable extent, his conduct. This stage may be long or short, or intermittent, and it is only in the minority of instances that the conviction of his insanity forces itself upon his friends. In these cases the feeling of there being something wrong with himself or of being wronged is so pronounced that it very markedly affects the subject's conduct, or he may betray himself by unguarded acts or recognitions of hallucinations. These patients are not usually communicative as to their feelings, but occasionally one

will voluntarily state them, and seek relief or sympathy in confidences with friends. In such cases the mental tendency is more readily recognized.

In the great majority of cases it is only after the victim has given way to the belief that there is a reality in the hitherto half-formed delusions, and entered into that state which Regis calls the stage of "delusive explanation," that his insanity really becomes manifest to relatives and others about him. He now accepts his delusions as realities; feels himself an object of persecution, though as yet he may not definitely attribute it to any individuals. In probably the majority of cases there are hallucinations, generally of hearing, and these form the basis of a considerable portion of the delusions in this form of insanity. The reticence and self-control of the earlier stages having been lost, the patient complains, often bitterly, of the annoyances and persecutions he undergoes, but cannot sometimes definitely state what they are, or what is their source. With a considerable proportion of the less cultured, the mysterious influences of electricity and magnetism are credited with being used against them; telephones or wireless telegraphs are sending messages in their ears; others claim to be persecuted by detectives, to be the selected victims of the Kuklux Klan, or the Jesuits, or, more frequently than these, of the freemasons. It is very exceptional for the hallucinations or delusions to take on an agreeable form, even temporarily; in nearly every case they are painful or disagreeable. The voices the patient hears speak insults; the odors he smells or the tastes he experiences are likewise disagreeable or disgusting. All these lead him to dwell more and more upon his delusions, and sooner or later he locates his persecutors, and his delusions become systematized and fixed. It is in this stage that these patients are most dangerous, when their delusions of persecution have thus become established, and, their

identification of their persecutors confirmed in their minds, these become the objects of their hatred and are liable to become the victims of their homicidal attempts. The disease appears often to so affect the disposition or pervert the moral sense that these patients are ready to commit murder, but this is not always the case. When the delusions have thus become systematized and fixed upon certain persons, the paranoiac is in perhaps the majority of cases inclined to be reticent in regard to them; he knows his opinions are not shared by others, and is shy of conversing about them. They are none the less dangerous, however, and the very reticence itself adds to the peril of the situation, as he gives his victim no warning as to his feelings in regard to him, and is therefore more able to take him off his guard. When patients of this class are sent to an asylum, it is often very difficult to ascertain their delusions, and sometimes perilous to attempt it, as questioning only arouses and adds to their suspicions. They are often exceedingly cunning in concealing their delusions, with a fixed purpose to obtain revenge or satisfaction on their fancied enemies. But while in the great majority the evil passions seem to be predominant in this regard, occasionally we find a case where the moral sense is still acute and the self-control is exercised to prevent the carrying out of the acts prompted by the delusions and impulses. This implies, of course, an intellectual discrimination or judgment that the act is wrong, notwithstanding the fact they are so strongly impelled to commit it, and in these cases we find very often no evidence of hallucinations, and the individuals are more likely to pass as sane, showing only occasionally evidence of their aberration in their conduct or remarks. These cases are also to be considered dangerous in spite of their self-control. There is always an uncertainty how long it will last. More frequently still in this class

of cases the terror of the law, or fear of being committed as insane, is an aid to their conduct and keeps them from acting on their delusions. We have known a man subject to delusions of persecution, a well-marked paranoiac, who for years conducted extensive business transactions, and held public office, with apparently no other mental aberration than these, who repeatedly made personal assaults on those whom he imagined were his enemies, and had to be bound over to keep the peace. His case was noticeable in that he never seemed to think of using deadly weapons, and in that he was perfectly controllable by his respect for the law, and doubtless more or less also influenced by his own convictions of right. He was in other matters a good citizen and apparently a conscientious Christian. His violent acts appeared to be always impromptu, and excited by the sudden meeting with the persons involved in his delusions, which continued till his death, many years after their first appearance. In this case, as in many others, the disease never passed beyond this persecutory stage, but generally sooner or later, and often simultaneously with these ideas of persecution, delusions of grandeur or self-importance make their appearance. The patient imagines himself some important personage; even the Deity is often personated. These ideas of importance, in some cases at least, grow out of the persecutory ideas, the victim of the latter explaining them to himself on account of some special qualities and attributes belonging to him personally. As a rule, however, they are the index of a further advance toward general mental deterioration, which may not have been at all evident in the prior stage, and whether logically reasoned out or not at first, they soon take on an extravagance that indicates a decided loss of accurate reasoning faculty, and an increasing mental weakness. One evidence of this is the tendency these patients often show, even in the

early exalted delusions, to manufacture and use odd and meaningless new terms. The hallucinations also are generally more pronounced when they exist in this stage, and may involve other senses than those first affected. Notwithstanding these facts we quite often meet with cases where, notwithstanding the appearance of exalted delusions and the manufacture of neologisms in speech, the general mental deterioration is very far from being extensive. In one case under our observation the patient, who believed himself endowed with a special mysterious "Goddy" power, about which he wrote and talked, could have passed as perfectly sane to any casual observer. Still another, who had constantly the most absurd visual and other hallucinations, was perfectly sane on most points, aside from his delusions, and a very ingenious mechanic and inventor.

When this stage is fairly entered upon, the patient is generally less dangerous than when in the suspicious stage, but is still not to be considered as reliable or safe. As mental weakness progresses, the dangerous character becomes commonly less marked as the patient loses the persistence and the cunning that really make the persecutory stage so formidable a condition. Nevertheless, an old chronic partially demented paranoiac is by no means to be regarded as not a potential homicide. The difference is that here we have to do very often with an intensely egotistic pride that rebels at opposition, and very often also with vicious impromptu impulses, while in the other case we have more frequently an intense hatred directed at individuals, based on the delusions of injury or insult. In the one case there is vicious tendency on casual provocation; in the other, persistent vicious motive.

The patients, as their disease progresses and the megalomania becomes more pronounced, endeavor to act out their imagined part, finally becoming less

dangerous, as their grandiose delusions absorb their whole attention and as they become more demented. It is a curious feature of these cases that they are for the most part unable to perceive the inconsistency of their surroundings and of their own acts with their delusive conceptions. Thus, a patient who believes himself the Deity will shovel manure in a barnyard or do menial work in the asylum ward with no apparent conception that there is anything out of accord between his claims and his occupation. These are the patients that decorate themselves fantastically with tinsel, old buckles, brass buttons, and trinkets. In their later and more harmless stages they are sometimes met with outside of asylums, and a notable case of this sort was some years ago a sort of public character in one of our Western cities. He called himself the Emperor of California, and was a frequent object of interest to strangers as he paraded in old regimentals, and was generally a public and privileged character. As a rule, however, these patients are safest and best cared for in an asylum.

The typical case of paranoia or of systematized delusional insanity (Magnan, and others of the French school) is divided into three stages, as stated above—a preliminary hypochondria or period of subjective analysis, a stage of well-developed persecutory delusions, and a final stage of megalomania and terminal mental failure. Not every case, however, is typical, and the first stage especially is apt to be lacking in the history of the case. The advances of its symptoms are so insidious and obscure, and so marked by the patient's own reticence and apparent sanity, that they pass more often than not without contemporary observation. The duration of this stage is, therefore, hard to state; the data we have in regard to a very large proportion of cases are full of eccentricities or peculiarities hardly noticed when they occurred, but

which are utilized in a sort of retrospective diagnosis of the patient's case by his friends and associates after his mental aberration has become clearly manifest. There is reason to believe that in many cases this stage may be of short duration, and a comparatively negligible quantity in the whole period of the insanity.

The second stage of persecutory delusional insanity with hallucinations and fixed delusions is the characteristic one, and it may be, and often is, of long duration, sometimes lasting for many years, the patients never fairly passing into the terminal megalomania. In fact, the disorder may be arrested at any stage, but most often probably in the second. Many people who go through life as eccentric are very possibly only aborted cases of paranoia, in whom the progress was checked in the early stage, and modified into a sort of crankiness and eccentricity, not pronounced enough for them to be commonly reckoned insane, but sufficient to make them noticeable as odd in behavior and generally peculiar. They learn, moreover, to control their conduct and conceal their feelings to a very large extent, so that their real mental condition is not betrayed, except by some habits of writing or speech when they are off their guard.

As varieties of paranoia, generally in its third stage, we have the erotic, the mystic, the political, etc., according as the nature of the delusions partakes of one or the other of these characters. These are generally combined with the persecutory delusions, and also with each other; thus, we may have a religio-erotic persecutory type, or delusions of political importance may coexist with any or all of these. In one case under observation a telegraph operator had conceived the delusion that he had been greatly defrauded by the Western Union Telegraph Company; that if he had his rights he would be owner of large blocks of

stock, and he was full of threats and curses against the officials of the company, claiming to know the most disreputable facts in regard to them in their public and private lives. With this there existed a very marked erotic, or, rather, a satyric tendency, which led him to constantly write the most abominable compositions and address letters of the same character to women whom he happened to see or hear about. More often, however, the erotic tendency shows itself in a romantic or Quixotic way, and it is in still other cases accompanied with sexual hallucinations. While these patients are sometimes, and in some respects, less dangerous than those with purely persecutory delusions, the difference is largely in degree only, and they are not to be trusted. The fact that other matters than their wrongs and their persecutions engage their attention to a greater or less extent does not invariably, or as a rule, prevent them from dwelling on the latter and planning revenge.

Another well-marked variety, that has been made a special type, particularly by the Germans, is the litigious paranoia, the "Querulantenwahnsinn" of German authors. This form is usually first apparent in its subjects after some disappointment in a law-suit, which apparently gives the starting-point for the building of delusions in the unstable mental organization. There have been antecedents, but they have generally passed unnoticed; the degenerative stigmata are usually marked. The patients show their insanity in constant litigation. They are continually starting suits and demanding justice. Their egoism is excessive, and their moral sense so defective that they can never recognize the real relations of things, and they build up extensive delusions as to the rights they are deprived of and the wrongs they have suffered. The disorder may be considered as a special development of persecutory insanity, and is often associated with the

ordinary delusions of persecution to some extent. It may also present the erotic phase of paranoia, as in a well-marked case that was for years under the writer's observation. The patient was a Scotchman, of respectable family, and general business education, who came to this country many years ago with a considerable sum of money, which he invested in lands and mining properties. His full family history is unknown, but there was most probably a strong hereditary taint. For a number of years he carried on extensive operations with more or less success, but finally became involved, and his litigious insanity developed. He soon had a whole community involved in law-suits, started on trivial pretexts, and, of course, futile, but annoying, expensive, and, if not attended to, liable to give trouble to property-owners whose titles were attacked. The nuisance created became so great that he was in peril of his life from some of the more desperate of those whom he attacked in the courts, and finally he was shot, the ball, it is said, penetrating the skull and lodging in the brain. It had, however, little effect on him, except to make him worse, and finally his insanity was recognized, and he was committed to an asylum. While in the asylum there was no change in the condition, though he remained there some years. He was constantly boisterous and threatening, demanding his liberty, and seeking every means to escape. He claimed to have large sums due him which he was sure to get from law-suits pending. He was exceedingly abusive to the physicians, profane, and threatening violence, legal proceedings, etc., unless he was released. He wrote many letters, some to lawyers and others to women whose names he obtained, the latter generally proposing marriage, or representing himself as a capitalist desiring to marry, and wishing, therefore, to correspond with that in view. Some of these letters were very improper in sentiment and language; others,

which he addressed to the superintendent or to the physicians, were equally objectionable in other ways. A curious feature of some of these was the occasional use of the ordinary conventional formulas of politeness, entirely out of accord with the general contents of the missive; thus, for example, he would begin an outrageously abusive letter with "Dear Sir," and end it with "Your warm friend," or something equivalent. At times he was dangerous, but generally only when he thought he had the advantage. He once knocked an attendant senseless with a piece of iron tubing he picked up when on a walk with the other patients. His memory was perfect; his reasoning powers, aside from his delusions, seemed but little impaired, though there were some evidences of it in his writing, such as that mentioned above, and he was decidedly insane in manner and acts. There was no evidence of any hallucinations. He made his escape several times, but was generally arrested sooner or later for some misdemeanor or minor offense, and his insanity recognized. He was once or twice taken out of jails or bridewells and returned to the asylum. He was able to excite sympathy as an abused individual, and on one occasion he obtained a certificate of sanity from a prominent physician without examination, the giver afterward saying that he gave it "to bother the doctors." Finally he managed to get his freedom on a writ of habeas corpus, the judge calling a jury to share his responsibility, and followed a sort of vagabond life for a few months, showing rather more decided evidences of mental impairment, and was at last killed by a train while walking on a railroad track.

Cases of this kind are rather sharply distinguished from the typical forms of paranoia—that is, of systematized delusional insanity—by the absence of hallucinations, by the combination of erotic and persecutory delusions, and in most cases by the more marked

degenerative stigmata, both physical and mental. These patients have usually been peculiar; they have shown lack of mental equilibrium in some way or other all their lives, and their insanity is generally what we might call the mental physiologic consequence of their degenerative development. Their insanity is, moreover, not progressive, as in the typical paranoia, and is not in such sharp contrast to their previous life and behavior. The patient above described falls into the class of persecutory delusional insanity of the degenerates of Magnan, which he definitely separates from his chronic delusional insanity of systematic evolution, which comprises what we have designated as typical paranoia. Nevertheless, it seems to us that the distinction is one of degree rather than of kind, and that the two types graduate into each other. In this more degenerative form of insanity there is not the systematic progression, it is true, and the lack or rarity of sensory symptoms is usually a rather striking difference, but cases occur where they are present, and, as a rule, so far as we have been able to observe, there has been a certain progressive tendency toward further mental deterioration, slow, it is true, but perceptible. This special persecutory litigious type is less pronouncedly a degenerative one than that next to be described, but forms, as it were, a transition between it and the typical paranoia.

The variety of paranoia now to be described is so different in many respects from the typical progressive form that there is some question whether it should be included under the same species. As already said, Magnan distinguished the insanity of the degenerates as a well-marked and distinct type, and some, at least, of the Italian school also make a sharp distinction between the degenerative paranoias and the chronic systematized type. Under the former they include a number of conditions under various names—mattoid,

degenerative, episodic insanities, original paranoia, etc. Under this latter head falls the special type here to be described, which is the extreme degenerative one here included under paranoia. The term original paranoia was proposed by Sander to cover these and possibly some other conditions, and is used by some authors to include also the form just described, as well as mystic, erotic, and religious variations. These, we hold, however, develop especially in the third stage of the typical form, though less frequently, and the litigious variety may arise in the second stage, and often is in many respects a less essentially degenerate type than the variety here to be considered. All, as already stated, fall under the head of insanity of the degenerates, as distinguished by Magnan and his school.

Original paranoia as here understood is a congenital degenerative defect, marked by very prominent physical stigmata, and mental defects appearing often from early youth, and becoming more pronounced at the critical stages of development, with very notable mental deficiencies in certain directions that ally these cases closely to the imbeciles and semi-imbeciles. Unlike the typical paranoiac, the original paranoiac begins to show his defects early, long before there is any decidedly insane manifestation. Instead of a more or less masked hypochondriac stage, lasting seldom over a year or two, and beginning in an apparently normal individual, there is commonly in typical instances of this type a peculiarity dating back to childhood, and especially becoming manifest at puberty or shortly after. There is also in these cases, as in the others, a very decided neurotic or neuropathic heredity, and often a direct heredity of insanity or eccentricity in one form or another. These patients in childhood are often reckoned as precocious; they are apt to be quiet, sedate, and retiring in disposition, and to show little of the natural joyousness of childhood. If they do go

with other children in their plays, their peculiarities are soon noted, and gain them some nickname that indicates them. Sexual precocity is not uncommon, and masturbation is frequent. If they appear to show mental capacity, it is likely to be in certain directions, and is marked by self-consciousness and exaggeration. They are often moody and inclined to revery and fancies, and all these peculiarities are commonly intensified at or about puberty, and often their mental weakness shows itself in their incapacity for ordinary business and their shifting and uncertain dispositions. Their insanity is recognized generally only after some *outré* or criminal act, or when their peculiar delusive ideas begin to affect their behavior. They differ from the paranoiacs already described in the genesis of their insanity and delusions; in the former the mental disorder originates from an apparently normal condition; there is, it is true, a marked heredity and a degenerative basis, but these are not conspicuous till, after some cause, apparent or otherwise, the unstable brain gives way, and the insanity manifests itself. There is first an emotional depression, a period of morbid introspection followed by hallucinations in most cases, and the building up of delusions upon them. There is possible, as Hirsch has suggested, an eccentric projection of ideas corresponding to that from the sensory centers in the hallucinations, thus giving rise to the delusions. The condition is a pathologic one, though imposed upon a predisposed and more or less defective organization. In original paranoia, on the other hand, the mental disorder is in the natural order of the patient's development, the inevitable result of his defective organization. His is a teratologic rather than a pathologic insanity. There is no essential morbid preliminary depression, and there are rarely any hallucinations, but there are day-dreams and fancies that he builds up into delusions, not irresistibly

forced upon him by hallucinations, but courted and encouraged by himself. In some cases the individual is clearly aware of their unreality, but in most they come sooner or later to be accepted as true, and to control acts. These patients form the great majority of the mystic, erotic, and political paranoiacs, and a large proportion of the querulant type, which may be considered as a variety, as already remarked, midway between this and the typical pathologic form.

The much-discussed mental status of the assassin Guiteau comes very apropos in considering this part of our subject. Beyond the general one of his own importance, which dominated his whole life, it appears questionable whether Guiteau ever had a fixed delusion, or any honest delusion at all. His defective mental organization was such that he was incapable of appreciating his own behavior and its consequences; he was thoroughly insane in his judgment, but it seems very doubtful whether his vicious day-dreams were any more realities to him than to those who heard them told, except upon the principle that a man can tell himself a lie till he comes more or less to believe in it himself. His delusions do not appear to have been permanent systematized ones due to special organic defects; they were rather due, so far as they existed, to his mental and moral degeneration and weakness.

This view of the Guiteau mental condition is confirmed by the observation of two or three patients whose cases appeared to be very similar to his.* "The most striking of these is a female, thirty-three years of age, who is said to have a heredity of insanity from several generations of ancestors on the paternal side. Her father, while not insane, is notably eccentric; her mother appears to have been weak and hysteric; one brother has been insane and an inmate of the same

*H. M. Bannister, "Monomania," "Am. Jour. Neurol and Psych.," 1884.

hospital as herself. Physically she is undersized and noticeably unsymmetric, one leg being considerably smaller than the other from paralysis in infancy. She is said to have had convulsions, but these were probably only hysteric ailments; her health is pretty good, her menses are fairly regular, there is no very marked cranial asymmetry, though her head is slightly depressed in the median line from the vertex to the occipital protuberance, and rather more protuberant in the right parietal region than in the left. There is a certain want of symmetry in her face, especially noticeable in expression, but it is not easily determined by measurements.

"She has always been wilful and unmanageable and perverse in her ways since childhood, though her friends were not willing to consider her deranged. She has had a fair English education, has done a great deal of desultory reading, and has a notable facility of expression of a certain sort both in speech and in writing, and a good memory, so that she is able to reproduce whole poems in her writing (sometimes altered to suit her ideas) without crediting the authors. She has been, according to her own statements, successively a ritualist, a Catholic, a Presbyterian, a Swedenborgian, and a Congregationalist, and at the time of observation she claims to be a high-church Episcopalian. Indeed, her religious vagaries were the matters that most distressed her friends for many years prior to their considering her actually insane. A year or two before her commitment as insane she became infatuated with a popular preacher, and persecuted him so with love-letters and by attempting to attract his attention and obtain interviews with him that the steps were finally taken that led to her being shut up in an asylum. Her committal papers state that her insanity was of twelve years' duration, which covers the period of her public eccentricities and her religious wanderings and dates its beginning at her nineteenth year.

"After a few months' stay in the hospital to which she was first sent, she was allowed to visit home, but soon had to be returned. During this furlough she absented herself from home, and was only found after several days' search by her friends, in the church of her admired preacher.

"Since her return to the hospital there has been very little change in her mental condition, though what there is has been for the worse. She is capable of talking sensibly and appearing perfectly rational, and has often surprised visitors who have conversed with her by her apparent sanity, though there is generally something fantastic in her dress or manner which, seen in such a place, makes her appear conspicuously insane to the casual observer. She delights in getting up oddities of costume, especially when she has a chance to display them in public, as at chapel services, entertainments, etc., and when not allowed to rig herself out too conspicuously, will have at least some fantastic embroidery or other striking peculiarity in her dress. In fact, her behavior generally is marked by a desire to be noticeable in some striking way, and she is never better satisfied than when she feels that she is producing a sensation. There is a strong erotic tendency; she is very much inclined to write ardent letters to some male individual with whom she may perhaps have no personal acquaintance whatever, and, judging from her talk at times, her feelings in this direction are not always purely romantic. She is a very troublesome patient in some respects, and seems at times to endeavor to be as irritating as possible to attendants and those about her. While seldom or never violent, she can make more ingeniously insulting remarks to and about her attendants than any patient I have known, and utterly disregards all the conventional proprieties of language in so doing. On this account, she seldom is kept long in any one ward, as an occasional change

seems to improve temporarily, to some extent, her too trying disposition.

"The point, however, in her case which is of most interest here is in the character of her apparent delusions. I say apparent, for their unreality to her is manifest at times to any observer. There is nothing fixed or permanent about them; at one time she is to be the mother of a coming Messiah; at another, she is heiress to the British crown; and, again, she claims to rule the American people as queen; and next she will laugh at her own notions, and admit that they are absurd. She will write a most loving letter to some man who is at the time the object of her affections, and then write one in reply to herself, addressing herself as 'My loving wife,' etc. Her inability to live altogether in the unreal world she pictures for herself in her day-dreams, and the conflict between them and the realities she appreciates about her, will probably account for much of her discontent, and help to explain some of her worst behavior. These day-dreams, though not realities to her, yet dominate her whole thought and intrude themselves into everything she writes, though the mental friction of conversation appears to enable her to often talk at length very sensibly on almost any subject with which she is at all conversant. She is conscious of her own mental weakness, and when asked recently what she soberly thought of her own case, she replied: 'I am not exactly insane; I am only a sort of an imbecile,' and then, apparently wishing to modify the admission she had made, she added: 'But you know the foolish things of this world are to confound the wise.' It is not often that she will acknowledge as much as the above, though she frequently admits that her pretensions are ridiculous, and that her behavior is unreasonable.

"If this patient had been of the opposite sex, and had the training and experiences of a man, it is prob-

able that the development of her insanity would have been somewhat different, and I can readily imagine that under such conditions she might have been another Guiteau. They are alike in their bad heredity, their overbearing egotism, their peculiar religious and erotic tendencies, their ability to deceive as to their real mental status, and, I believe, they both had the same type of pseudo-delusions."

The case of Prendergast, the assassin of the Hon. Carter H. Harrison, was also one of this form of paranoia. He was born in Ireland, and came to this country as a babe; his father was an inebriate, and several of his paternal ancestors were insane. His mother was a strong woman, with no bad heredity that was ascertained. In early childhood he sustained a head injury by falling that made him unconscious for several hours. This was followed by more or less headache. As a boy he showed peculiarities, was very irritable, and did not care for the companionship of other boys. He went to school for a few years, and made very good progress. He became a newsboy and did quite as well as such boys generally do, but was rarely on good terms with the other boys. As he grew older, he became a deliverer of daily papers on a somewhat secluded route, and did this work to the satisfaction of all. About the age of fifteen he began to develop delusions of persecution; thought the other newsboys were combined against him, that they were making misrepresentations about him, and that his mother and brother were also against him and constantly trying to do him harm. A little later than this there was much agitation in the Chicago papers about the dangers of railroad grade-crossings and the necessity of stopping the loss of life by track elevation. Then he became possessed of the delusion that he was God's appointed agent to bring about this important work. To do it, he conceived the idea that he must

be made the Corporation Counsel of Chicago. This is an appointive office by the Mayor of Chicago, and demands legal talent of the highest order. As soon as Mayor Harrison was elected, he applied to him. After Hon. A. Krauss had been appointed, he called upon him and several times demanded the office as his, by right, as the Almighty's agent. At the time of the assassination he went in the early evening to the Mayor's residence and made the same demand. Being refused, he shot him, and immediately thereafter went to the police station and gave himself up. At this station he was regarded as insane, and they at first determined to send him to the Detention Hospital for the Insane. The neighbors across the street heard the shot fired, went over immediately, and no one had the slightest idea who did it. Mr. Harrison himself had admitted Prendergast; no one saw him leave, and the Mayor died without giving any information about it. At the police station Prendergast insisted that he did it; that he was the divinely appointed agent to elevate the railroad tracks, and in order to do it properly he must be Corporation Counsel. The Mayor refused to do it, and the Lord had commanded him to remove him. He seemed sorry enough, but said he must do as the Almighty demanded. In due course of time he was tried by jury. He was the son of a washerwoman, and a newsboy, and had killed the Mayor of a great city at the time of the closing exercises of the great Columbian Exposition. The excitement was intense, and the people almost with one accord demanded his blood. The case showed the utter unreliability of the American method of securing expert testimony; the Commonwealth found many physicians to testify to the sanity of the poverty-stricken and deluded boy. In various interviews he always admitted the killing, and always justified it by his delusions; he seemed to be very sorry that it had to be done. Upon other topics he

talked as well as could be expected with his limited education, showing a good memory and emotional control. He had numerous stigmata of degeneracy; the shape of the head was quite abnormal, very deficient in frontal development, and quite excessive in occipital. There was marked arrest of development of the superior maxillæ, prognathism, great prominence of the malar bones, asymmetry between the two sides of the face, the orbital cavities were large and widely separated, the teeth were deformed, and the palatine arch was saddle-shaped. The upper extremities were very long, the finger-tips extending an inch below the knee. The ears were too large, not on the same level, too far front, conchæ greatly enlarged, lobule deformed, and two Darwin tubercles on each helix. The penis was unusually large and one testicle had not descended. After two jury trials he was condemned, and in due time hanged. No postmortem was permitted.

The **pathologic anatomy** of paranoia is unknown, aside from the degenerative stigmata already mentioned. Among these the most important are cranial and convolutional anomalies, asymmetries, etc., which are most pronounced in the type last described—the original paranoiacs. In these they are rarely lacking, or, rather, are seldom not markedly prominent. In long-continued cases of the typical form when the disease has progressed to the final stage of dementia, we find on autopsy the typical lesions of that condition, cerebral atrophy, and often more or less thickening and opacity of the membranes. The same is probably to be found in the original paranoiac after long continuance of the condition. In the assassin Guiteau some evidences of a more acute cerebral pathologic condition were found, but his case was exceptional in other respects, and possibly also in this.

The **diagnosis** of paranoia is ordinarily easy after the disorder is fairly under way. In the early stages

of the typical form there is a chance that it may be mistaken for melancholia, but more often a danger that it will not be recognized at all. After hallucinations have appeared and persecutory delusions exist, the patient may still be able to conceal his insanity to a great extent, and in this lies the greatest peril of the disease. The walking cases of paranoia, unrecognized by the laity, and often protected in their freedom by the courts, are one of the greatest public dangers and the cause of a very large proportion of the tragedies that shock the public from time to time.

There are many insane conditions where delusions predominate that are not paranoia, and some of these have been already described. The secondary delusional insanities may be confused with the later stages of this disorder, but the difference is practically unimportant, as this is itself a secondary condition. The megalomania of the third stage of paranoia is, however, often characteristically blended with some traces of the earlier delusions, so that it can be distinguished from that following other forms of mental disorder. In the early stages there may be a confusion with melancholia, especially the hypochondriacal type, but the melancholiac is self-accusatory, which is not the case with the paranoiac. The paranoiac type of alcoholic insanity has much resemblance to certain cases of paranoia in its delusions and their dangerous character, and often it is well to reserve a positive diagnosis between these two conditions. As Regis says, also, there are cases where the incipient paranoiac takes to drink under the influence of his feelings, and this may confuse matters. Hallucinations of hearing are, however, unusual in alcoholic insanity, while they are almost characteristic of paranoia, and their existence or development may assist or be suggestive.

The delusional early stages of paresis may possibly be confused with this form, though generally a little

close attention will settle the question definitely. The presence or absence of the physical signs and the fleeting and changeable nature of the delusions of paresis are also generally characteristic. In some pre- or post-epileptic conditions also there may be a predominance of delusions that might suggest paranoia, especially if the convulsive phenomena are slight or masked; but these are temporary conditions. The same may be said of certain episodic conditions in degenerates which closely resemble paranoia, and the existence of which has possibly led to the conception of an acute paranoia. These occur in decidedly predisposed individuals, but who are ordinarily not fully over the border of insanity, and are generally of short duration. Sometimes there is a strong suggestion of drug intoxication in these cases, and possibly this may be accounted for by some of the secret drug habits.

The **prognosis** of the disorder is generally bad, the tendency is in all forms progressive, and it may be said to be in a general way incurable. Once in a while, however, the disordered intellection seems to be stayed at certain stages, and there may be even an apparent improvement. We have seen a case that had passed into the megalomaniac phase apparently become aware of the absurdity of some of his ideas and undergo a sort of apparent "recovery with defect." His death occurred so shortly after his removal from the asylum that it could not well be said that the change was permanent, and such happenings are exceedingly rare. The mental disease does not, except as secondary dementia, directly tend to shorten life; but in a general way, without perhaps any very definite reasons for it, one would have to consider a paranoiac a bad life-risk. The tendency to suicide may arise, and in other ways there is so much uncertainty as to their behavior or personal care of themselves that it is impossible to insure against dangers either from accident or disease.

The **treatment** of these cases is largely moral; as might be supposed, there are few or no tangible physical symptoms to treat. One is limited to the watching for complications and meeting them as they arise. Sometimes, under the influence of delusions of poison, etc., the patients may refuse food, and this may possibly go so far as to endanger their health. Forced feeding for any considerable period, however, is rarely necessary, and should be avoided altogether if possible, as it will be likely to aggravate the delusions and excite dangerous antagonisms.

Confinement in an asylum or hospital for the insane is a very essential part of the treatment, both for the patient and the public, and for the influence of the regulated living and discipline of an asylum, since more than any other insane they can appreciate the reasons and often the reasonableness of their seclusion. Upon many of them it has a very happy effect; in other cases it may be resented, and they become the more dangerous patients. In some of the less aggressive cases during the period of the prevalence of the persecutory delusions, it is felt doubtless as a refuge from their persecutors. If suitable employment is given under judicious control, the delusions often become less prominent, at least objectively, and the patients seem to be actually improving mentally. There is still another class of these patients in whom the delusions are not so imperative in their nature, and in whom there is still such a strong power of self-control that after a stay in the institution they may appear so well as to be allowed to leave, and actually manage to live outside without doing anything to call for their recommittal. They are not cured, but if their delusions are not too strong, and their general dispositions good, they may pass safely beyond the active persecutory stage and act as if they were only eccentric or very moderately abnormal individuals. It cannot be said,

however, that any patient with delusions of persecution and hallucinations of hearing is safe to be at large without oversight.

The original paranoiac may be even more dangerous to society or individuals than the typical one, as is shown by the histories of some noted cases of this kind. The recognition of either form is a matter of serious importance, and it is unfortunate, to say the least, that judges and juries are so backward as to their sequestration and so ready to release them from necessary restraint.

It should be mentioned here that in the management of these patients any argument about their delusions, or even any reference to them, is generally very inadvisable. As in every form of insanity, but especially in this, where the reasoning faculties are often so little generally impaired, it is best to treat the patients as far as possible as rational beings, and gain their cooperation and good-will in the measures to be taken for their benefit. Sometimes they appreciate the motives of those in charge of them, and maintain a friendly feeling toward them, but much depends upon the tact and good judgment of the physician in their management.

# CHAPTER XIX.

## DEGENERATIVE INSANITIES (Continued).

### MORAL INSANITY.

UNDER the head of "moral insanity" we include a class that is clinically distinct enough to be noticed by itself, though it represents perhaps two or more different types in its real relations and nature. Still other conditions might be classed by some under this head; thus, we have spoken already of the moral insanity of a certain type of hypomania. The class of cases here described includes some that may be possibly closely related to hypomania or circular insanity, and some that fall more readily into the category of imbecility. There is a special form of moral insanity sometimes seen in old alcoholic cases; the ethical sense seems altogether abolished in some of them, independently of the alcoholic tendencies; they are absolutely immoral even when compelled by circumstances to be perfectly temperate for long periods and when their intellectual powers seem fully as active and acute as in the normal condition. These are the alcoholic cases that are the terror of asylum authorities, and almost the only class of asylum inmates that is capable of breeding plots and organizing conspiracies among the other patients. Another somewhat similar type is occasionally met with among the epileptics, but it is here much more exceptional. Lombroso, indeed, sees a family relation between epilepsy and moral insanity; and, in fact, an identity, though of somewhat modified type.

What is here considered, however, is different from these, at least, in its apparent beginning. It is not asso-

ciated with epilepsy or necessarily with any other detectable neurosis or psychosis, though it occurs almost invariably in degenerates with a bad family history in some neurotic or neuropathic particulars, and usually in subjects presenting more or less numerous and prominent physical stigmata, such as cranial facial, aural, genital, or corporeal defects or deformities. It is not necessarily accompanied by any symptoms of mental deficiency or of the ordinary emotional abnormalities of excitement or depression; its essential character is the lack of the power to recognize ethical distinctions and of that dictation or inhibition which in its full normal development we call conscience, including, as it does, the sense of right and of duty. Without this inhibition, which underlies to a degree all the social and altruistic instincts and emotions, and which is even present in the lower animals, the unbridled egoism has full play. Except so far as checked by the intellectual consideration of utility or expediency, there is no limit to the lengths it may go. The condition is, therefore, one of deficiency of an important part of the mental endowment, and we may count it as akin to imbecility or idiocy. It might then be considered as an idiocy by deprivation, accepting the moral faculty as an additional higher sense the organ of which in the cerebrum is functionally inactive or wanting. By the same analogy we might assume as possible in these cases an even higher development intellectually than ordinarily, just as the other senses appear sometimes to act as substitutes and be even heightened when one is defective or lacking. Be this as it may,—it is offered only as a suggestion,—there is in some of these cases no special intellectual deficiency noticeable, at least not until later in life, and for a time at least the subject of moral insanity appears bright and even brilliant in most respects. Ray has given in his "Medical Jurisprudence of Insanity" a

history of such a case, a brilliant lawyer, but an absolutely depraved and conscienceless man, who later in life showed by his insanity of acts that there was with the moral deprivation a serious lack of balance and reaction between his thinking and his acting capacity.

These patients are, as has been said, rare in asylums unless in the progress of the disorder their mental faculties have generally begun to suffer. The symptoms first appear in infancy; the moral development does not take place as in normal children; they lack natural affection; are especially rebellious to authority; brutal and cruel, and unreliable in all respects. The moral development of a child is in all cases largely a matter of education, but these cases lack the basis that is essential to a moral sense. This form of moral insanity, the congenital, may be regarded, when it exists in its fullest extent, as a moral idiocy; there is no material for a moral development. Other cases are less extreme; the moral potentialities are there to a certain extent, and while these children are wayward and hard to bring up in a respectable way, they are not absolutely incapable of learning self-control and appreciating the higher motives of conduct to some extent. Many children are to a certain extent immoral, but these two classes, the moral idiots and the moral imbeciles, differ from the mass in that their original capacity for moral education is lacking. As they pass to adolescence the moral imbeciles may develop a better moral sense and ability for self-control, so that they may, in adult life, become something like normal individuals. They are likely, however, to be always moral weaklings, quick to yield to temptations that would be resisted by a healthy minded man. When these cases are intellectually bright, so that they can fully appreciate utilitarian considerations and control conduct according to them, they may become the sharp unscrupulous swindlers, or business or profes-

sional men whose only guide or restraint is expediency and safety. Such cases are, as we all know, not rare, and they may possibly very often be based on a congenital moral imbecility. A very great proportion of the criminals are probably of this type, especially the so-called "born criminals," which term, in fact, implies just this condition.

The moral idiot is not a modifiable type even by training, and is fortunately a rare one. Such cases exist, however, and it is probable that in rare instances there may be so little intellectual defect that they are able to see the impolicy of indulging in such extreme gratifications of their egoistic and immoral inclinations as would lead them into trouble. As a rule, however, their self-control is defective somewhere, and their character is manifest, even if they do not come under the penalties of the law; they are black sheep, ne'er-do-wells, disgraces to their families, and generally hopeless reprobates. Such cases are sometimes puzzling to place, but a full and complete study of their history, family and personal, and their physical defects will enable one to form an idea as to their mental condition, and in some degree of their responsibility. It is not to be understood that this class includes all criminals, or all even of the habitual offenders against the law, but that, though rare, it is more common than has been generally believed is held here to be true. As the moral functions are the highest of the mind, and are chiefly developed in the human species, though traces of them are to be found in the lower animals, and are, therefore, probably among the latest developed, it does not seem at all improbable that, like other recent requirements as yet imperfectly established in our nature, they should fail at times, and even be extinguished in certain rare instances. Moral insanity of the moral imbecility type is fortunately not frequent, but the wonder is that it is as rare as it is.

In women moral insanity of the strictly immoral kind is probably rarer than in men; they are less liable to be absolutely deprived of all moral sense with full retention of intellectual capacity. Their insane egoism is more likely to be fully developed when associated with some pronounced psychic or neuropsychic deficiency or in hysteric insanity, etc. When they are moral imbeciles or idiots, they are likely to adopt the more strictly feminine forms of criminality, such as prostitution, rather than those affected by the male sex. It is probable that among the depraved females in the cities there are some that would properly be classed in this category.

The responsibility of the moral idiot is an interesting question. There is no doubt but that some cases of this kind whose intellectual capacities are unimpaired can, if they choose, be as good judges of the expediency of their acts as any one, and are, therefore, to that extent amenable to the law. They know the consequences of their acts, and to a certain extent may be good utilitarian moralists. The fact remains that they are imperfect individuals, lacking one of the most important guides to conduct, and this should be taken into account in estimating their responsibility. As far as the law is intended as a protection to society, they need to come under its provisions as much as or more than ordinary criminals, from the fact that they lack the basis of any possible reform.

One of the latest writers on mental disease, MacPherson, includes litigious insanity under this general head. We have already spoken of this type under the general head of persecutory paranoia, where it appears to us to more rightfully belong. Nevertheless, there may be cases where moral insanity may manifest itself in this symptom of litigiousness, but it is not the usual full-blown type. The persecutory litigious insanity is a more limited aberration, manifesting itself mainly in

one direction, and is, we believe, invariably accompanied with diverse insane conceptions as to the subject's legal rights—mental illusions, if not full-fledged delusions. The moral deterioration that accompanies it is only an incident of the general condition.

There are other peculiar mental conditions that might come under the head of moral insanity more correctly than persecutory litigious paranoia, but which have their special characters that separate them from the type. Among them is, for example, the occasionally observed periodic vagabondage in young boys or even children of tender years, which is associated sometimes with a very marked and causeless depravity. In a case of this kind, under our observation, a child under ten years of age, unusually bright for his years and generally a model in behavior, had periodic impulses to run away, and would sometimes go long distances. At these periods also he would steal money or anything that took his fancy, would lie, and in other ways show a complete absence of moral sense which was not ordinarily lacking in his make-up. After the impulse was over he could give no explanation of his conduct, though there was no defect of memory or any disturbance of the continuity of consciousness whatever so far as could be ascertained. During these periods he was as complete an example of apparent absence of moral sense as is ever seen; between them he was a docile well-behaved lad, rather exemplary than otherwise. As he grew up these impulses continued to appear, and for a long time; till toward the end of adolescence, shortly after his twenty-first year, he underwent a change, and became a more reasonable and creditable person, though a certain Bohemian tendency was still manifest at times. Such cases as this are not common, but they occur, and it is difficult to properly class them. Their periodicity, or, rather, their irregular repetition of the symptoms, suggests somewhat

Lombroso's epileptic theory of moral insanity. They are rarely met with in asylums, but may be a problem for the purely medical counselor when they occur, and one that deserves very serious study.

The diagnosis of moral insanity, as here limited, is chiefly from depravity, and can be made only by a thorough study of the individual and his history. There is, however, in the moral idiot, lunatic, or imbecile, whatever we may call him, a sort of quality of immorality that is characteristic. If morality consists alone, as Mercier says, in the ability to forego indulgence in one's egoistic impulses, then the moral lunatic may possess it to a degree, but there is more than that in it. When a man has absolutely no perception of any moral dictation of conscience, or no recognition of moral distinctions whatever, he is much more seriously handicapped as a member of a social organization than is one more normally constituted. However acute he may be intellectually, this depravation is likely, or even almost certain, to ultimately damage his mental health. We do not believe that any one so constituted would be likely to go through a long life without his conduct sooner or later leading to a mental breakdown obvious to even an unskilled observer. This fact has been the basis of much of the argument against the existence of this form of mental disorder; it has been said that observation of such cases always sooner or later revealed their intellectual deficiencies, hence there was no such thing as a purely moral insanity. The fact that this intellectual morbidity finally appears is taken as evidence that it has always existed, a conclusion as logical as it would be to say that because a man finally must die he has been moribund all his life. The clinical evidence of absence of moral perceptions and inhibitions in some cases is overwhelming, and the other mental defects that may or may not be observed

later have no essential connection with it, at least in some stages or conditions of the disorder.

The prognosis of moral insanity is usually bad. Nevertheless careful attention to its earliest signs in childhood may ward it off, and while we cannot create a moral sense, we can prevent sometimes the obliteration of the germ and cultivate it into something like its normal development if it cannot be done completely. Moral training, good associations, and especially wise and tactful control, are the means of treatment, and in some cases at least there may be hope of change for the better. This is not to be absolutely given up until the individual has passed the earlier critical epochs of infancy and adolescence, as changes have been observed even at the latest of these. The other forms of moral insanity associated with the various mental derangements already mentioned are, as a rule, episodic, or temporary, and need no special mention. Their treatment is that of the associated conditions, on which, also, their prognosis depends.

## CHAPTER XX.

## IMBECILITY AND IDIOCY.

THE congenital mental deficiencies known under the designations of imbecility and idiocy are considered, as a rule, in connection with insanity in works on mental diseases. They are different only in degree from the degenerative insanities into which they graduate through several separate types. We can here include those cases that originate in diseases or accidents in early infancy as well as the congenital forms; they differ only in the stage of development at their incipiency, and their symptoms and prognosis are practically the same. The conditions of disease that produce these forms of mental defect are those that inhibit or prevent the normal development of the brain, such as eclampsia, hydrocephalus, meningitis, etc. The congenital cases are those of brain defects from imperfect or abnormal development, as in porencephaly, macrocephaly, microcephaly, abnormal cortical development, reversions, etc.; absence of important parts, such as the corpus callosum; absence of special lobes, particularly the frontal ones; defective cellular development of the cortex, etc. To these we must add the effects of autotoxins, as in the case of myxedematic idiocy, where the absence or imperfect function of the thyroid gland is the cause of the mental as well as the physical symptoms. In some cases it is impossible to determine readily during life the nature of the pathologic process, and after death the macroscopic evidence may be also lacking. It is probable that in these cases the defective development of the cortical cells will be found to be in fault when microscopic examination is

possible. Besides this fetal or undeveloped condition of the cortical cells (Bevan-Lewis, Middlemass), we have also an actual reduction of their number (Hammarberg), and we can assume that, at least in a large proportion of cases of imbecility, a lack of functionally active cortical cells is the essential pathologic condition.

The external physical stigmata of imbecility, and especially of idiocy, are generally prominent. Thus, we have microcephaly, on the one hand, and the overgrown hydrocephalic or hypertrophic cranium on the other; the peculiar features and misshapen head of the Mongolian type, the dull expressionless facial development, the misshapen or defective auricle, the deformities of the jaws and teeth, facial and bodily asymmetries, and other characteristics that can be noticed more in detail in connection with the special varieties to be described. In the lesser degrees of imbecility these are not, as a rule, so prominent, but they usually exist, and are more or less noticeable and significant.

Considering first the milder types included under the head of imbecility, we may define, symptomatically, the condition as a state of cerebral defect characterized by a more or less limited intellectual or moral deficiency, making the subject to a noticeably greater or less degree below the average in these respects. These are the special marks of imbecility; other brain defects are not essential or characteristic. An individual may be deprived of one or more of his or her senses; in fact, so many of them may be lacking as to largely cut off the avenues for impressions from the external world, as in one or two very noted cases, and yet be very far from being an imbecile. It is the intellect, the judging faculty, or the associated moral impulse that must be affected. In most cases both the intellectual powers and the moral sensibilities are affected together; when the latter alone suffer or are lacking, we have the



A Group of Imbeciles.

typical moral insanity, which, though really a variety of imbecility, is noticed elsewhere as a separate type.

In many cases of the milder or less marked types of imbecility, the semi-imbeciles, as they have been called, there are no very pronounced external stigmata; they look and act to a large extent like normal individuals, and they may be able to fill a humble place in society where no great demands are made upon their intellectual powers. In infancy they may appear much like other children, and it is only in their later want of development that their disability becomes noticeable. They never really pass beyond the stage of childhood mentally, though their physical development may be good. In some respects they are even below the childhood standard; their capacity for learning is very limited, at least, in most directions, though they may show special aptitude in certain lines. Their sexual development is marked, and they are apt to be masturbators or perverts. Morally they are also deficient; they are apt to be unreliable and untruthful, and subject to fits of passion, and these with their sexual impulses, mentioned above, may make them dangerous to society. Under judicious control it is often possible to make them useful to a certain extent, and even self-supporting, but this is not usually possible when they are left to themselves.

These are the most familiar cases, the ones that show their deficiencies least. The majority even of these semi-imbeciles are markedly degenerates, and show it in obvious physical signs—misshapen crania, defective ears, jaws, and teeth, bodily asymmetries, and other stigmata of degeneracy. There is usually no very well-drawn line as regards the mental symptoms between these and those more favored in a physical point of view; but the more pronounced the bodily defects, the more marked are the mental and moral deficiencies. That this is not always so, does

not affect the general rule, and as we pass gradually from the semi-imbeciles to the imbeciles in the fuller sense of the word, the exceptions become more rare. In this latter class the mental capacity is less, the animal propensities less restrained, and the facial expression still more indicative of vacuity. Nevertheless, these patients have a certain degree of intellectual vitality; within a limited scope they reason correctly, and are still far from being mental blanks or falling within the scope of the still lower grade of defectives. They are generally docile if tactfully managed, and while they are mostly incapable of strong affections or natural emotions, they may become attached to those who care for them, and even show gratitude and be governed by their relics of better impulses.

It has been already remarked that while these defectives sometimes show striking abilities in some one direction, their weakness in all others is most evident. These cases are not very numerous, but they are sometimes seen, and, as a rule, the particular ability is not available for their advantage in the struggle for existence. We have known a semi-imbecile, a rather shameless masturbator, one generally useless and unreliable, who was so particularly gifted in prayer that he often imposed on good people, who, not knowing him or his peculiarities, thought him a sort of saint. He was fond of using his accomplishment, and frequented prayer and other meetings, and there he took part, to the discomfort of some who were better acquainted with him. A sort of religious tendency is not uncommon in this class, and there may be, in some cases, a certain genuineness about it, but generally they are not capable of being consistently religious, as are more responsible individuals. A peculiar sense of humor and a sort of wit are not uncommon, and some of this class were utilized in former times as kings' and noblemen's fools or professional jesters. Others show

musical or arithmetic talent, the well-known Blind Tom being one instance of the former, showing that a very pronounced degree of mental weakness is consistent with such talent.

These semi-imbeciles, when taken young, are generally educable to a certain extent, and may progress at school like other children for a time. Their backwardness soon becomes apparent, however, and before very long they show their mental incapacity very clearly in the inability to follow any connective source of thought, in their weakened judgment, and very frequently in their moral as well as mental deficiencies. They are cowardly, irascible, egotistic in a way, and generally incapable and unreliable.

We can differentiate the grades of mental deficiency as follows: The semi-imbecile is a case of mental weakness; the faculties exist, but are not up to the normal standard of even average mediocrity. The will is especially deficient and the higher inhibitions are largely wanting, though in certain special directions the development may be high. The complete imbecile is a still lower grade, but the mental faculties are still in evidence to a certain extent. It is an extreme debility, not an abolishment of them, that we find in these unfortunates. In the idiot, on the other hand, we have the lowest grade, with a complete abolition or suppression of the intellectual and moral faculties; and if there remain any traces, they are exceptional, and limited to one or two of the special mental faculties. There is a wide range, it is true, amongst idiots, in their capability of being instructed in some simple matters, but in all we find the absence instead of the mere weakening of the intellect. In the higher grades there may be some signs of simple mental action, limited to a few points; they may even have the command of a few words or phrases, and can even be taught to observe some of the conventionalities and

decencies of civilized life, and to know and even show some regard for those who have the care of them; they may even be taught some simple tasks which they do under the constant supervision of their caretakers, but they go no further, and are utterly incapable of consecutive reasoning even in simple matters, or of continued attention to anything. In almost all cases their bodily stigmata are marked; they have deformed crania and features, their limbs are misshapen, bodily asymmetries exist, they very commonly have excessive or imperfect development of the genitals, and their appetites are abnormal and uncontrolled by any higher inhibitions. To a certain extent they are susceptible to discipline, but they are much like the lower animals in their tendencies without their special adaptation to their environment. They are governed by their instincts rather than by any judgment even in elementary matters, or by any higher feelings or emotions.

The idiot is simply a being without ideas, an individual in whom the intellect is absolutely undeveloped. He differs from the demented patient in that the latter has a developed but diseased brain; while the idiot has an undeveloped or imperfect one. In the dement there are generally more or less relics remaining of a normal past which the idiot has not. Clinically also they differ; the dement may be stupid, helpless, and speechless, but he is liable to have brighter intervals, and even recovery may occur, while this is not possible with the complete idiot. Their physical stigmata differ also; in the idiot we have, according to the type, the microcephalic or macrocephalic head, or deformed limbs, etc., which are wanting in the demented patient. The two conditions are only similar in the absence of intellectual activities and its consequences; in all other respects they are widely different from each other.

There have been several classifications of idiots

according to their causation, special characteristics, and symptoms, but a brief description of the more prominent types will suffice here. The ordinary congenital idiot is perhaps most frequently met with. In this type the physical development may be fairly good; the cranium well developed as to size and not specially abnormal in contour, but the features are generally heavy and expressionless, sometimes still infantile in conformation to a certain extent; the jaws are apt to be misshapen, very often what the dentists call the V or the saddle shape, the teeth irregular and defective, the ears misshapen and misplaced, the palate high arched. This last deformity has been especially noted as of importance by writers, but it is not exclusively associated with idiocy, though more frequent than in the normal population. Other bodily defects are sometimes present; badly shaped or proportioned limbs and abnormalities of the sexual organs, cryptorchidism, and lack of hair on the genitals and absence of the beard in the adult idiot are not infrequent. Only rarely do we meet with children that are physically well formed throughout and with handsomely molded though expressionless features, but such do sometimes occur. We have seen idiots that would be considered handsome children but for their dull aspect, drooling, and generally untidy habits.

A special variety of the congenital idiot has been specially designated, from its peculiar physiognomy, the Mongolian type. In these we have a low stature, rather a gross figure, a broad face with a depressed nasal bridge and obliquely set eyes; hence the special designation. The tongue is generally large and the fungiform papillæ marked, so that it presents a roughened appearance. The genitals are apt to be undeveloped, the testicles small or undescended. The skull is commonly flattened anteroposteriorly, but is not specially less in size than in the normal individual. These cases are

often lively and less obtuse than some of the other idiots, but their intelligence is very limited, as a rule. We have seen this general physical type in one or two rather bright individuals, so that it is not altogether peculiar to idiocy, though it is very characteristic of a certain type.

Another characteristic form of congenital idiocy is the microcephalic. Here, as the name implies, the most prominent feature is the smallness of the cranium, which is noticeable at sight. The actual size of the head varies, and there is no exact definition of what is a microcephal. Ireland gives as an approximate limit 17 inches in circumference; all below that he would consider microcephalous. This is perhaps the rarest form of idiocy, but as it is the most striking, the marked cases of this type have received much attention. As a rule, these idiots are undersized; their bodily development may be fair; they generally have good control of their movements. Their grade of intelligence varies; some of them are imbeciles rather than idiots; others are complete idiots, unable to care for themselves, and would soon perish if not fed and protected. This class includes some cases that are educable up to a certain degree; they can be taught to talk and even to read in some cases, but their limit is soon reached, and their development is not more than that of a child of eight or ten at the best. In many more cases they are incapable of any considerable degree of education. As in the ordinary congenital idiot, the symptoms appear from birth, and there is no sudden or gradual post-natal mental deterioration.

In these cases the brain is small, as might be expected, and it may be very imperfect in its convolutional arrangement. The cerebellum is liable to be proportionately better developed than the cerebrum, which may explain the good coordination and motor power. It is said that the fontanels are earlier closed

in these than in other cases, and a premature closure of the sutures has been given as a reason to explain the non-development of the brain and skull. This has suggested the idea of surgical interference, which will be noticed under the head of treatment later on.

The acquired forms of idiocy, including under this head all cases where the deficiencies become apparent after the first months of life, are numerous. Some of these are, properly speaking, not acquired, as they are due to defects that only become actively efficient at a certain stage of development. The distinction is not always a valid one, moreover, as many of the causes begin to act before birth, though their full effects are not manifest till some time after. Hydrocephalus and porencephaly may begin in the antenatal condition; injuries to the brain may and often do occur at birth, when, also, may be laid the foundations for subsequent epilepsy and paralysis, and the goitrous lesion of cretinism may appear at the same time. As a rule, however, hydrocephalic, hypertrophic, epileptic, and inflammatory and cretinoid idiocies make their first recognizable appearance after birth and during the first few months of infancy. The same is true of the family forms of paralytic idiocy and the amaurotic type described by Sachs. In all these the child appears generally normal at birth and for some little time after; then the symptoms of idiocy appear and continue during life.

Hydrocephalus does not necessarily destroy the mental activities; there are notable cases where the subject is not so defective intellectually as to be classed either with idiots or imbeciles. A very slight degree of hydrocephalus in infancy has been thought in some instances—that of Helmholtz, for example—to have favored subsequent mental development. Most commonly, however, a marked degree of this condition is attended with mental enfeeblement, and sometimes is

the cause of more or less complete idiocy. The idiots of this class are generally docile and inactive; they are apt to be scrofulous and short-lived. It is easy to admit the consequences of the swelling and pressure and the derangement of the anatomy of the brain in advanced hydrocephalus as causing idiocy, and the only wonder is that its effects are not always so marked.

There have been several forms of idiocy described associated with structural defects of the cerebrum, generally with eclamptic or epileptoid symptoms. Some of them may be considered only early cases of epileptic dementia, and of hemiplegic dementia occurring at a very early age, the brain lesion affecting its structure and arresting its development. In some of these cases the direct pathology and etiology are obscure, but in all we can count on the existence of cortical arrest; and probably if the Hammerberg method of cell enumeration were employed, we would find the cortical cells less abundant than normal, and probably also exhibiting other defects.

Cretinism is a form of disease depending upon toxemia due to deficient or perverted function of the thyroid gland. The mental symptoms associated with it range through all the grades of imbecility to complete idiocy. It is rarely congenital, but generally makes its first appearance quite early in life, and is subject to amelioration if treatment is instituted sufficiently early. It is rare in this country, but is common in some mountainous regions of Europe, where it seems to flourish most in secluded valleys and in conditions of bad hygiene. It has been attributed to defects in water or soil, to unhealthy modes of life, to geologic conditions, to close breeding by intermarriage, etc., but its causes are still obscure. One thing is certain: it is endemic in certain regions, and it may be due to some telluric cause, if not to a germ. A closely related form is, however, not specially

limited to any region—the so-called myxedematous idiocy, which unquestionably has its origin in the absence or functional inactivity of the thyroid. This is often called sporadic cretinism, and is limited to no special region. The disease generally makes its appearance during the first year of life; the children become stupid and indifferent, and as they grow up their features become heavy and coarse, the limbs short and stumpy, the figure squat, the tongue large, the skin dry and scaly, but swollen-appearing, the hair scanty, the lips thick, and the general appearance stupid and repulsive. The skull is not necessarily misshapen and the hands are fairly proportioned, but there are often swellings of the neck, and the thyroid is absent or atrophied. These idiots are generally of the lower grade, with little sign of intelligence, though sometimes there may be some indications of intellect apparent. They are usually docile, but this is mainly due to their stupidity. Altogether they are one of the more repulsive types, but they have a special interest owing to their possibilities of improvement. This will be spoken of more fully under the head of treatment.

The **diagnosis** of idiocy and imbecility is simple, only the very mildest type of the latter affording any difficulty. When the history of the patient is at hand, the question is always easily solved in every case. There is little danger of confounding it with dementia, the marked physical stigmata alone in most cases sufficing for the differentiation.

The **prognosis** is not generally favorable, except as to amelioration in varying degrees, and this differs in different types. The congenital idiots and imbeciles are less hopeful than the myxedematous cases. In quite a large proportion a certain degree of improvement is possible, but only under special care and at the expense of a vast amount of patient attention and instruction. The most brilliant successes are those

striking ones, like Laura Bridgeman, which are really, however, not idiots at all, but normal individuals deprived by disease of some of the main channels of impressions upon the mind. If these channels are opened up, even at a comparatively advanced age, they may, like Laura Bridgeman or Helen Kellar, develop a very high grade of intelligence.

The **treatment** of idiocy and imbecility is mainly pedagogic, but the more knowledge the teacher possesses of their physical deficiencies and their physiologic psychology, the better. Hence it is best carried on by specialists in an institution designed for their care. It is a hardship and a worry to associate even semi-imbeciles in schools with normal children, as they are liable to have to suffer for their deficiencies. Special training and capacity are needed to bring out what intellectual power they possess, but a certain proportion can be educated and fitted to fill a place in society, though not a high one. Yet certain imbeciles may show special talents; perhaps music is the line in which the greater number show some capacity; Dr. Ireland says that most idiots who pay any attention to sound have an ear for music. Others may show special mechanical ability, and still others have had remarkable abilities in limited directions otherwise. Many idiots are, nevertheless, absolutely incapable of any degree of education, not even enough to care for their simplest wants.

It is important that, in order to develop any possible latent talent in the idiot or the imbecile, the training be begun early, before habits and time have fixed their tendencies and spoiled the chances of improvement. In myxedematous idiocy the thyroid treatment is almost a specific, but in these cases it is better that the medication be begun when the patient is young. The physical improvement is nearly always very marked, and while the mental improvement may

be less marked and slower, it, however, develops to a certain extent. In cretins, while it is theoretically indicated, this treatment is not so generally successful. In any case it may be necessary to keep it up or repeat the treatment frequently for a long time or during life. It should be commenced cautiously in moderate doses, and its effects on the system carefully watched in these as in all other cases where it is employed. In other forms it is not specially useful.

Something may be said here of the surgical treatment of idiocy. It has been suggested that the cranium ossifying too early has checked the development of the brain, and an operation relieving pressure has been proposed and tried in a number of instances. The theory has not been generally accepted by the best authorities, and a critical discussion of the operation and its literature in a recent memoir by Lowenstein* shows that the results are not such as to commend it.

Imbeciles may be fairly long-lived, but their inability to care for themselves properly is against this being the rule, and idiots, as might be supposed from their numerous physical defects, are not likely to reach old age. They often suffer from cardiac disease, and their small and weak hearts are very possibly, as Ireland suggests, in some degree the cause of their cerebral deficiencies by reason of an insufficient blood-supply to the brain. Many hydrocephalous children die in infancy, and convulsions and other nervous diseases are fatal to many others. The idiot stands at the lower end of the scale of defectives, physically as well as mentally, and is the more likely to succumb to what a more perfect organization would naturally survive.

* Brün's "Beiträge," XXVI. I. (3.)

## CHAPTER XXI.

## BORDERLAND AND EPISODIC STATES.

### OBSESSIONS, PHOBIAS, IMPULSES.

THE conditions of mental aberration here considered comprise quite a wide range of symptoms of equally varying gravity, some of them comparatively trivial and not specially of serious import, while others are indicative of marked degrees of degeneracy and are formidable in themselves. They agree only in the fact that they do not fall readily into any of the special forms of insanity described, that in them the intelligence is not materially implicated, and that in all there is a decided nervous weakness involving more or less that mental function that we call the will. Except in their most pronounced development, or when associated with other clearly insane manifestations, they seldom are met with in the asylums, but they are common in the experiences of outside practitioners, and in some of their mildest forms can almost be said to be matters of common experience. There are probably few normal individuals who have not felt at least a suggestion of a morbid impulse under certain favoring conditions, or had a haunting idea that was not far from an obsession at some time in their lives. They comprise a true borderland between mental sanity and disease, and are found well over both sides of the indefinite dividing-line that separates these states.

The peculiarities and oddities of some persons that go under the general names of eccentricities, crankiness, etc., have been already incidentally noticed in connection with certain forms of insanity, etc. These are

generally indications of degeneracy, and in some cases the individuals are really only mild instances of some form of mental derangement—circular or periodic insanity or original paranoia; in others the apparent eccentricities are only racial peculiarities or the results of early training emphasized by a special environment, as suggested by Kiernan in the case of Thomas Carlyle. There is, however, a certain number of eccentrics whose aberrations cannot be accounted for in either of these ways, and who make up the class of disequilibrates, or, in common language, "cranks." While they may never become actually insane in the legal or medical sense of the term, they are frequently the descendants or progenitors of lunatics, and the family history shows their real position on the borderland of mental alienation. These individuals are often mentally brilliant in some directions; many of the unbalanced or irregular geniuses are of this type. Others are mediocre in talent, and only exhibit a lack of mental balance that handicaps them in the competition and struggle of existence. A very common peculiarity is in their writing—the undue use of italics, for example, so characteristic of a certain class of these disequilibrates. It is almost impossible, however, to definitely define them, as their symptoms and peculiarities are manifold, and they shade off imperceptibly into the average individuals. It is only when their abnormalities are rather striking that they can be reckoned as belonging properly on the borderland of insanity. It is rare for these persons to be in any sense dangerous or to require sequestration, except when, as sometimes happens, the degenerative predisposition causes them to succumb more readily than others to attacks of actual mental derangement.

The class of eccentrics or cranks stand on the borderland of insanity by reason of their mental twist or deficiency; they are for the most part nearer the original

paranoiacs and the imbeciles than to other types of mental disease. They hardly come within the scope of the present chapter, which mainly treats of a quite different class of borderland conditions that are for the most part comprehended under the head of obsessions—a French term which has become naturalized in our language as the most expressive and descriptive for these states. The term "obsession" is here used in its wider sense as covering all the will defects characteristic of these conditions, not in the narrower sense of simple imperative ideas, and not including all the impulsions and aboulias as well. All these symptoms, whether affecting directly the emotions or the intellect, are essentially defects of the will; they have in common the character of being recognized as morbid by the subject himself, and they have been classed by recent writers as belonging to the neurasthenias, as being symptoms of functional weakness of the higher cortical centers. They are commonly said to be usually hereditary, but in our observation this is not by any means always the case. Practically they are only exaggerations of the experiences of most, if not all, normal individuals, and it is only through the degree of this exaggeration that they carry their victims over on the borderland of mental health. We are all of us subject to morbid impulses and to besetting mental conceptions or obsessions, but with most of us these are only transient, and are fully controlled by the intelligent will. It is only in certain conditions of nervous exhaustion or in persons who are naturally defective that these defects become actual obsessions. We must remember, also, that a certain degree of defectiveness is the rule; no one is perfect physically or mentally, and the individual who is perfectly free from all stigmata of degeneracy probably does not exist. It is this inherent element of degeneracy in us all that comes into play, so to speak, in these neuras-

thenic manifestations that lie on the borderland of mental disease.

Following the classification of Regis, whose chapter on these symptoms is one of the best general summaries of the subject, we can divide the obsessions first into impulsive types, where the suggestion or feeling that lies at the basis of these symptoms is not controlled by the inhibitory action of the will. Under ordinary healthy conditions we have the power of choice in our ideas and resulting actions; no one of them becomes predominant so that we cannot substitute for it another. In this obsession the victim of the impulsion is impelled to act and think against his judgment, and in extreme cases, where the volition is altogether disabled, may do the most absurd or even criminal acts, or be tormented with the most unreasonable fears or doubt, being all the time fully conscious of their absurdity and impropriety. Regis divides these impulsions or impulsive obsessions into (1) the obsessions of indecision; (2) the obsessions of fear (phobias); and (3) the irresistible propensities or morbid impulses.

**Obsessions of Indecision.**—The most typical form of this class is the *folie du doute*, or doubting insanity, as it has been called. In its mildest form it is by no means uncommon; it may exist merely as a tendency to question one's acts—to be troubled with an uncertainty as to whether one has locked a door as he should, for example. Another form is what the Germans have called *Grübelsucht*, or metaphysical mania, where the individual distresses himself over abstract or ridiculous questions. Still others are in constant distress for fear that they have mistaken the address on a letter that they have sent, or some equally trivial matter. In one case observed the patient would spend hours in going back and forth before starting anywhere, each start being balked by the fear that something or other had not been done that ought to have

been done. Even the going up and down stairs to and from his room was interrupted the same way; he would go back and forth indefinitely until stopped by almost the use of force. Still others are troubled with religious scruples; they have an abiding fear that they have committed some sin, possibly a trivial one, but it may occupy their mind almost to the exclusion of all other ideas. The varieties of these obsessions of indecision are infinite; anything in regard to which it is possible to raise a doubt may be their incitation. Some patients distress themselves for fear they have been guilty of some impropriety, perhaps some trivial mistake in etiquette; others are equally worried for fear that in some of their acts they may do something in the wrong way—the tying of a cravat or parting of the hair, the form of greeting or parting, etc., may any of them be the subject of their worries. Perhaps the most frequent form is the question that arises as to whether one has performed certain duties or taken certain precautions, such as leaving things in their proper place, locking doors, turning out the gas, etc., and even in the milder types which some of us may have personally experienced, the individual will go back on his tracks over and over again before he can free himself from the obsession. Closely allied to this type are the crack-steppers and the counters, etc., who feel uneasy if they fail to note the number of posts they pass or if they step off certain definite lines in their walks.

In its severer manifestations this doubting psychosis may be a very serious matter; it may occur paroxysmally and be accompanied by precordial pains, headaches, etc. The common delusion of having committed the unpardonable sin in melancholiacs has some resemblance to some of the doubts and mistrusts, but the real melancholiac is a different sort of case. These neurasthenic obsessions are not real delusions; the sub-

ject has a perfectly clear intellectual comprehension of his unreasonableness; they are simply ideas or feelings that he cannot get rid of at the time. It is in the milder manifestation, however, that these obsessions of indecision are most commonly observed, and in many cases they hardly affect the normal life of the individual, and to a slight extent they have been a part of the experience of very many otherwise mentally healthy persons.

The **phobias,** or **obsessions of fear,** constitute a more obviously abnormal class of symptoms, and are much less common than the obsessions of doubt. In these the patient suffers from an uncontrollable dread, usually confined to a single object or class of objects. In some directions it borders on the class just described; as, for example, in the so-called mysophobia, or fear of dirt, where the continual washings may be interpreted often as the result of an obsession of doubt as to their completeness as well as to the fear of defilement to which they are usually credited. In fact, in this as well as in some other ways the two conditions overlap, so to speak. But the fully developed obsessions of fear are a step beyond those of doubt either as neurasthenic symptoms or mental degenerative stigmata. The forms they may take are, however, almost as numerous. We have, thus, the fear of open places (agoraphobia), in which the patient cannot cross a square or even the street; and its opposite (claustrophobia), where the same sort of dread is excited by being in an inclosed space. A large number of other forms have been described, such as astrophobia (fear of lightning), cremnophobia (fear of precipices), fear of blood (hematophobia), etc., all only manifestations of a special form or type taken by this neurasthenic dread. The origin of these fears is simply explained: they are results of ideas that would leave only fleeting impressions on a healthy brain, but which leave an

exaggerated and lasting trace on the asthenic organ. They may originate with some special experience: an apparently narrow escape from being run over may be the inciting cause of an agoraphobia; a sudden morbid impulse or suggestion to throw one's self down may be the cause of a phobia as regards all high places. In all cases it is the weakened inhibition that is at fault. It is easy to see how almost any variety of obsessions of dread may thus arise, and most of us can, from our own experience, appreciate their possibility.

**Morbid impulse,** or **obsession propension,** is still another modality of the same general type of neurasthenic defect of mental and emotional control, the existence and *modus operandi* of which can be readily appreciated from one's own experience. Most of us have experienced at times a morbid impulse to do something of which our better judgment disapproved, and it is only in these cases where the impulsions are so strong as to cause distress or become irresistible that they are really on the borderland or fall under the head of the subject of this chapter. They are as manifold in their forms as are the obsessions of doubt or fear, and vary in their importance and severity from the simple easily rejected suggestion to say or do something *outré* or wrong to the most inconvenient or dangerous impulses to serious crimes, such as assaults, arson, suicide, or homicide. A conscientious individual may suffer intense distress by the persistent besetting ideas of blasphemy or other improper language; the sight of a weapon may suggest its use, and even cause the commission of crime. The idea of the act may be constantly present for a long time with the individual or may come upon his consciousness suddenly, and sometimes without any cognizable external suggestion or cause. More often, however, these sudden besetments of the will are suggested by some association with objects or in time or place. The fact that a suicide

has been committed in a certain place and in a special way has led to its photographic repetition by one of these neurasthenics, and we have known an individual otherwise apparently sane to whom the sight of a sharp ax or knife has been more than once the occasion of an attempt at homicide. It is not solely in degenerates that these obsessions are dangerous; they may be equally so in simple neurasthenics, a fact the forensic importance of which has not been so fully recognized as it ought to be.

Besides these more or less fully developed impulsions, we have the simpler type of purely intellectual obsession without impulse to action, the imperative conceptions or fixed ideas of authors. Here the subject is troubled with only a pervading thought, a notion or even a feeling of which he finds it difficult or impossible to rid himself. It may be a word or a rhyme, like Mark Twain's "Punch brothers, punch, punch with care, punch in the presence of the passenjare"; or it may be a more elaborate conception—an anticipation of evil, for example. Many so-called presentiments are merely such neurasthenic conceptions.

Apparently different, but really closely related, and belonging to the same general class of pathologic cerebrations, are the aboulias or defects of the will involving acts, where the patient has the desire, but not the power, to carry out the movement or purpose of his idea. There are as many possibilities in this direction as in morbid impulse, but fewer instances and varieties have been described. Regis mentions several types, such as the inability to rise from a sitting posture or to climb heights, for which he suggested the names *ananastasia* and *ananabasia;* the inability to dress one's self, to write one's name, etc. There is no essential difference in all these neurasthenic besetments or obsessions; they all have alike their origin in an intellectual conception, an idea, and they all graduate into

each other in one way or another. An obsession of indecision may be based on a morbid fear, or vice versâ; and an impulse and aboulic obsession may have essentially the same mental mechanism—the idea of compulsion, of inability to act otherwise than in the way mentally suggested. While all these above mentioned may, and perhaps more generally do, occur in individuals with a more or less marked degenerative taint, it does not follow that this is always the case. In their most pronounced forms they are only exaggerations of the experiences of average normal individuals under certain special conditions, and we have seen quite marked instances of the obsessions of indecision and aboulia in persons without any known special neurotic heredity or very prominent degenerative stigmata. These symptoms of mental or cerebral neurasthenia are frequently and perhaps commonly associated with numerous physical neurasthenic symptoms —headache, insomnia, digestive disturbances, paresthesias, etc.; but these need not be more than mentioned here. They may exist only under special conditions of nervous stress and only once in a lifetime, and they may be continuous while they last or, as is more frequently the case, paroxysmal. They hardly ever terminate in typical insanity, but these same morbid impulses and other obsessions, and especially the former, may occur in insanity, hence the occasionally held opinion that this is one of their terminations. They really represent, according to our present knowledge, quite a different pathologic state. They are, however, not uncommon in epileptics who are not actually insane or between the attacks of real epileptic insanity.

While the subjects of the various neurasthenic obsessions above described need not always be pronounced degenerates, though they probably often fall to some extent within the general class of originally defec-

tive organizations, there are certain related conditions that indicate very decidedly a morbid constitution from the start, and usually a very notable neuropathic heredity. These are the periodic morbid impulses, and their most familiar type is periodic alcoholism or dipsomania. In this there is often first the appearance of neurasthenic depression in most cases in one form or another, most commonly headache, malaise, restlessness, insomnia, etc., to a greater or less extent; and there follows the craving for stimulants, and the victim gives himself up absolutely to the gratification of this desire. If the ordinary alcoholic stimulants are not available, anything in that line will be taken; there is none of the ordinary drinker's fastidiousness, anything strongly alcoholic will be taken with avidity. The attack may last with brief intermissions for many days or weeks, and then it passes off, leaving the sufferer prostrated and usually much depressed also mentally for a time. These attacks may occur at regular periods, with intervals of months and even years, during which the subject is often a model citizen, or they may be excited at any time by overwork, mental strain, or misfortune. In many cases, but not in all, as said in a recently published text-book, there is a direct heredity of alcoholic habits. In this disorder the desire for drink is commonly called an appetite; this is hardly the best name, as it signifies a desire for drink for its own sake, which is hardly the case. The craving is simply the symptom of the neurasthenic or neuropathic craving which in this type takes the form of a demand for stimulation. There is no social element in this type of drunkenness and little real or apparent pleasure; the victim indulges indifferently alone or in company. After a varying period, with perhaps several attempted reforms and relapses, the attack passes off, leaving the subject generally more or less prostrated and penitent. There

is by no means always a direct heredity from parent to child in these cases; we have seen it where heredity, if it existed, must have skipped one or two generations, and occurring in an individual whose parents' habits were unexceptionable, though there was a record of intemperance in the remoter ancestry. It is highly probable that it may originate in the victim himself, sometimes as a sequel of disease, though such cases are rare, and seldom satisfactorily observed.

Degenerative periodic impulse may appear in other forms than dipsomania; one is the tendency to vagabondage noticed sometimes in young persons who are periodically seized with the irresistible desire to go on the tramp. The reason why this is not often observed in older individuals is probably that in advanced life these cases degenerate into steady vagabonds or criminals, or take to some occupation that gratifies their impulses. A considerable number of regular professional long-voyage sailors appear to be degenerates and "ne'er-do-wells," and have possibly graduated out of youthful periodic vagabonds. We have known of cases of this periodic morbid impulse taking the shape of sexual perversion in some of its most repulsive forms, and still others have been reported.

Sexual perversion itself is, at least in some of its manifestations, to be reckoned amongst the degenerative borderland conditions. It would be absurd to claim that it was always such, for it may be the result of vicious habits and be wilfully cultivated, as is shown in the records and practices of some peoples of former times and in some civilizations at present, the ancient Greeks and the modern Chinese being examples. Among these people these practices were or are common, and not considered abnormal. In many cases, however, it is clearly due to original defect; especially is this true of those congenital examples of perversion where the physical stigmata are obvious—in the sexual

misfits, the femininely organized man, and the masculine women, mentally and emotionally as well as physically; and there are still others in which the conditions are not so obvious, but the inverted sexuality is just as abnormally strong. The condition is not an acceptable one to the victim always in these cases, and suicide or actual insanity may be the result. In other forms of sexual perversion the manifestations may range through a wide scale, from a comparatively harmless fetichism for articles pertaining to women to the most abnormal practices and even the most atrocious lust-murder. It is hard to estimate responsibility in some of these, but in many of them we must recognize degenerative taint and reckon them among the borderland conditions.

Periodic kleptomania may also exist, and similar homicidal mania, in unquestionable degenerates, though both of these symptoms may be really only aggravated neurasthenic manifestations. These and many other so-called manias, such as pyromania, etc., are often only symptoms of profound degenerative neurasthenias, and in this class, as an extreme type, may also be reckoned the tics or convulsive neuroses, the "jumpers" of Canada and the Maine woods, the myriachit of Siberia, and other similar conditions noted in various parts of the world. All these neurasthenic symptoms may be imposed upon actual mental weakness and alienation, and they are not so very infrequently observed in patients who have recovered "with defect,"—that is, with an impaired cerebral organization,—and, as already said, in epileptics.

The diagnosis of these states is generally simple, but the facts just mentioned should not be forgotten. Pure neurasthenias with the intellect unimpaired, even in their extreme forms, are seldom difficult to recognize and to differentiate from the typical forms of mental disease. There is, however, a neurasthenic type of

melancholia associated with fears and indecision that may be almost considered as a variety of the genuine form, so far as its more obvious manifestations are concerned. These patients, however, are less self-accusatory, less positive in their self-condemnation; they may worry over the unpardonable sins they fear they have committed, but are not so convinced of the fact as is the case with the genuine melancholiac, and they do not have the continuous distress of the latter; they strive against their feelings, their ideas do not have the character of actual delusions, and the symptoms of refusal of food and wilful suicidal intention and desire to die are not characteristic. There are undoubtedly many cases, however, that have been classed as melancholiacs, and if there is any type of true insanity that their condition may most readily pass into, it is likely to be this. Certain cases of incipient paresis may also cause confusion for a time, especially the depressed and hypochondriacal cases and those in whom a kleptomania is one of the earliest symptoms. Sooner or later, if not at once, however, the characteristic physical and mental symptoms of paresis will remove all doubts as to the true nature of the case.

When marked degenerative stigmata exist, they will aid in the diagnosis to some extent, but they are also equally liable to be present in many other conditions, such as hysteria, imbecility, original paranoia, etc., which may possibly in some cases be complicated with obsessions. Hysteria itself is a sort of borderland, but it has its special stigmata and characteristics. The so-called traumatic neuroses are often mentioned in this connection, but are best treated of in special works on neurasthenia. There is an occasionally litigious psychosis connected with railroad traumatism that is a genuine mental aberration in degenerative individuals. In kleptomania and sexual perversions it may also be difficult to exclude criminality, and in

many other cases the diagnosis of neurasthenic obsessional conditions may have a forensic importance, as crimes may be committed in them and the question of criminal responsibility arise. In non-degenerative cases or those where the physical stigmata are few it may be difficult to establish irresponsibility, but it is well to keep in mind the fact that it may exist. The whole history and all the facts of the case require to be learned and studied in such cases with especial care.

The prognosis of neurasthenic obsessions and of all the borderland states we have been considering depends in each case on the amount of original defect. No one would say that the slight obsessions experienced by nearly every individual have any dangerous significance, and yet in conditions of ill health or with other nerve-exhausting factors they may be greatly intensified even in the normally constituted. There are many individuals who cannot trust themselves to look down from a height and yet who are in other respects perfectly sound and sane. Among such individuals may be reckoned, on their own testimony, Verga, the distinguished Italian alienist, and Beard, the first to fully describe the symptoms of neurasthenia. We have seen very striking instances of obsessions of indecision and of aboulias where the symptoms disappeared completely and, so far as observed, permanently. In probably the majority of cases, however, there is an original nervous weakness, and on the amount of this defect the prognosis depends. With a very marked degenerative taint it is bad as to recovery, and the condition may even pass finally into some form of insanity—true melancholia or some phase of paranoic delusion.

The treatment of these conditions is that of neurasthenia, and sometimes will simply tax the skill and tact of the physician. Change of scene or occupation in some cases will be sufficient, but travel is not often

advisable. Rest, eliminants, tonics, such as iron, strychnin, etc., and in some cases sedatives, like the bromids, cautiously used, are all of service in appropriate cases. Some patients react well to cold morning sponge tub-baths, others are better for warm baths at night. General faradization, and static electricity in some of the forms of its application, have been highly recommended by some and may sometimes be serviceable. Hypnotism, though it has its advocates, is not to be generally advised; it is of dubious advantage and may do harm. One or two German authors have made much of it, often in an objectionable way, in the treatment of sexual perversion, but we cannot indorse their methods. In very degenerate cases a cure is not to be looked for; all that can be expected is temporary relief or palliation. In a certain class of neurasthenic cases isolation, with special feeding, massage, etc., the Weir Mitchell rest cure, may be advisable. One thing must be especially remembered in these cases: that every fact bearing on the condition, every variation in general health, every possible collateral or direct cause, should be searched for and studied for therapeutic indications.

## CHAPTER XXII.

### TERMINAL DEMENTIA.

The great mass of the inmates of our asylums are cases of terminal stages of mental disease. We have already noticed in connection with the different forms of insanity the general symptoms of the secondary conditions that follow them. While it is often the case that the original condition implants its type to a greater or less extent upon the terminal condition, this is not by any means the universal rule. All forms of insanity of many years' duration, with the exception possibly of certain types of delusional derangement, fall under the general head of terminal dementia. The impaired mental action or dementia is characteristic of them all in varying degrees. In the very large proportion of cases it is the one prominent feature, and varies in its degree from a mild general defect to a completely vegetative condition, where the patient can only follow a certain simple routine requiring the least possible degree of intellection. In the milder form the mental action, though limited, is sufficient to make the patient a useful member of the society in which he finds himself if he is only subjected to the proper control and to judicious general management. These patients do well in asylums, and can do much to make themselves useful; outside of such institutions they are, as a rule, incapable of taking care of themselves. Their condition is, in fact, a more advanced degree of what we have already described as recovery with defect. Sometimes they have a certain tendency to excitement, and are usually classed as

chronic maniacs. In other cases depression is the ruling feature, and they are usually called chronic melancholiacs. Delusions may be present and very marked, likewise hallucinations and illusions, and some of these cases fall under what is called secondary paranoia; and in still other cases mental confusion is marked. In fact, the symptoms are infinitely varied, so that all of these types and some others may be counted in the permanent population of any large institution. The bodily health in these cases may be reasonably good; they are able to work and often are extremely willing and useful; others, again, are absolutely helpless, and their general condition requires the constant attention of the physician, not so much to treat actual illness as to oversee and prevent a general, more rapid decay that would follow from their lack of attention to all the ordinary rules of healthful living. As a rule, the chances of life of these patients are far less than those of the average normal individual. They break down readily in disease and are especially subject to accidental ailments, lung trouble, etc. The average mortality of an asylum which is made up of this class is therefore higher than that of communities in any condition except the most unsanitary. In a well-regulated institution the death-rate can not well be kept under 6 or 7%, and while this higher rate is largely due to deaths in acute insanity, these chronic insane furnish far more than their share as estimated by the usual ratio of deaths in the general community. Outside of asylums and poorhouses these chronic cases are sometimes found, and with kindly and judicious friends they manage to live a comparatively comfortable existence. These cases, however, are exceptional, but the facts of family care of the insane as shown in Belgian and Scotch communities demonstrate how practicable this method of controlling them may be found. It has, however, its disadvantages, and re-



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quires to be carried out under the best conditions in a stable community where the traditions and customs have been adapted to it from generation to generation. It also requires a thorough and conscientious medical oversight. Violent cases of this type, and there are many such, can be properly cared for only in an asylum, though there are many that suffer miserably in poorhouses and jails.

## CHAPTER XXIII.

## ON THE EXAMINATION OF PERSONS SUPPOSED TO BE INSANE.

THE insane may be divided into three classes: one so manifestly insane that any layman can readily make the diagnosis; another, in which a physician with some knowledge of insanity will easily make a diagnosis; and the third class, in which all the skill of the medical expert will be required to reach a proper conclusion.

**The Method of Examination.**—This examination will be to determine whether or not insanity exists, what will be the duration and termination of the attack, and, as nearly as possible, the time when the attack began. Conclusions will be reached in these several instances, first, from relatives and attendants; second, by an inspection of the patient and his residence to determine any sign of insanity in bodily stigmata, in deportment, in dress, in environment; third, by conversation with the patient, so as to ascertain the condition of his intellect, emotions, and volition; and, fourth, by an examination of all the organs of the body that are accessible.

First, the previous history of the patient. Care must be exercised here in properly estimating statements made by the friends; they may be desirous of establishing the insanity and exaggerating, and indeed falsifying, the record; or they may be equally anxious to prove his sanity, and will misrepresent in the other direction. The medical man, to be a success in his investigation, must possess a logical mind, be able to analyze evidence, and cull out that which is defective and untrustworthy. A husband may want to get rid

of his wife, with whom he does not live happily, or the respectable family may desire to get rid of a scapegrace son, or a crime may have been committed and no sufficient plea in defense be found. It therefore behooves the physician making this investigation to be vigilant. In making the examination the hereditary predisposition should be inquired into, and it should be remembered that nervous diseases undergo transmutation in transmission, and that hysteria, chorea, neuralgia, alcoholism, tuberculosis, etc., may be the hereditary basis. Inquiries should be made as to the patient's previous health from infancy up, concerning history of convulsions, chorea, rachitis, or febrile diseases in childhood; character and temperament in childhood; condition at the developmental period; condition during adolescence; sexual relations, masturbation, excessive intercourse in marriage or illicitly, venereal diseases; we should inquire about injuries to head, delirium, delirium tremens, intemperance in use of drugs (opium, chloral, cocain, etc.), physical condition, habits, such as exercise, history of intellectual strain, of anxiety, of grief or disappointment, as to state of the affections and religious convictions; history of present attack and its probable etiology.

Gaining access to the patient is often difficult, and requires sometimes much talk and judgment on the part of the physician. Insane patients are often very suspicious, and will refuse admission to medical men; under these circumstances some medical men resort to a stratagem; they deny that they are physicians, and approach the patient in some less distasteful way. This we are sure is a mistake. Honesty should be the rule of practice. The physician who entered the presence of the religious lunatic as a clergyman, and was asked by the patient to pray with him, being out of practice in prayer, now thinks that dissimulation should not be practised. The resourceful man will

overcome the obstacles and get access to the patient. He will then determine his general nutrition; consider the circulation, temperature, stigmata of degeneracy; condition of heart, lungs, abdomen, and genito-urinary system; reflexes, motor and sensory; condition of speech, whether there is stammering, paretic scanning, verbigeration, aphasia, agraphia, and apraxia. He will ascertain about sleep; study his facial expression and gesticulation; the appearance of the apartment. He will carefully consider the psychic condition, his mode of speech, his conduct, whether he has illusions, hallucinations, or delusions; the condition of his emotions, as to his being depressed, excited, exalted, irritable, apathetic; his power of attention, memory, judgment.

While no absolute or universally applicable rules can be laid down, it is well, in many doubtful cases at least, to let the subject know at once what is the object of the investigation; that is, to state to him that his health, both mental and physical, has been the subject of suspicion and that a thorough study of his case is desired for his sake and that of others. It may put him on his guard to some extent, but if he is really insane he will be apt to betray it to a careful examiner. If without saying anything to excite opposition one can so treat the individual as a patient that one can obtain his co-operation in the study of his case, so much the better. Most insane are aware that there is something wrong with them even if they do not wish to admit it, and this is especially true of those cases where reasoning capacity is retained and the diagnosis is dubious. Perfect frankness and sympathy with such sometimes works admirably; we have been able sometimes to induce them to voluntarily go to an institution for treatment, in spite of the presence of extreme suspicion leading to dangerous acts. Every case, however, is more or less a law to itself, and the judgment and tact

of the examining physician will be called upon to the fullest extent.

One advantage of the thorough physical examination is that it puts the insane or suspectedly insane in the position of a patient from bodily disease which he may or may not himself suspect, and often to some extent disarms his suspicions, which would be aroused by any direct questions bearing on his mental state.

Letters and handwriting give much valuable information. Insanity is sometimes only shown in writings; people are often off their guard in letter-writing. It will be especially valuable to compare letters of to-day with those written before the attack began; not only is the composition of the letter to be considered, but the penmanship, and this should be compared with that months before. There are sources of errors that must be borne in mind, such as the simulation of insanity by the insane and the concealment of delusion by the insane. Insane persons may simulate just as sane people may, and they may simulate a form of insanity different from that which they possess. Occasionally the general practitioner may mistake a delirium due to some visceral disease for an insanity. The simulated insanity by sane criminals will require prolonged and repeated examination often to detect it. The forms usually simulated are acute mania, dementia, and melancholia with stupor, or acute confusional insanity and epileptic insanity. The physiognomy, the bodily temperature, the condition of the vasomotor system, the sleep, are all exceedingly important in this differentiation. The simulator usually much overacts his part, constantly seeks to give evidence of his insanity, while the lunatic tries to conceal it.

It is worth while here to state that extreme caution should be used in doubtful cases and the examiner should be able to give good reasons for his belief in the insanity. There should be no mistake in diagnosis, no

overpositiveness on insufficient data. Where the commitment for insanity is a judicial proceeding the medical witness is in a measure protected—absolutely in some States—from vindictive prosecution, but where it is made on a medical certificate the maker is sometimes put to serious inconvenience. This is as likely to happen in cases of some really though not obviously insane as with those where there has been an actual mistake; the most troublesome individuals of all are certain litigious paranoiacs or degenerates who can make themselves appear to the average person as sane. Courts and juries are apt also to be prejudiced against anything that they think has interfered with the liberty or rights of the citizen, and do not always do justice for this reason. These facts should be borne in mind, and whoever certifies to the insanity in a dubious case should be certain of his position. It is not advisable, unless one has had much experience with the less obvious symptoms of derangement as shown by these less pronounced types, to pose as an expert or venture to give decided opinions. Even experienced and skilled alienists are at times at a loss to detect satisfactory proofs of mental disease in a patient in whom they know it exists by signs they cannot well describe or define.

The details of the psychologic examination are best suggested by a study of the descriptions of the various types of insanity, and are therefore omitted here.

## CHAPTER XXIV.

## THE ETHICS OF INSANITY.

THERE are in the practice of almost every general practitioner a number of questions which arise relating to insanity that may be puzzling and at times severely tax his judgment; the family physician especially is liable to be questioned in regard to matters of heredity or of the policy as to marriage, divorce, the sequestration of relatives or individuals, etc., and an answer may at times be difficult to give. First of all, is the question of heredity: one of the most common that the physician is liable to be asked is concerning the propriety of marriage or of engaging in projects or in business where a family history of insanity or supposed heredity exists. There are many conscientious individuals who would forego marriage and domestic happiness for fear of transmitting to offspring their hereditary defects. And there are very many, less conscientious, who need to be advised. Advising them is often a thankless task, and yet the physician may be consulted by relatives or others interested in regard to their conduct. It is safe to say that insanity occurring in an individual is liable to leave its scar on his mental make-up, though this may be so insignificant as to be deprived of any practical importance as far as he himself is concerned. When we consider, however, how great a part predisposition plays in the etiology of mental disease, the former attack of insanity is a matter for serious consideration, no matter how slight a trace it may have left. Moreover, a person may himself not have been insane, but the existence of insanity in other members

of his family, or especially in his immediate ancestors, may raise the question, either in his own mind or in the minds of others. A recovery from insanity is practically complete in a certain proportion of cases. It is a disease, however, as compared with others, the least self-protective, and the person who has once gone through an attack of pronounced mental disorder is the less immune to future attacks for that reason. In a certain proportion of cases where the recovery is apparently complete there yet remains a certain degree of defect, unrecognizable by the general public, but more or less apparent to the individual himself, and sometimes to his nearest relatives and associates. In a very considerable proportion of cases recovery is never complete, and there is a readily recognizable mental defect, though not sufficient to require the individual's restraint or incapacitating him for the ordinary occupation and business of life. Such persons mingle with the world, and are looked upon as to a certain extent cranks, or as flighty, eccentric, or peculiar. In far the greater proportion of cases recovery never occurs; the degenerated condition is too well established and inbred in their constitution for them ever to be restored to their former condition in society. It would be saying a great deal to lay down the rule that no person who has ever been insane should marry, and yet it would be on the safe side if such a rule could be adopted. It is not the decidedly cranky ex-patient who is likely to ask advice, and there are many unfortunate unions of such individuals. If advice is asked of the family physician as to projected marriage of one of his clients to such an individual, it would be his duty to point out the possibilities of evil, and there his duty would end. Society has not reached a point where the advice given in medical journals sometimes, to asexualize the unrecovered insane or those who have recovered with pronounced

defect, will be received with favor. Nevertheless it might be a policy worthy of adoption, but its realization lies in the future. We may lay it down as a safe rule to discourage all marriages of individuals who have gone through an attack of insanity arising from apparently insufficient cause or where a strong predisposition or degenerative defects are known to exist. It is possible for a temporary delirious attack to occur, or a mild confusional insanity following exhaustion or diseases or exposures to intense toxic conditions, and yet not indicate any serious mental depreciation after recovery. We should regard these cases as excepted to a certain extent from the general rule of the impolicy of marriage of the victims of mental disease. Still, it would be safer if they, too, could avoid offspring in a legitimate way. The celibate life itself is to a certain extent unfavorable to mental health under certain possible conditions, and it might possibly be better for the individuals in these cases to marry; but the possibility of transmission of a predisposition or mental weakness to children is the matter to be considered.

With regard to ancestral insanity as unfitting a person for married life, many things are to be considered —the form of insanity that has appeared in the family and the date of its occurrence in relation to the birth of the individual in whose interest advice is asked. The whole family history as regards nervous and other diseases, questions of consanguinity of parents, etc., all must be taken into consideration. If the parents had been themselves victims, or even the grand-parents; if there had been anything like a succession of suicides in the ancestry, with or without other evidence of mental aberration; if the insanity that occurred had been of a pronouncedly degenerative type; if it was on the maternal rather than on the paternal side; if it

was attended with collateral heredity of mental disease; if there was a history of nervous disorders, epilepsy, alcoholism, or even of tuberculosis,—all these points would enter into the problem, and according as they existed singly or in combination, the answer must be made, as a rule, unfavorably. If, on the other hand, the attack was a single one, following traumatism or exhaustive disease or acute infection or intoxication; if there was no collateral heredity and no decidedly neurotic or insane family history; if the insanity occurred late in life, after the birth of the patient and from apparently adequate cause,—the answer may be different, and there may possibly be no contraindications whatever to the marriage of the descendant on account of mental disease. Some forms of insanity are decidedly hereditary, and we may say, as a rule, that the more degenerative the type occurring in the parent, the greater the danger of defect and predisposition to mental disorder in the offspring.

We must bear in mind what has been already taught, that there are three principal elements in the production of insanity: Predisposition, toxic influences, and mental strain or stress of some kind or other. Without the first, the other two are less liable to produce the disease, and according to the amount of predisposition must the danger be estimated in any particular case. One of the most formidable forms of mental disease—general paresis—is, we believe, one of the least hereditary, depending, as it does, in the vast majority of, if not all, cases upon a specific infection. Nevertheless, the occurrence of paresis in an ancestor is not to be overlooked in considering the possibility of mental breakdown in descendants. There is a certain amount of truth in the idea maintained by Regis and other French authorities of a congestive heredity in these cases, and the occurrence of paresis itself indicates a certain weakness, since excesses, mental strain, and syphilis are not

the cause of the breakdown in many cases where all three exist. It should be remembered, moreover, that paresis is a disease of the prime of life; that its syphilitic antecedents often date back many years, and unless we can be sure that the poison did not exist in the system before the birth or begetting of the offspring, we cannot certainly be assured that the latter is absolutely free from the taint.

As a general rule we may say that ancestral insanity of any type casts a cloud upon the title of any individual to absolute mental health and freedom from inherited predisposition to mental disease. This may be cleared up by thorough study of the case in certain instances, but, as a rule, it exists.

The question as to the continuance of sexual relations of persons who have recovered from mental disease may possibly be asked, and the advice given should be governed by the rules laid down in the preceding pages. In some cases it may be safe; in the majority they had better be dispensed with. In some countries insanity of a certain duration specified by law is ground for a divorce, but not in this country so far as we are aware of its laws. There is no ethical reason why absolute divorce should be granted; marriage is a contract for better or for worse, but a partial separation, a divorce *a thoro*, might be an excellent provision, at least in many cases.

Senile insanity is not necessarily an evidence of family taint. Each case must be judged by itself. A certain amount of mental decay is almost normal in old age, and the hardships and strain of a long life may easily produce a condition of mental breakdown that may sometimes be estimated as senile derangement. Therefore, in taking account of this factor full inquiry should be made to ascertain just how far degenerative predisposition may have entered into the etiology. Atheromatous degeneration of the arteries is a very

common condition in advanced life, and with it there is more or less derangement of the circulation of the nerve-centers that may clinically manifest itself in the greater or less degree of the mental changes from the normal. Senility is properly a relative term. The saying that "a man is as old as his arteries" embodies a practical truth, and a very early appearance of mental decay in advanced age should be looked out for and reckoned with in estimating the family history as regards the probabilities of insanity.

To recapitulate: it would be better if no one who had passed through an attack of insanity should venture into matrimony or attempt to raise a family. Still, in the milder or more curable forms of mental disease there are many possible cases where the chances of morbid heredity in this direction are minimal. It is especially in those types of insanity which are based on a marked original, constitutional defect, and are what we call degenerative in their type, that the greatest danger exists. Among these we may especially recognize acute mania, properly so called, in the limited sense in which the term is used in this work, together with other periodic forms and the delusional types included under the general head of paranoias, that the peril is greatest. In purely acquired types, including under this head traumatic insanity, toxic forms, and those due to special and entirely adequate conditions of shock, overstrain, etc., the danger is least. In paresis, though it may indicate a certain predisposition, this element in its etiology, in spite of the views held by some authorities, such as Naecke, is less prominent than in many other forms of insanity. The same considerations apply when estimating the probabilities in the family history of any person who may ask advice in regard to his possible danger on account of insane relatives. Every case must be judged by itself, and sometimes even the most formid-

able form, such as epilepsy, is due to an adequate cause, and occurring long after the birth of children, may have no special significance. Paranoia, however, and circular insanity and special forms of suicidal insanity or aberrations, perhaps without any other very decided mental symptoms, have a bad significance.

Occasionally a physician's advice is asked in regard to business matters, especially the advantages and disadvantages of certain forms of occupation, the dangers of special projects contemplated, etc., by individuals who have some doubt as to their mental endurance; in such instances, every case must be judged by itself. But, to be on the safe side, whatever advice is given should be carefully weighed, and based upon thorough study of all probabilities and possibilities. One would not wish to advise a person with specially marked tendency to insanity to undertake business operations involving special mental strain or associations that could be damaging by any possibility to mental health. The case is best illustrated by the extreme example that we would not advise the son of a drunkard to go into the liquor business. The same way it would not be well for a person in what might be called delicate mental health to undertake speculative occupations involving severe mental strain or suspense; still, as already remarked, every case is more or less a law for itself, and general rules cannot well be laid down.

A very delicate question which may arise to trouble the medical man is what is to be done in regard to certain cases of insanity recognized by him, but not altogether apparent to the general public, in which dangerous tendencies exist. Here the ethical question of medical secrecy may be involved. Facts coming to the knowledge of the physician may be of importance to other parties. One cannot learn of them in the ordinary course of events. In the extreme case when danger is imminent to individuals or to the general

public, there ought to be no question as to the physician's duty, and yet its execution may subject him to some unpleasant risks. Not long since an English physician was mulcted in damages to the amount of $500 for giving his opinion as to the insanity of a young nurse who had the charge of giving medicines and care of the sick and who was suffering from the most evident persecutory delusions. It is true that a higher court reversed the finding of the jury, but the physician was nevertheless subjected to expense and serious inconvenience for a considerable period. There are many dangerously insane at large whose condition may be recognized, and yet it would be very imprudent, in a strictly utilitarian point of view, to make known or publish their condition, and still more to take any actual steps for their sequestration. The physician, therefore, will do well to look at all sides of the question in these cases and govern himself accordingly. In cases, however, of actual and imminent danger, as already said, his duty ought to be clear. The unfortunate thing is that ignorant jurors and opinionated judges are liable to bring about occasional miscarriages of justice in such instances. The public needs educating as to the true nature of some of the dangerous insanities that are too much at large, and which are only called to its attention in the domestic or public tragedies that are from time to time occurring.

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