restlessness, especially at night, no inclination to go to sleep, but a constant nervous tension and desire to go away, break out of the window, tear the sheets, scream, bite, and scratch if hindered. Later, they weaken, creep

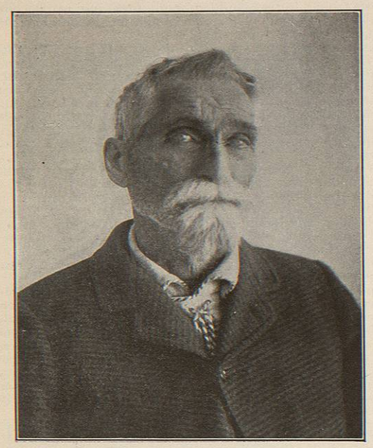

FIG. 2843.—Senile Confusion with many Hallucinations and Delusions.

about on the floor, smear themselves in every way, roll about, and object to and oppose everything that is tried to be done for them.

Under this head should be included the "dark-room delirium" so often observed after cataract operations in the aged. Here, however, hallucinations of sight are apt to be uppermost, the talk more sensible and connected, and the motor restlessness not so marked.

The duration of senile delirium may vary considerably, with many repeated remissions and relapses throughout its course. Sometimes these cases may eventually, with careful treatment, make a very good recovery, but as a rule it is at best partial, and finally leads to grave dementia. Those cases that do prove rapidly fatal, and they are not uncommon, show more and more confusion and continuous excitement, their strength fails rapidly, they do not assimilate the food they are forced to ingest. Then there ensue semi-consciousness, picking at the bed clothes, subsultus tendinum, extreme emaciation, weakness, profuse sweatings, deglutition- or ether-pneumonia or some other accident, and death.

4. *Senile Persecution.*—This group includes a number of those cases which exhibit symptoms analogous to those described under presenile insanity, among which various delusions of persecution are continually uppermost in the downward progress to complete dementia. The onset is gradual, with usually a change of mood and habits. The patients grow quiet, morose, suspicious; seclude themselves, and, finally, become definitely deluded and it may be actively hostile. They think they are robbed, insulted, intentionally and slyly poisoned, that their income has slowly been taken away. They hear threatening voices calling to them. They are charged with electricity, wet with corrosive acids, shot at and perhaps killed many times a day. Sometimes they become markedly elated, deck themselves, and put on airs.

The general conduct of these patients is good, they keep neat, and to a casual observer seem no different from normal old persons. At times, however, under the influence of delusions, they become more irritable and troublesome. The train of thought is not early impaired, nor the recognition of persons, places, time, and the general events of their environment. They often cause much trouble to themselves and others when at large, but under proper guardianship and restraint they usually pass a fairly comfortable and quiet existence to about the normal limit of life. In all their delusions there is a marked and growing childishness and absurdity, their persecutory ideas are ever changing and not much elaborated, they are easily influenced to modify their opinions, and in many ways show that the essential process is the gradually progressive dementia.

ETIOLOGY.—Doubtless all the factors causing the onset of the peculiar symptoms which we designate as senile are not yet appreciated. Some, with an imaginative tendency, have urged the auto-intoxication theory as explaining the origin of the more or less sudden nervous breakdowns. From the analysis of large numbers of cases it has been determined that the onset in the majority of instances occurs in the decade between sixty-five and seventy-five years of age, and that in those whose mental breakdown is noticeable earlier than this there has usually been much overwork, worriment, or excesses of various kinds in early life which have tended to predispose to premature decay. Heredity, we believe, plays a far larger rôle as a predisposing causative factor than is commonly supposed or can be learned from statistics, for the reason that there are usually but few who can tell accurately concerning the inner family life of the relatives and ancestors of old people, as most of the close friends have already died. We

FIG. 2844.—A Second Case of Senile Confusion. Patient died at the age of one hundred and four years. The photograph was taken when she was ninety years old.

know, too, how difficult it is to learn accurately the family history even in the case of young people. As a matter of fact, a definite history of hereditary mental taint is found in not much over fifty per cent. of the cases, except, perhaps, in those which we have included in the presenile group. Quite a number of these patients have had the reputation of having been rather weak-minded all their lives. This was the case with the subject of Fig. 2841, who soon became unmanageable from his extreme irritability when senile symptoms began to manifest themselves after the age of sixty years.

Frequently there is the history of a rather acute onset

after severe physical injuries, especially to the head, after grave general diseases accompanied with considerable rise of temperature, as in typhoid and influenza, or after violent excitement or severe nervous shock. This last seemed to be the determining factor in the case of Fig. 2839, who never recovered his mental balance and composure after being attacked in the woods by a frenzied Frenchman with an axe. Finally, it may be said that any factor tending to produce those subtle changes in the arteries which we speak of as atheromatous and calcareous degenerations, would indirectly thereby hinder the nutrition of the nerve centres and predispose to senility.

PATHOLOGY.—Macroscopic examination of the brain shows evident destruction of nervous tissue, with consequent loss both in volume and weight of that organ. The space thus available within the skull is filled up by compensatory thickening of the skull and by collections of serum. The average loss in weight has been estimated as nearly half a pound. The general contour may not be noticeably changed, although such brains are apt to be much softer than normal. Sometimes distinct calcareous or atheromatous patches may be evident in the larger arteries, and less frequently minute capillary hemorrhages and aneurisms or larger areas of softening, especially in the region of the basal ganglia. The pia is white, opaque, and thickened in patches. Infrequently there are adhesions of the dura; sometimes hæmatomata may be noticeable. Throughout the body we frequently see the results of the general hardening of the arteries—organic lesions in the heart and great vessels, and in the kidneys.

Microscopically there is an evident thinning of the cortex with atrophy and destruction of the parenchymatous elements and subsequent sclerosis and increase in neuroglia cells. Pigmentary degeneration is frequently noticed. The acute changes in the cells incident to sudden failure of nutrition are often also to be seen.

DIAGNOSIS.—The boundary lines between slight forms of senile dementia and normal old age are not sharp and well defined, and in certain cases the judgment as to their presence or absence must be purely arbitrary. The grave emotional outbreaks, and more certainly the cropping up of delusions in other cases, may soon make the diagnosis more certain. Much the same hazy boundary lines lie between these cases and those belonging to the involutionary years and presenile periods. In cases of melancholia the onset of senile symptoms is coincident with a growing tendency toward hypochondriacal and nihilistic delusions and an evident increased emotionalism. From general paralysis the diagnosis would seem not difficult, but, as a matter of fact, frequently mistakes are made between these two diseases. The excitement and delusions of grandeur may be quite similar, but the paralytic is more prone to enter cheerfully into minute details and be less impatient and irritable than the case of senile excitement. The accompanying physical signs would also be of eminent value.

The forms of senile persecutory insanity may be mainly distinguished from true paranoia by the general mental weakness, the disinclination to further elaborate their delusions and act accordingly, and, finally, the almost entire lack of true systematized delusionary plots. From the similar cases included under presenile insanity there would seem to be no strict boundaries. In the later cases, however, there appear less marked emotional periods with an increasing general mental failure.

PROGNOSIS.—True senile dementia is never fully recovered from. Under appropriate conditions there may be marked remissions, decrease of emotionalism, and a generally calmer habit of mind sufficient to enable the patient to return home to spend the rest of his days in a quiet, dreamy, second childhood. On the other hand, the onset of confusion may lead to accidents and no end of trouble if the patients are not closely watched and cared for. Abject helpless dementia seems to offer no ray of hope for even temporary clearness—the mental fires have burned out and nothing remains but the whitened ashes. As before stated, the presenile forms may exhibit almost complete restoration, and may even afterward re-engage in many of the activities of life. The great majority, however, of all these patients eventually become more and more markedly weak-minded, until they are carried off by some sudden intercurrent disease.

TREATMENT.—*A. Prophylaxis.*—Little stress has been laid upon this aspect of the subject by writers, obviously because, when the signs of dementia first appear, the sclerosis of the arteries and other grave pathological changes have already progressed considerably and certainly cannot be prevented; only occasionally can they be hindered, and still more rarely stopped by means of treatment. There are so many persons, however, in the community with slight nervous symptoms in earlier life sufficient to cause the experienced clinician to suspect their brains as offering a suitable soil for the involution insanities, that a few words in this connection may not seem amiss.

In such cases the regular habits of life, plain nutritious and unstimulating food, exercise, and the avoidance as far as possible of all worriment and severe mental or physical strains considered so important in the care of the really sick, will be found more beneficial in preserving the mental equilibrium than in restoring it when once disturbed. Many times if business men would be satisfied with a competence, and would retire from the wear and tear of exacting work comparatively early in old age, as has been so shrewdly recommended of late by a prince of finance, many would undoubtedly escape the untoward effects of senescence who now yearly hopelessly break down. Particular care to avoid excitement and the adoption of measures likely to hasten convalescence from acute physical disease in the aged will often prevent severe and sudden mental collapse. For similar reasons, operations that are so frequently recommended in old persons "if the heart is all right," should always receive due consideration as to the mental risks which may be incurred.

B. General Treatment.—The first requisite in caring for the aged insane is to secure good, careful, conscientious attendants. For this reason, relatives often make the best nurses, contrary to the usual rule in mental diseases. The whole daily life of the patients has to be mapped out and regulated. While diversion is ofttimes an object, it must be borne in mind that the old are very conservative and enjoy old haunts and familiar habits of life better than constant change of companionship and scenery. It seems sad and incongruous sometimes to find some old home-body forced to travel and see new faces and scenes in the hope that her mind may be diverted from the introspective ideas of beginning involution.

On the question of diet we would not be dogmatic. If everything that has been recommended as allowable were to be taken, there would be no restriction; if everything objected to were cut off the list, the patients would undoubtedly starve or die of thirst. It seems absurd to me to withhold such staples as bread, milk, and spring water from these often very delicate, toothless old people, because, forsooth, there may be a proportion of lime salts contained in each that is supposed to increase the arterial deposits. Yet such a course is advocated by the very latest authority upon our shelves. The various prepared foods upon the market have proved very efficient in feeble cases. As a general rule, all the food and drink should be served warm or hot. The living rooms of the patients need to be light and well ventilated, and kept warm both day and night. Efficient night attendance, especially with those who are restless or confused, is imperative. Cleanliness must be insisted on. For this reason the rooms are often best rather scantily and plainly furnished, with guards to the windows at night if necessary. Outdoor exercise in moderation quiets excitement and tends to produce more natural sleep, as do also massage and warm baths in certain cases.

C. Special Treatment.—Attempts to modify the degree of dementia by specific medication have uniformly proved unsatisfactory. Usually such remedies as will assist the general attempts to increase the physical nutrition will be found best. Potassium iodide has been lauded by some

for its specifically alterative effects in this disease. On the whole I have been disappointed in its use. On the other hand, cod-liver oil in as large doses as the stomach would bear, has proved much more efficient. In emaciated individuals rubbing with quantities of *pure* lard or other animal oil has seemed at times to decrease the dry harshness of the skin and markedly increase general nutrition.

For the noise and restlessness opium should not be used. In fact, it has but little place in the insanities of old age. After extensive use of all the newer sedatives, I believe that dormiol, in appropriate doses, is the most generally serviceable. From two to four drachms of the ten-per-cent. solution of this drug in water will usually be found sufficient, although such doses can be safely repeated if necessary. It does not seem to depress the circulation appreciably. Small doses induce a calmer frame of mind during the day, and larger ones will quickly produce dreamless and restful slumber at night. Its effects are transient and it is easily taken, and has no disagreeable effect subjective or objective. Sulphonal and trional are serviceable on occasion, but chloretone has proved disagreeable and is too depressing to the heart to risk in most cases. In patients manifesting extreme weakness or collapse, complete rest in bed and vigorous stimulation with alcohol and nux vomica and warmth are sometimes the only things which will avert a sudden dissolution. I have always been singularly unfortunate in the use of digitalis in these cases and I believe that a special watchfulness is needed with this drug in senile delirium and collapse. For continued refusal of food the use of the stomach tube is invaluable. The patient must not be allowed to starve himself too long before this measure is resorted to. In vigorous individuals it has been my custom to feed after the second day's abstinence, but in debilitated cases we must not wait for so long a time. In feeble cases I have found that the introduction of the nasal tube seemed to cause more discomfort and in many cases to set up more disturbance of the mucous membrane than when the tube was introduced through the mouth. In all such cases very great care is to be taken not to get the least amount of liquid into the trachea, on account of the danger of insufflation pneumonia and a rapidly fatal termination of the case.

The question as to whether a patient would be better off in a hospital or asylum or at home has to be settled according to the character and station in life of the individual case. The milder types can very comfortably be cared for at home. Many of these cases, even, when their circumstances will not allow of constant and intelligent supervision, are undoubtedly better off in a well-managed hospital, while even quite severe cases can avoid the stigma of the asylum if they can command trained attendants or the facilities afforded by the private retreats and sanatoriums so numerous throughout the country.

Albert Edward Brownrigg.

XVII. INSANITY, CLIMACTERIC.—The normal signs of the menopause are largely confined to nervous and mental change of a minor kind, and are present in varying degrees in most women. At the ordinary menstrual periods the susceptibility of the nervous system to various even slight stimuli is considerably increased. Many women—it is well known—are at these periods unduly sensitive and inclined to be irritable and dispirited. They are also more or less whimsical and lose their control over slight occurrences.

At the climacteric, however, these or similar manifestations, even when not intensified, are especially prominent because they are attended with increased frequency and unusual abundance of the uterine flow in many cases, and because of the length of time elapsing before complete cessation of the menses takes place.

Although the phenomena which characterize the menopause are chiefly of the nature of slight mental or nervous disturbance, actual insanity in the form of a first attack and directly and solely attributable to the menopause is far from frequent. It would seem as though the relatively limited and special nature of this change precluded to a great extent the possibility of profound mental disturbance, and was perforce confined to a set of less pronounced disorders. Sutherland believes that mental trouble amounting to actual insanity is extremely rare at the "change of life." Merson,[1] whose monograph on this subject is very thorough and exhaustive, considers that the histories of the cases which he has investigated point to the conclusion that the menopause is not of itself the immediate cause of their insanity. Mitchell [2] is convinced of the fallacy of attributing melancholia to the menopause, and his statistics show that of all insanities but two per cent. are due to that cause. Lewis' ratio is 4.4 per cent. Statistics on this point are, however, widely divergent, and there is little room for doubt that the number of cases of true climacteric insanity would have been smaller and the percentages more uniform if the cases selected had been invariably and exclusively confined to those which originated during the actual progress of the menopause and were uncomplicated by other causes. This inaccurracy does not prevail in reporting cases of puerperal insanity, the starting-point of which is always shown to be within the parturient period. The apparent laxity is probably in a measure due to the difficulty that exists in ascertaining the first appearance of the menstrual irregularity which marks the menopause. Although, as Clouston [3] truly remarks, the mere cessation of function does not necessarily fix definitely the mental and nutritional changes that mark the period, and that therefore the mental disease that accompanies the climacteric need not be coincident with the menopause; nevertheless the more remote the attack is from the menopause the more room will there be for the operation of other causes, and there are a multitude of morbid influences—mental, moral, and physical, direct and indirect—to which women are exposed at this time of life.

Attacks of recurrent insanity at this period have also served to swell the number of cases of "climacteric insanity" in tables of statistics. They are obviously of much earlier origin, as a rule, and should be rejected from this category. Finally, competent opinion as to the baleful effect of this physiological change with regard to disease in general has greatly altered in the last twenty years, and the menopause is no longer looked upon as an experience fraught with peril and difficulty.

We can therefore only say, as regards the relation of the menopause to mental disease, that it may be the final factor in the causation of attacks of insanity in occasional cases in which a bad heredity with or without other influences has been previously inoperative.

The menopause is, however, quite an effective influence in cases of insanity with a history of previous attacks. In other words, when the heredity taint is marked and previous attacks of mental disease have been undergone, there is reason to fear that the menopause will give this tendency to mental disturbance an increased activity which will be sufficient to precipitate a relapse.

Nevertheless, although the influence of the menopause itself is a minor one in this direction, there is a general and recognized condition of the organism which attends middle life in both sexes, and in which the period of the menopause is included, that is charaterized by diminished vigor of body and mind, lessened interest and ambition, perhaps unnecessary anxiety, and a tendency to become more easily disturbed than usual. It is due to the failure of the system properly to adapt its powers to meet changed conditions or increasing demands on its resources. This period, which represents an involution of the mental faculties, begins earlier in women than in men, being probably hastened by the menopause, which in turn aggravates the condition. This soil is a most fruitful one for mental disease, especially in the hereditarily predisposed. By far the most frequent form that it assumes is melancholia, which may be of any grade. This—the melancholia of involution, as it is termed—embraces most of the melancholias except the depressed states occurring in the course of dementia præcox and organic dementia, and properly includes nearly

all cases designated as "climacteric insanity," for which few writers have ever claimed distinctive mental manifestations and in which ordinary melancholia has always been found to be the prevailing condition. The limits of melancholia of involution as given by Kraepelin [4] are from the fortieth to the sixty-fifth year, sixty-four per cent. of the cases occurring between fifty and sixty. For a full consideration of this important form of insanity in all its relations, the reader is referred to the article on *Insanity: Melancholia,* and for certain allied presenile conditions to that on *Insanity, Senile.*

Although melancholia is the usual mental state at this time of life, several others are not infrequently met with. The peevishness, ill-temper, and ungovernable anger of previously amiable and reasonable women occasionally amount to a condition resembling "moral" insanity. Sudden repugnance to the dearest members of the family has led women at this time to tyrannize over and hate others of the household and even to desert their husbands. Primary delusional insanity is not uncommon, and paranoias heretofore latent are apt to crop out under the stress of this period. The simplest type of these conditions consists in systematized delusions of persecution without necessarily any defect in intelligence (Berkley). A craving for stimluants may manifest itself possibly through a desire to meet or appease the anomalous sensations at the epigastric region so common in women at this time. Tilt, like B. de Boisment, has several times seen temperate women have a craving for spirits only at the menstrual epochs, the craving subsiding with the flow, and the same desire has been noticed in pregnant and puerperal women. Esquirol and St. Royer Collard, quoted by the same author, had met with women in good circumstances, who all through life had been temperate, but who at the menopause were suddenly seized with an irresistible desire for brandy, which again became disagreeable to them when the critical period was passed.

The *prognosis* of all mental disturbance occurring during the period of general involution is good, as a rule, in uncomplicated but acute cases. The duration, however, is somewhat longer than that of insanity occurring at other times of life, owing to the protracted nature of the physiological change underlying it. We should, therefore, be less surprised to find no evidence of improvement under a year than in other cases of insanity which terminate favorably.

The *treatment* should be adapted to the form of the insanity that the disorder assumes, and the reader, is, therefore, referred to the special chapters describing them as well as to that on the General Treatment of insanity.

Henry R. Stedman.

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[1] West Riding Asylum Reports, 1876.
[2] An analysis of 3,000 cases of Melancholia. Transactions of Association of American Physicians, 1897.
[3] Mental Diseases, 1898, p. 612.
[4] Psychiatrie, sixth edition, Leipsic, 1899.

XVIII. INSANITY: MELANCHOLIA.—The term melancholia has been applied to all forms of mental disorder in which a morbid depression of feelings dominates the clinical picture. Besides emotional depression, a more or less pronounced retardation of mental processes was found in certain cases, and some authors regarded this symptom (under which, however, a number of heterogeneous phenomena were comprised) as an important part of all melancholias and included it in their definition. Hence it came about that not only depressions, but some states in which the emotional element was more in the background or absent, while the retardation of mental functions was the only or the most prominent symptom, were also described as melancholias. The frequency with which conditions of "melancholia" occur; the fact that with the depression we often find associated other apparently heterogeneous traits; the circumstance that some depressions clearly form merely a phase of a disease which may also manifest itself in other phases; moreover the differences in course and outcome, the variations in causes—all these considerations have given rise to the conviction that melancholia is by no means a disease entity or an adequate clinical group.

This has been recognized more or less clearly by many writers, and has led to many groups of melancholia and to various conceptions in regard to these cases. It would lead us too far to trace these changes in the history of psychiatry, nor can we give any space to the divergent views of the present writers, but have to limit ourselves here to what seems to us a fair presentation of this difficult subject and one which tries without dogmatism to be just to the facts as they present themselves.

We have in the foregoing spoken of the lack of agreement which exists among different writers on melancholia, as on every other mental state. This lack of agreement is primarily due to the fact that the principles according to which groups of melancholia were and are made, differ so widely. Frequently the differentiation has been made according to some striking feature in the clinical picture without consideration of finer traits, or, of course, outcome, etiology, and whatever other data may be at our disposal. The only exception is represented by the melancholias of general paralysis—here all these points were considered and it would probably be difficult to find a psychiatrist who would speak of a general paralysis which is complicated with melancholia; although the various depressive states which occur in this disease still deserve further study. While we are in a less favorable position in regard to other depressive states, we should nevertheless proceed according to the same principles which have been used in the depressions of general paralysis. Kraepelin has pointed out that a certain number of melancholias belong to the domain of manic-depressive insanity. We have, in a preceding section, given the characteristics of these, and have seen that they show no essential tendency to deterioration. There are other depressions, in the young chiefly, which show such a general tendency, though the outcome in dementia seems not inevitable. The more we observe these cases the more we find that they also show certain symptomatic characteristics. It matters little what we call these—Kraepelin has united them together with various states of excitement, as well as with paranoiac states under the head of dementia præcox. Whether the pictures thus included form in reality an adequate clinical group need not be discussed here. I am personally inclined to doubt it. Nevertheless we may agree that there exist certain depressions in the young which show a tendency to deterioration. These pictures are by no means uniform, but this is not the place to describe them, and the reader must be referred to the chapter on dementia præcox, as well as to the differential diagnosis of manic-depressive insanity, for an account of their characteristics. We have thus far mentioned the melancholias of general paralysis, manic-depressive insanity, and dementia præcox, three groups of psychoses in which other syndromes occur as well.

But states of melancholia are also found associated with other conditions such as various "somatic diseases." In some cardio-vascular disorders we may find depression with fear and delusions of persecution, even hallucinations. Focal lesions of the brain may be followed by depressions. Alt has described an acute psychosis with fear in dilatation of the stomach. Moreover, Graves' disease and myxœdema may give rise to "melancholia." Finally, the neuroses, hysteria and neurasthenia, may be associated with depressions; even epilepsy presents certain pictures in which depression is very prominent. It would lead us too far to go into the symptomatic characteristics of these various states, nor are many of them studied with sufficient clearness to permit of a distinctive description. It is of course not excluded that such diseases may be complicated with a psychosis in which states of melancholia exist. But usually the depression seems to be a manifestation of the disease. We see from this that emotional depression is a not infrequent accompaniment of various diseases.

But after all these depressive states are excluded there

still remains a large class of melancholias which do not seem to belong to any other group; in these a melancholic syndrome is the only manifestation of the disease. The bulk of these cases occur in advanced years and have by Kraepelin been called "involution melancholias." It is these which we must more particularly consider. But in earlier years such melancholias also occur; some of them resemble certain forms of melancholia of advanced years; others are simple depressions usually with a favorable outcome. All these require further study. They are not of very frequent occurrence. We must also admit that in regard to melancholias of advanced years, it is by no means clear that all the cases here included belong together. It is seen from this that the question of melancholia is still a difficult one. But the fact that these difficulties are recognized, and that "melancholia" no longer represents a clinical group, is of the utmost importance for practical as well as for scientific purposes.

It should be stated, in order to convey a correct idea of the proportions, that besides the depressions in the young which form a part of the provisional group of dementia præcox, those of manic-depressive insanity and those occurring after the climacterium and belonging to the group to be described, form by far the bulk of the cases which we see.

The conditions included in the group of involution melancholias, which will now be considered, all present, after a more or less protracted prodromal state, the melancholic traits of depression of feelings; and in most cases apprehension and fear play a more or less prominent rôle. As a result of this depression and fear we find almost always delusions of self-accusation, of poverty, of impending danger; sometimes the delusions may become very absurd. In a certain group delusions of a somatic character are most prominent. Anxious restlessness is very common. In most cases the patients are clear, and though the mental horizon may be more or less narrowed to the depressive ideas, and a certain insufficiency of thinking may be present, this seems usually to be in harmony with the emotional disorder or to be the beginning of the permanent deterioration. A fair number of patients recover, others deteriorate, but it has not been possible to lay down a definite rule, and say which type of cases have a bad prognosis, although practically it is at times possible, even fairly early, to recognize the permanent damage. The degrees of deterioration differ. The chief character of the deterioration seems to be a loss of energy, going often with the feeling expressed by the patient that his strength, his interest, his mental power are gone; this loss of energy expresses itself in a diminished activity. The mental horizon becomes narrowed; a more or less pronounced mental insufficiency becomes evident; certain traits of the acute psychosis almost always persist; while the emotional reactions become shallow. Sometimes the deteriorations are more severe. But in contradistinction to senile dementia the memory suffers comparatively little, and what loss may exist would seem more the outcome of the narrowing of the mental horizon and of the mental inactivity than of a fundamental memory defect; for, even in comparatively profound degrees of inactivity, we may often be surprised at the readiness with which, compared with what is observed in senile dementia, events are remembered from day to day. In many of these cases it has been the custom to speak of chronicity rather than of deterioration, but it seems impossible to draw a line between the two states. In the gravest forms of deterioration we may question whether we are not dealing with transitions to senile dementia; but the fact that the great bulk of these melancholias shows an absence of the characteristic memory defect, and of the characteristic progression of symptoms; together with the fact that many of the cases, though they occur in the involution period, develop at a comparatively early age, would seem to indicate that we are here dealing with different conditions. The clinical pictures as well as the forms of permanent defect will be brought out more clearly in the more detailed description of patients.

The bodily condition always suffers in these cases: the body weight may fall considerably, the appetite decreases, the tongue may be coated, constipation is very common. The sleep is regularly interfered with. The temperature is often subnormal.

As the most important factor in etiology we must mention the age of the patient. Not infrequently the menopause seems in women to form the starting-point for the psychosis, although of course this period seems to favor the occurrence of other psychoses as well. In general it seems that the entire involution period furnishes certain conditions which are especially favorable for the development of these cases. Of the nature of these conditions we are ignorant. The cases occur between the ages of forty to sixty, and even later. Arteriosclerosis does not seem to play an important rôle: it may be present in the cases occurring in advanced years; in the younger ones it is usually absent. Besides the period of life, emotional causes are of importance; one is certainly struck with the frequency with which some mental shock or some bereavement precedes these melancholias. Heredity, on the other hand, is much less prominent than in other psychoses. The duration of the sickness varies from a few months to one or two years in the non-deteriorating cases. Recurrences may unquestionably be met with. Death results from exhaustion or from some intercurrent disease. It seems that the condition which Adolf Meyer described as "central neuritis" is more apt to occur in these than in other conditions. The danger of suicide cannot be too much insisted upon.

The pathological anatomical findings are still meagre. But Alzheimer has described a fibril production of the neuroglia in the deeper layers of the cortex, a finding which I can corroborate.

The mildest conditions may be illustrated by the following case: The patient (Case I.) was a man fifty-six years old, without any signs of arteriosclerosis or senile habitus. Two years previously he had, without cause, a short depression which is said to have been very similar to the later attack, but which lasted only a week; however, a deficient sleep remained. In May, 1898, he began to worry unduly about the illness of his daughter, then about various rheumatic pains of his own; he exaggerated their importance and became restless. His worry extended to his business, yet he was able to attend to it until two months later, when the depression deepened. He thought that owing to mismanagement of business he was going to lose his money, that he would be sent to the poorhouse, and that his daughter would not be provided for. He spoke of suicide but made no attempt. He walked about restlessly, picked at his finger-nails, complained of a "restless feeling" in epigastrium and head, but showed no very marked signs of fear. He was afraid something was going to happen, in what form he knew not. He was clear, though at the height of his agitation he could not apply his mind well. He showed no other delusions, and three months after the onset of the more severe symptoms he had completely recovered.

In other instances the restlessness, which has given to many of these cases the name of agitated melancholia, and which is often the result of apprehension and fear, is not at all present or only slightly marked; again, in others it leads to intense agitation with great fear which is manifested in the facial expression, the wide-open eyes, the dilated nostrils, the rapid respiration. The fear sometimes increases as night comes on. Sometimes this fear does not fasten itself on anything; more often it results in certain ideas. The patient thinks that he is going to be arrested, killed, or torn to pieces; and then frequently accidental utterances or occurrences are interpreted as confirming these ideas, or unquestionable hallucinations may occur (usually of hearing, rarely of sight, in these milder cases).

It is seen from the above that there are cases in which the fear is evidently primary, without any delusions of self-accusation preceding it; and the fear which is often referred to the præcordium, epigastrium, or head, may not fasten itself on any idea and may constitute the first more pronounced symptom. In other instances the

depression with self-accusation seems to exist primarily, and only a few apprehensive ideas seem to arise secondarily. Then the restlessness is often not in evidence, and the picture is more dominated by a certain gloominess. These patients may complain of "not having lived properly," "not having gone to church enough," of "not having been honest in business," of "having lost their souls," of "having committed the unpardonable sin," etc. With this, as was stated, may be associated some apprehensions as to the welfare of those dear to him or even as to his own welfare. It does not seem possible to separate these two sets of cases, and probably the two emotional states are not fundamentally different. In general it seems that at present a differentiation of depressions is not possible on the basis of the kind of emotional disorder, but only on the features which accompany it.

Sometimes the delusions take absurd forms; thus, a man, forty-eight years old (Case II.), stated that he was going to be put in a cave in Wachusett Mountain to be devoured by a snake, that the United States and England had combined to arrange the cave which had been lighted by electric lights. At the same time he affirmed that there he was to live forever. He was clear mentally, showed no insufficiency in thinking, and never lost his bearings. Night after night he asked with evident fear whether he was going to be taken to the cave, and had some hallucinations of hearing which confirmed him. This patient also recovered after a year, although frequently the absurdity of the delusions speaks for a bad prognosis. But while these patients not infrequently recover, deterioration or chronicity is always to be feared.

Thus, in a man of fifty (Case III.) a condition which was very similar to that of Case I. deepened into a persistent gloom with marked loss of energy and inactivity, and a certain narrowing of the mental horizon. He retained no special delusions, his memory remained good, and there was no marked loss of judgment. On the other hand, hypochondriacal ideas may be added to the above picture of deterioration and persist in unaltered form. The patient may claim that he has no movements of the bowels, is starving to death because he cannot digest (though he may be growing stout), etc. These ideas are reiterated whenever the patient is seen, and they form almost his whole interest. Or other delusions may be retained,—either merely ideas of self-depreciation, or ideas of an apprehensive nature. Thus, a woman at fifty-eight (Case IV.), who started with a picture chiefly of self-accusation and poverty, retained persistently the delusions that she was going to be chopped to pieces, that the head was going to be cut off, but that she could not die, and was going to be a living lump of flesh, etc. These ideas she uttered without any decided show of emotion, as is very frequent in these cases. In other instances the ideas are more absurd. Sometimes renewed attacks of restlessness and fear may be repeated for years.

It will be noted that all the cases thus far mentioned remain clear during the active stages, as well as during the state of deterioration. On the other hand, the deterioration may be more pronounced, this being especially true of cases in more advanced years. The following case may illustrate this, as it also shows that the restlessness may persist for a long time. A woman of sixty-nine (Case V.) was, since the death of her husband, six years previous to the onset of marked symptoms, somewhat nervous. After the death of her sister, two years later, she was apt to complain much of various ailments, little things in the household worried her more easily, and she often cried. Six months later she began to be afraid to be left alone, and soon to fear that her only daughter would be kidnapped. The condition observed at the hospital was this: she was restless, showed distinct fear, "an operation will be performed," "If I get into that bed I won't get out alive"—"I will be cut up." She could not be reassured—"for all that I have my fear." As an occasional idea she spoke of the daughter being shut up in the hospital. Sometimes the restlessness became very marked. The memory was good, she could apply her mind well, and had her bearings perfectly. Then the ideas about the daughter became more prominent. "She is to be married to a Mormon"—"I saw him outside"—"She is to be killed"—"The food is the flesh of my daughter," etc. At the same time it was more difficult to attract her attention, her orientation became deficient, her answers to simple tests of calculation or common knowledge poor. The moaning became more stereotyped and after six months her condition became stable, and has remained so for two years. She constantly walks up and down, often rolls her body in a swinging motion, or in a peculiar manner jerks her head back with uninterrupted moaning of "no, no." She answers no questions, refuses food, and, as is characteristic in some of these cases, blindly resists every measure. Occasionally she brightens up a little and is quieter, but shows very poor grasp on her surroundings, speaks of her mind being weak, although she remembers fairly well from day to day during her rare short periods of comparative clearness.

In some cases the mental insufficiency and the poor grasp on surroundings are present even earlier and, as it were, set in almost with the beginning of the more active symptoms. This seems prognostically unfavorable. Thus, a woman of fifty-nine (Case VI.) with a slight depression, who had been in a sanatorium for non-insane, and who came to this hospital soon after the onset of more pronounced symptoms, could on admission give only poor answers in regard to her life, her surroundings, the time of the year, or to calculation tests and the like. Often she said, "My mind is weak." Her utterances were very stereotyped, the extent of her ideas being "cannot pay bills"—"will be sent to jail"—"filled up"—"cannot take the responsibility for all these people"—"the food is thrown away." She was restless and moaned. Later, her throat, feet, and jaw "are broken." She now lies in bed in an apathetic manner, untidy, tubefed, never speaking, only pointing to her throat. She takes little notice of anything, sometimes moaning, often silent.

In other instances the delusions soon assume a fantastic character. Thus, a woman at the age of fifty-five (Case VII.), whose psychosis started with self-accusation, soon began to get restless, saying that the people at home were dead, that the water had been poisoned, it was her fault, etc. Later, she spoke of the hospital as a prison built by the Catholics in which to punish her, again "everything here is pretended," one old woman "is a dummy who is made to walk around and made to speak"—"there are no water-closets"—"nobody eats except myself"—"the letters are not from the persons they are claimed to be," she has "no friends"—"all are dummies," she is "the only woman alive." Or, again, she is "only a talking machine." "The country is in the hands of Spaniards," the physician is "the king of this country." She is "the cause of it all." "There is no sense in the papers." "Time is counted differently"—"everything is upside down"—"changed." She pinched persons about her to see if they were real. Sometimes when asked more especially about the origin of her ideas, she would say these ideas "came to her."

This case brings out to some extent what the French writers call délire de négation, a symptom present at times in these conditions.

As the oncoming deterioration seems at times to be indicated by a diminished emotional reaction to the delusions, so do we find cases in which from the beginning a shallowness in this respect is prominent. Delusions of depressive character, often very absurd and poorly founded on flimsy grounds, are uttered by the patient with remarkably little show of emotion. These cases are, so far as recovery is concerned, prognostically bad.

Finally, a small group of cases in which the somatic delusions play an especially prominent part should be mentioned. They are cases which are especially apt to occur in women directly or soon after the menopause, though cases occurring later may be seen.

Often the somatic delusions are, after a prodromal stage, the first symptom to appear and thenceforward dominate the clinical picture. Fear often seems not to