

*Insanity in Imbeciles.* By A. F. TREDGOLD, L.R.C.P.Lond.,  
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INSANITY is rarely met with in the more pronounced grades of amentia. In the milder degrees of imbecility, however, such a complication is far from being infrequent, and out of over 200 imbeciles whom I examined in the asylums of the London County Council considerably more than half had at one time or another been insane. Of course it is impossible from these figures to deduce the actual proportion of all imbeciles liable to be so affected, but they sufficiently attest the frequency, and therefore the importance, of this condition. The exceedingly scant attention which the subject has received in this country is a further excuse for the following remarks.

The general characteristics of these higher-grade imbeciles are too familiar to necessitate any description here, but it may be remarked that an excellent indication as to the existence of a mild degree of amentia is furnished by the history of the progress, or, rather, want of progress, during school life. It is one of the commonest things to hear the mothers state that "he could never learn at school," and it is the rule to find that these children have not passed beyond the third, second, or even the first standard, arithmetic in particular being a great stumbling-block. In addition, they may have been late in learning to walk and talk, and dentition and development generally have been delayed; also in a considerable number of them well-marked stigmata of degeneracy are present.

But although all the cases of insanity in imbeciles that I have hitherto seen have been in those of high or medium grade, it by no means follows that *all* high-grade imbeciles are liable to be so affected. In them, as in individuals of normal development, a special predisposition appears to be necessary, the presence of which is, as a rule, easily recognisable.

It will nearly always be found that those imbeciles who subsequently become insane have for some years before the actual outbreak been prone to sudden fits of irritability, "bad temper," moroseness or sulkiness, often accompanied by acts of violence; or that they have been in the habit of wandering

away from home, in many instances being brought back by the police ; or they have evinced a restless disposition, making it impossible for them to settle down to any kind of employment. Indeed, from a very early age these patients have been a source of endless worry and anxiety to their friends and relations, or, should they have been in an institution, to the attendants and other inmates. Such characteristics are by no means typical of all higher-grade imbeciles, many of whom are placid, harmless, and industrious to the end of their days, and although their mental deficiency renders it impossible for them to make any headway, they are, nevertheless, capable of useful employment, and in many cases of earning their own living. Neither can such conditions be well described as insanity, though they are, I believe, the shadow of the coming event, being evidence of that special predisposition which will sooner or later terminate in insanity. Perhaps the best term for it would be mental instability, and the higher-grade imbeciles may therefore be divided into the two groups of *mentally stable* and *mentally unstable*.

This instability appears to me to be by far the most important factor in the causation of insanity in these patients, and exciting causes seem to play but a minor part. It is true that in some cases the latter may act as contributory factors, [e. g., alcohol, religious or other forms of excitement, or a severe fright causing great emotional disturbance], and help to hurry on the attack which was only threatening ; but at the most they only bring matters to a crisis somewhat earlier, and in many cases are entirely absent. I would say that, given a high-grade imbecile whose mental condition is unstable, the chances of his passing through the third decade without becoming insane are very small indeed. Could the education of such an individual be more carefully supervised and better adapted to his capabilities from a very early age, and could his youth and adolescence be passed in an orderly and systematic manner, devoid of the bustle incident to the daily life of most of the poorer classes, it is possible that the attack might be deferred, or even entirely prevented. As things are, however, the first attack of insanity usually appears between the ages of puberty and adolescence. Institution life of the right kind, if begun sufficiently early, would probably do much for these patients, and I have frequently found that even

where the surroundings are adverse the instability may be to a certain extent controlled by a free use of the bromides.

As to the probable nature and cause of this instability, we may obtain some light by referring for a moment to what is known of the etiology and pathology of amentia. It is now well known that amentia is the final manifestation of what may be termed the neuropathic diathesis, and in an inquiry into its *etiology* which I made two years ago<sup>(1)</sup> I was enabled to show that in 90 per cent. of cases morbid hereditary influences were present, and that these, in all probability, act by interfering with the normal growth of the germinal plasm. If the morbidity is very pronounced its effect upon the growing embryo is extensive, upon the nervous system causing gross amentia, upon the body generally causing the stigmata with which we are all familiar. With a less pronounced morbid influence, the normal development is less interfered with, and the more specialised parts of the growing embryo, *i.e.* the higher portions of the nervous system, are chiefly affected, giving rise to a mild degree of imbecility.

The result of recent *pathological research* shows that the degree of mental deficiency present during life is directly proportionate to the amount of change discoverable in the brain under the microscope, and that, speaking generally, whilst the brain of the idiot is characterised by a paucity of imperfectly developed and irregularly arranged nerve cells and processes, in that of the imbecile the cells much more nearly approach the normal in both their number and degree of development, the principal change being an irregularity of arrangement. Further, in the milder degrees of imbecility the changes appear to be almost entirely confined to the second and third cortical layers (small and medium-sized pyramids), and to the frontal and parietal regions of the brain; in gross idiots imperfectly developed cells are more noticeable in the same cell layers and regions, but are also to be found throughout the entire brain; indeed, in some of these cases I have seen the cells of the spinal cord affected.

There can be no doubt that the different degrees of pathological change which occur in these cases are the cause of the great variations of mental capacity which exist in the various types and degrees of amentia, and that, whilst the idiots scarcely develop beyond mere automata, capable of little

beyond reflex action, the higher-grade imbeciles are possessed of good perception, of memory, of emotion, and of ideation. They are, however, deficient in the power of concentration, of continued application, and of comparison, their appreciation of their surroundings being therefore inaccurate, and their higher faculties of deliberation, judgment, and control remaining undeveloped.

We may therefore conclude from our *clinical* knowledge of these cases, from *histological* examination, and from *etiological* considerations, that in the higher-grade imbeciles the arrest of development has involved more particularly or exclusively what are called the "higher" portions of the brain, and that the lower faculties have attained a fairly normal development. These lower faculties, however, require for their useful and proper action to be constantly controlled and corrected by those of a higher order, and when these latter are deficient the equilibrium of the brain is unstable, and the various manifestations of mental instability which have been described are very liable to occur.

The faculties of ideation and emotion, which are usually well developed in high-grade imbeciles, are especially in need of this higher inhibitory action, since there can be no doubt that the uncontrolled and uncorrected action of either of them may seriously endanger the individual's sanity. It is therefore not difficult to see how this condition of mental instability may readily develop into a state of true insanity, the nature of which will depend largely on whether the disturbance is of an ideational or emotional type.

In one class of these imbeciles *uncontrolled ideation* can be readily demonstrated. The original idea may be of the most simple description, and the result of an impression received by one of the ordinary sensory channels, or in some cases it may be caused by an hallucination of sense (auditory or visual); but since the patient is incapable, by reason of his mental deficiency, of correcting or controlling the primary idea, it rapidly assumes such dimensions as to entirely alter his mental attitude towards his surroundings. Hence delusions result, which may be of various kinds, as of identity, of persecution, etc.; these may remain fixed or be subject to rapid change, but their persistence soon brings about a condition of mania or melancholia in most instances.

Thus in some of these cases of mild imbecility I believe that the patients themselves are, to a certain extent, conscious of their infirmity, and do not fail to notice that they are somewhat neglected, put on one side, and "of no use." As a result of this they acquire a habit of brooding over their fancied wrongs, pronounced delusions of persecution soon follow, which rapidly pass into a state of acute melancholia, in which they may attempt suicide. It is very common to find this type of patient complain that he has "not had fair play."

Delusions and hallucinations, therefore, figure largely in the ideational type of insanity, and as a rule their presence is easily recognised.

*Uncontrolled emotional action* is characteristic of another class of imbeciles. I have already stated that emotional storms of a transient nature are very common in many of these patients for perhaps years before the actual outbreak of insanity, and it is probable that such are very closely allied to true insanity; their short duration, however, renders it practically impossible to certify these patients as lunatics at this stage. But in course of time the outbreaks become more severe and prolonged, until finally they may last for several weeks and present every feature of acute mania or melancholia.

All the cases of insanity in imbeciles which I have seen conform at first to one or other of these types, and they therefore appear to be the direct consequence of the imperfect development of the higher mental faculties, with its associated instability. As already stated, however, many imbeciles are of perfectly stable equilibrium, and in such I believe the ideational and emotional faculties to be also imperfectly developed, so that overaction in either of these directions does not take place. It is certainly a fact that the unstable ones are the brighter and more vivacious of the two.

In this connection it is interesting to consider for a moment the insanity which is frequently present in association with primary dementia. The physical basis underlying this condition has been demonstrated to be a degeneration of, *inter alia*, the cells of the cerebral cortex, and although the process varies greatly in rapidity it appears to be essentially the same whether the disease is an acute degeneration, like general paralysis, or a more chronic change, like senile dementia; in fact, many cases occur which are intermediate

between these two extremes, and which cause considerable doubt to the pathologist and the clinician as to the class in which they should be placed. For our present purpose it is an unimportant matter whether this form of degeneration be considered as primarily neuronie or primarily vascular, the essential point being that it is a pathological change which affects the cortical layers in varying degrees, and, as a rule, those of a higher order, and whose action is chiefly inhibitory, first and most. Consequently in many of these cases a disturbance of the equilibrium is brought about analogous to that occurring in mild amentia, with the result that there is a great liability to ideational and emotional disturbances, readily passing into insanity. Since, however, the degeneration is a progressive one, a stage is at length reached at which all mental processes are annihilated (complete dementia), the individual being reduced to the vegetative condition of the gross ament. The insanity in these cases, therefore, is but temporary, being symptomatic and an incidental phase of the underlying degeneration.

I have said that insanity "frequently" occurs in these cases because, as in high-grade imbeciles, it is not universal, and numerous cases of both general paralysis and senile dementia run their course without its appearance.

It has been stated that in these imbeciles the first attack of insanity usually appears between the ages of puberty and adolescence, and it will be remembered that this is the age at which the ideational and emotional faculties are conspicuously active in the healthy individual. Here, however, the higher processes of deliberation and judgment, by their controlling influence, prevent a disturbance of the mental equilibrium sufficient to produce insanity, although they do not always prevent the youth from making a fool of himself; and with further experience the imaginations, day dreams, and castles in the air ripen into originality of thought and breadth of intellect, whilst the fulminating emotion of youth becomes the righteous indignation of mature age.

I am inclined to think that the age at which the insanity appears not infrequently leads to these cases being diagnosed as adolescent insanity, and several undoubted imbeciles I have met with in asylums have been so classed. The question is important from the prognostic point of view, and although a

correct diagnosis is not always easily arrived at during the actual attack of insanity, a careful examination of the patient as this abates, with a history of his previous condition from the parents, usually suffices to make it perfectly clear whether he is really imbecile or not.

Let us now turn to the *clinical features of the insanity* from which these patients suffer. On the whole they closely resemble those occurring in ordinary patients, so that it is unnecessary to enter into any very detailed description. There are, however, a few points which must be noticed.

The insanity is chiefly mania or melancholia; mania is the most common form, occurring in about 55 *per cent.* of all cases, melancholia in about 40 to 45 *per cent.* Monomania and pure delusional insanity must be very rare if they occur at all, for I have not seen one case. General paralysis occurs probably to the extent of 2 to 3 *per cent.* Delusions can be ascertained in about two thirds of the cases; hallucinations are also very common. I have excluded all those cases of insanity in which epilepsy was also present, thinking it better to deal with epilepsy in imbeciles separately on a future occasion.

These figures will give some idea of the prevalence of the different clinical types as ordinarily described, but since all these cases may be referred to a disturbance of either the ideational or emotional faculties, they may more advantageously be considered from this aspect.

In the *ideational variety of insanity*, to which the greater number (about 80 to 85 *per cent.*) of the cases belong, delusions are a prominent feature, although they are not always to be readily elicited; in a quarter of these cases hallucinations also exist, usually of an auditory, somewhat less often of a visual nature. These delusions, as already mentioned, are generally simple, such as those of persecution or identity; I have never met, amongst these imbeciles, such elaborate delusions as are common amongst ordinary lunatics, the most complicated being that of a youth who was under the impression that he "had fallen to pieces and lost some of his parts," and a girl who thought that "people drew her brain and used her thoughts up"; in these cases the delusions only lasted for a few weeks, and it is rarely that they persist unchanged as long as this.

In some of the cases the existence of delusions can be

ascertained for days, and occasionally for some weeks, before any more acute mental disturbance ; but sooner or later acute mania or melancholia supervenes. Delusions of a persecutory nature are usually accompanied by melancholia, those of identity by mania ; but this is by no means invariable, and on the whole the nature of the acute insanity seems to be chiefly dependent upon the temperament of the patient, mania predominating more in males and melancholia in females.

Acute *mania* occurs in rather more than half these ideational cases, the patient being in a state of ceaseless activity day and night. He is constantly talking, shouting, or singing, his language being often of the most vile description ; he tears up his bedding and clothing, smashes windows and breaks furniture, his destructiveness being often so great that confinement in the padded room is necessary ; personal attacks upon the attendants and other patients are by no means uncommon, and in some cases I have seen, the imbecile has attacked his relatives with a knife and other weapons ; one youth of 13, in addition to assaulting a girl with a knife, made a determined attempt to set fire to the house.

One of these patients, who was recovering from such an outburst, accounted for his actions by saying that he "got some thought on his mind which he tried to get off and couldn't ; this caused the blood to rush to his head and sent it rushing down his arms and legs;" not a bad explanation for an imbecile !

*Melancholia* is the form assumed by the insanity in nearly half the cases. This is a much greater proportion than in the non-imbecile class of lunatics, the probable explanation being that the temperament of these patients is more apt to be gloomy, owing to their general health being poor. Both active and passive varieties of melancholia occur, the first being somewhat more common. In the active form the condition appears almost invariably to be associated with terrifying delusions. Thus, one young girl was frightened by seeing a fight in the street, she became timid and anxious, and in a few days developed pronounced delusions to the effect that people were trying to kill and burn her ; she heard voices threatening her, thought her food was poisoned and refused to eat it, and was apprehensive of danger from every imaginable quarter. She was constantly in tears, wringing her hands, and

muttering, "What are they going to do to me?" Case No. 3, in the Abstract of Cases, is a similar example.

In the passive form of melancholia the patients are silent and depressed; if they can be got to converse at all their remarks will generally be to the effect that they are "tired of life and want to die," and, indeed, attempts at suicide are by no means uncommon. More often they are utterly apathetic, refusing to wash, dress, or take food, entirely careless of personal cleanliness, and resisting any attempt to attend to these matters for them. At times actual stupor may be present, occasionally so intense as almost to amount to catalepsy, and the state of these patients so closely resembles dementia in many ways that recovery or remission is often the only distinguishing sign.

Suicidal attempts occur in two-thirds of these melancholic patients, and they are real and definite efforts to put an end to existence, unlike the somewhat feeble impulses which are common in the insanity of an emotional type, to be presently referred to. The feeling of misery and depression may be responsible at times, but in many instances it is the result of delusions of persecution, the patients feeling that everyone is so much against them that suicide offers the only way out of their difficulties; or in other cases they hear voices telling them to make away with themselves. Death by drowning would appear to be the most attractive method. In the same way the refusal of food occurring in half the cases may be either the result of delusions that the food is poisoned, or part of the general condition of utter indifference to surroundings.

Whether the mental disturbance be mania or melancholia, it usually subsides within a comparatively short time; improvement may be noticed at the end of a week, or the acute condition may persist for a month or more, but in 60 to 70 *per cent.* of cases it has entirely disappeared in two or three months. The mental deficiency, which had been to some extent masked by the insanity, is then perfectly obvious. Seeing the patients again quiet and tractable the parents not infrequently desire, and obtain, their discharge, but any hopes they may have of permanent recovery are nearly always doomed to disappointment, for, as far as my experience goes, there is scarcely any class of patient in whom recurrence of the insanity is so likely to take place. It is true that occasionally nothing further is

seen of one of these imbeciles after his discharge from the asylum, but of the greater number it can safely be said that within a few months, or at most a year, they will be back again. There is also no doubt that recurrences are more favoured by a life at home than by the routine of an institution, and if these patients cannot be kept in a general asylum, it would be better to transfer them to a special establishment than to set them at liberty.

As a rule the second and subsequent attacks are of the same clinical type as the first, and they continue to occur at periods varying from three to twelve months for many years. In the intervals the patient is fairly quiet and may do a certain amount of work in the wards and out of doors, although his mental deficiency and instability usually prevent any regular and systematic employment. With the lapse of time the insane attacks tend to occur more frequently, and the patient eventually passes into a state of chronic insanity which is only terminated by the onset of dementia.

In a small proportion (probably about 15 *per cent.*) the subsequent attacks are different to the primary one, and the patient who was at first maniacal becomes melancholic, or *vice versa*, this condition of depression, alternating with exaltation, continuing for years. In the end, however, the patient tends to become more and more apathetic until dementia is established.

In about a third of the cases there is no recovery from the first attack; the mania or melancholia, although becoming lessened in their intensity, still persist. The patient remains for some years in a state of chronic insanity, which almost invariably terminates in dementia.

The *emotional variety of insanity* differs from the ideational in several important features. The attacks are violent storms, entirely independent of hallucinations or delusions, or, as far as can be ascertained, of any ideational process. They resemble the fits of "temper" and hysterical outbursts already alluded to, probably also the transient outbreaks of rage and passion frequently seen in gross idiots; but they differ from these in their intensity, and in being of longer duration. Occasionally it seems as if they might be the result of some trivial altercation, and it is nearly always said of these patients that they cannot bear to be "crossed"; more often, however, the attacks

appear to be entirely spontaneous. Notwithstanding their resemblance to the milder forms of emotional disturbance, their duration and the intense mental agitation make it impossible to look upon them as other than true insanity.

The condition is not nearly so common as the ideational form of insanity, and probably only occurs to the extent of 10 to 15 *per cent.* of all the cases ; further, it is almost entirely confined to the female sex. The patients are, as a rule, very plausible, and in between the attacks of a gentle and pleasant disposition. The degree of mental deficiency is usually slight, though definite.

The mental disturbance may be exaltation or depression, mania, however, being the more frequent, and one never sees in these cases the state of profound melancholia that is elsewhere met with. The mania may give place for a period to sullen obstinacy or listless apathy, with perhaps refusal of food and threats or even attempts at suicide, or the patient may become tearful and obviously miserable ; but I have never seen the intense apprehension of approaching harm, or the state of abject terror which mark the ideational melancholiacs ; also in these cases threats of suicide are more common than attempts, and where the latter occur they are of a feeble and half-hearted description, or are obviously the sudden yielding to a childish impulse.

The mania is often extremely violent, and the patient will rush about for days gesticulating, singing, shouting, using abominable language, and smashing everything within reach ; the attacks, however, are of shorter duration, and do not so readily tend to pass into a chronic stereotyped condition as in the patient suffering from delusions. On the other hand, recurrences are more frequent, it being unusual for more than two or three months to intervene between the attacks, and as a rule the periods of quiescence are much less than this.

Many of these patients certainly seem to improve somewhat under firm and judicious treatment, and the diminished severity and frequency of the outbursts would appear to indicate that their power of control is, in some degree, capable of development, probably never to a sufficient extent to enable them to be freed from supervision, but enough to fit them for a certain amount of useful work. The future of these patients depends largely upon the patience and intelligence of the charge attendants.

In many ways these emotional attacks bear a close resemblance to the sudden seizures of the epileptic, and they are also probably analogous to the various forms of impulsive and moral insanity, and to the cases of extreme cruelty which are occasionally recorded of lunatics; indeed, some of these imbeciles are subject to uncontrollable impulses in definite directions, in addition to the maniacal outbursts. Thus one girl was a most inveterate liar, and another was quite unable to resist pilfering small articles from the other patients or from the work-basket as soon as the nurse's back was turned.

I believe that most cases of insanity in imbeciles may be readily referred to one or other of the above-mentioned groups. Insanity with delusions, however, does not exclude the possibility of emotional storms, and patients suffering from insanity of emotional type may occasionally have delusions. Cases Nos. 7 and 8 in the appended abstract are good examples of this.

DEMENTIA.—*Primary dementia* in imbeciles is of such rare occurrence that if the signs of dementia make their appearance without antecedent insanity or epilepsy the case will in all probability turn out to be one of general paralysis. *Secondary dementia*, however, is the natural termination of most of these cases of insanity; its advent depends chiefly upon the type and the frequency with which recurrences occur. In the emotional form it is decidedly rare, and I have known such patients show no sign of dementia after the lapse of fifteen years. In the ideational form, on the other hand, it is common, and the shorter the intervals between the attacks the earlier does the dementia appear. In some cases it is well marked within two or three years; some may possibly continue for from twelve to fifteen years without any sign occurring, but on the average symptoms are observable within about eight years.

GENERAL PARALYSIS.—My figures are not sufficiently numerous to enable me to state definitely to what extent this occurs, but amongst rather more than 200 imbeciles I met with six instances (three males and three females). The disease may be of the adolescent or of the ordinary variety, but although a few cases of the latter have been recorded I have not myself seen an example of it in an imbecile. Accepting the view that syphilis is the most common cause, one would suppose that the state of the nervous

system of the imbecile would render him particularly liable to its action should he become infected ; possibly, however, the explanation of the comparative infrequency of the ordinary variety of general paralysis in imbeciles may be that they are not so much exposed to the chances of syphilitic infection.

In my cases the symptoms first made their appearance between the ages of fourteen and nineteen years, all the patients being well-marked imbeciles. In three of them delusions of persecution were present, accompanied at one time by attacks of mania, at another by profound depression with attempts at suicide. In the other three cases the mental disturbance consisted of emotional storms like those already described. These conditions persisted with occasional exacerbations and remissions for from one to two years, when signs of dementia appeared. Up to the time of writing four of the patients have died with the unmistakable physical signs, the diagnosis being confirmed by microscopical examination ; and the remaining two are in the last stage of the disease.

The adolescent form of general paralysis has been so fully discussed by many writers that any further description is here unnecessary, since the clinical features in imbeciles do not materially differ from those in ordinary patients. It is possible that in the early stages of the disease the imbecile might be thought to be suffering from ordinary insanity, delusions of grandeur being rare, and there being nothing peculiar to the mental change. But if the history shows that the patient has not previously given indications of mental instability, and if, further, there should be marks or a history of syphilis, the case in all probability will be one of general paralysis. The super-vention of dementia within one or two years (earlier than in the ordinary insanity of imbeciles) makes the diagnosis practically certain, although even at this stage there may be none of the ordinary physical signs of dementia paralytica. It is perhaps more common for an error of diagnosis to be made in the opposite direction, and for a normally developed patient suffering from adolescent general paralysis to be regarded as an imbecile, the early dementia being mistaken for amentia.

It may be added that in these four imbeciles which I have had the opportunity of examining *post mortem*, the naked-eye appearances of the brain were precisely similar to those occurring in ordinary cases. Microscopically the changes are

also much the same, with the exception that in the imbeciles there appears to be rather less *acute* cellular disintegration and less marked structural vascular change.

The appended abstracts of a few cases illustrate some of the points mentioned in this paper.

CASE 1. *High-grade imbecile ; attack of acute mania with delusions lasting six weeks ; recovery ; discharge.*—C. H. C—, No. in series 180. A high-grade imbecile with several well-marked stigmata of degeneracy, said to have always been very excitable, no regular employment. Admitted to asylum æt. 16 with acute mania of three weeks' duration. He had suddenly become noisy and sleepless, throwing himself into strange attitudes, utterly irrational in his conversation, shouting out "God save the Queen," and asking to be allowed to fight the Boers ; alternating with this he was tearful and anxious, with delusions of being constantly followed by policemen, and by boys who called "thief" after him. He was in a state of restless agitation, begging for the door to be kept locked. For a week after admission to the asylum he remained in this excited condition day and night, and it was quite impossible to control him. He was terrified of the other patients, thinking they were all trying to strangle him. After a week he gradually became quieter, and at the end of two months had become so quiet and well behaved that he was able to be discharged. Up to the present (one month after discharge) I have heard nothing further of this boy, but it is highly probable that he will be again admitted before very long.

CASE 2. *Medium-grade imbecile ; attack of acute mania with delusions and hallucinations, subsiding in two months ; subsequent recurrences for two years ; signs of dementia.*—A. C—, male, No. in series 2. Has always been backward, and never learnt to read or write. After leaving school earned a few shillings weekly by doing odd jobs, but had no regular employment. Apt to behave queerly at times from early boyhood, and on several occasions disappeared from home for two or three days. At the age of twenty-four began to attend music-halls frequently, and shortly afterwards became exceedingly strange in his manner ; he refused to do any work, and spent most of his time standing at the open window talking to

people he imagined he saw. Much of his conversation was about one Flo Arnold, whom he wished to marry, and for which purpose he said he had taken £2 out of the bank. He gradually became quarrelsome, and finally violent and acutely maniacal, and had to be sent to the asylum. This condition of mania, with delusions and aural hallucinations, lasted for two months, after which he became quieter. He has now been in the asylum for nearly two years. He is subject from time to time to sudden outbursts of maniacal excitement lasting from a few hours to several days; these are probably due to delusions, although none can be ascertained. He shows indications of the onset of dementia.

CASE 3. *High-grade imbecile; attack of melancholia with hallucinations and delusions, passing into a condition of recurrent insanity; signs of dementia in six years.*—C. D—, male, No. in series 3. He could never learn arithmetic at school, as the master said his brain was too weak. Used to behave very oddly at times. After leaving school was employed in a boot-shop. At the age of sixteen he was frightened by a large black dog, and shortly afterwards became much depressed, gradually passing into a condition of melancholia. On admission to asylum he was found to have aural and visual hallucinations with delusions. He thought he was surrounded and threatened by black men; he said that he was afraid he was going to be killed in the China war, and that God told him to kill himself. For several days he was restless and anxious, afterwards becoming dull, listless, lethargic, and a confirmed masturbator; he would occasionally waken out of this stuporose condition to become aggressive and violent. Four years after admission he had so much improved that he was discharged to his friends, only to be readmitted six weeks later, as they found it impossible to manage him. He is now twenty-two years of age and is still in the asylum, being idle, and as a rule dull and depressed and constantly muttering to himself; occasionally destructive and aggressive; signs of dementia are apparent.

CASE 4. *Medium-grade imbecile; attack of melancholia with attempted suicide; recovery in four months; relapse eight months afterwards; now again recovering.*—T. K—, male, No. in series 53. Mental deficiency noticed from early childhood;

incapable of learning at school ; no work subsequently ; never earned any money. Gave much trouble to his parents, being "very bad-tempered," and frequently wandering away from home. At sixteen years of age became much depressed, and attempted suicide by taking carbolic acid. On admission into asylum was wretched and tearful, saying that he wanted to die, and there was no reason why he should live. He gradually became brighter and even cheerful, and a month after admission was able to work out of doors ; the improvement continued, and he was discharged in four months. Eight months later he was readmitted, having been found by a policeman battering his head against some iron railings. On the way to the station he said that he would kill either himself or his father, the latter stating that he had been violent and had attempted to cut his (the father's) throat. He was profoundly depressed, thought he heard voices, and that people had conspired to kill him. At the present time he has been in the asylum four months. He is still depressed and solitary, but on the whole decidedly brighter, doing a little work, and appears to have lost his delusions.

CASE 5. *High-grade imbecile ; acute mania of emotional type, æt. 16, passing into a condition of recurrent insanity ; no dementia after three years.*—A. F—, female, number in series 66. "Always simple from quite a child." Left school æt. 12, being only in third standard ; afterwards in a training home ; very bad-tempered and addicted to smashing windows ; sent home after three years, as they found they could do nothing with her. At the age of 16 she became so violent that she had to be removed to the asylum, having previously hurled a cooper's hammer at a man and thrown a heavy padlock at a woman. She remained in a condition of maniacal excitement for three months, with an occasional short interval of comparative calm. During one of these I asked her why she behaved so violently ; she said something came over her and she felt she "must do it." In three months she had become much quieter, and for the following five months she remained silent and gloomy, refusing to have anything to do with the other patients ; then she relapsed into a state of restless excitement lasting for a month, followed by another period of depression. She is now 19 years of age, having been in the

asylum three years. She is at times fairly quiet and does a little ward work, but is very untrustworthy, and liable to sudden outbursts of maniacal excitement with destructiveness; she is highly emotional and unstable, bursting into a fit of tears or laughter without any apparent cause. There are no indications of dementia.

CASE 6. *Medium-grade imbecile; attack of acute mania of emotional type, æt. 14; condition practically unchanged at the end of six months.*—C. R—, female, number in series 63. Never passed first standard at school; subsequently kept at home; could never be depended upon; and from 9 years of age has been at times very violent and addicted to using disgusting language. She had to be sent to the asylum at the age of 14, and on admission was in a state of mania, chattering to herself and singing or shouting the whole day; at times destructive and aggressive; very restless at night. She has now been in the asylum for six months, and on the whole there is very little improvement. She is occasionally fairly quiet and rational, but as a rule she is raging up and down the wards singing, shouting, and swearing at the other patients. The charge-nurse says she is her most troublesome patient. She will probably remain in this state until the advent of dementia.

CASE 7. *High-grade imbecile; attack of acute mania of emotional type, æt. 16; constant recurrences, at times accompanied by delusions; under observation four years, no improvement.*—R. D—, female, No. in series 82. Very backward at school; left æt. 13 and went to service, but was so liable to what her mother calls "fits of temper" that she could not keep any situation more than a few months; altogether she had fourteen situations in less than three years. At the age of 16 she became so violent that she was sent to the asylum. On admission she was in a state of acute mania, screaming, shouting, singing, and resisting all attempts to keep her in bed; she also threatened to cut her throat. This condition lasted for a few days after admission; she then became quieter, and by the end of a fortnight was doing some work in the wards. Within a month she had a relapse exactly similar to the first attack. She is now 20 years of age, and has been in the asylum four years. At times she is quiet, well-behaved, and answers questions readily and pleasantly; it is, however, quite

impossible to depend upon her, and she is subject from time to time to sudden outbreaks of excitement, in which she becomes most abusive, uses the foulest language, and violently attacks anyone who may be in her way. These attacks last for three or four days and nights; as a rule, they seem to be purely emotional storms, but in some of them delusions are present, generally to the effect that the medical officers and the nurses are trying to cut off her head or to torture her in various ways. I see no prospect of any recovery in this case.

CASE 8. *High-grade imbecile; attack of acute mania subsiding in three months, followed by frequent recurrences; under observation for seven years without any improvement.*—E. S—, female, No. in series 101. Noticed to be simple-minded from birth; did not get on at school; subsequently kept at home to help mother, “as she did not seem to have enough sense to go out to work;” was at times very troublesome, and caused much annoyance by suddenly rushing into the neighbours’ houses. At the age of 16 became so restless and excitable that they could do nothing with her, and sent her to the asylum. The medical certificate states “she exhibits undue mental excitement, talks, sings, shouts, and laughs immoderately, and behaves in an insane manner; very restless, imagines the attendants to be her former school teachers, and seems altogether too excited to control herself and talk sensibly.” This acute condition gradually abated, and by the end of three months she had become quiet and able to do work; two months later she relapsed, again becoming excited, noisy, and destructive day and night, in which state she remained for three weeks, then becoming quiet and industrious again. She has now been in the asylum seven years, has ceased to do any work, and is subject to frequent acute outbreaks, becoming noisy, destructive, and aggressive. In some of these attacks delusions are present; thus a short time ago she stated that she had given birth to a child, which had been stolen from her in the night. She is very impulsive, and on one occasion, seeing a pail of water standing in the ward, she suddenly plunged her head into it. She is becoming untidy in her dress and personal appearance, though there are as yet no other indications of dementia.

(<sup>1</sup>) “Amentia—its Etiology, Classification, and Pathology,” *Archives of Neurology*, vol. ii.