On General Paralysis. By HARRINGTON TUKE, M.D.

(Continued from page 104, vol. vii.)

THE physical symptoms attending the general paralysis of the insane have been shown to present in their progress three well-defined stages. Some of the earliest physical signs—any one of which associated with a particular form of insanity will almost infallibly indicate the first stage of this special disorder—are the intermittent pulse, the irregular or contracted pupil, the quivering lip or embarrassed articulation. The second stage is marked by loss of power in the upper extremities, by a gait more or less unsteady, by diminished sensation in the cutaneous nerves, or by the loss of some of the special senses. In the third period the disease approaches its climax, in an entire want of motory power, and by an impairment of all the nervous functions so universal, that although organic life may, under careful treatment, be prolonged for a considerable time, the patient may be said to exist rather than to live. Epileptiform attacks may precede or accompany any one of these stages. They sometimes very distinctly mark out their boundaries, or the disorder may run its course without any recognised convulsive seizures.

The mental symptoms of general paralysis—although more variable than the corporeal in the order of their appearance—are susceptible of a similar division into stages. These may be shortly described as presenting, first, the stage of excitement, with loss of self-control and reasoning power; secondly, absolute delusion, with or without violence; and, lastly, complete insensibility. In many cases this sequence of the symptoms is so strongly marked as to have given rise to the opinion that each patient successively presents the symptoms of mania, monomania, and dementia.

If the mental derangement, that I believe invariably accompanies this particular form of disorder, be recognised at its first appearance —and this is not difficult for any physician conversant with the disease—I do not think that any division of its progress into stages is of much practical importance: even in those cases in which the stages of the disease are most strongly marked, their approach is by no means coincident. The third stage of physical weakness may be associated with very slight symptoms of mental alienation, or the almost imperceptible quiver of the lip, or hesitation in pronunciation may alone indicate the special disorder in a patient who is in a state of furious mania, or exhibiting distinct and fixed delusions.

The intellectual derangement does not always preserve even an

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approximate ratio to the amount of muscular paralysis, and the dictum of Andral with regard to softening of the brain is by no means applicable to the general palsy of the insane; moreover, the same patient may one week present all the three stages of the mental disorder, sometimes even rallying from an apparently hopeless dementia into a state that to one unacquainted with the insidious nature of general paralysis, might be thought to indicate a perfect restoration to reason. The physical symptoms are more constant, and more easily demonstrable; hence in systematic writers, and in the reports and case books of the English asylums, if the stage of general paralysis is mentioned, the reference is to the degree of loss in the motor power, and very seldom is any measure of the amount of mental derangement present.

The idea of the malady involved in the acceptance of the term general paralysis of the insane, as distinctive of the particular form of brain disease so ably demonstrated by Calmeil, has probably led to its mental phenomena being to a great extent overlooked, and their value in its diagnosis being so much underrated. They are as equally characteristic of the malady as the physical symptoms, and will receive their full consideration, when it is more universally understood and admitted that the disorder is a mental one, associated indeed with a peculiar form of paralysis, but still *sui generis*, and often strongly marked before any muscular affection is developed. There is one very important point involved in the recognition of the first stage of general paralysis: the disorder is frequently said to be incurable, not so much because it really is so, as because the cases that have recovered from the disease are not admitted to be true examples of it, in default of the recognised presence of paralysis in any of the muscles. I must defer the reasons that lead to this explanation of what I believe an erroneous opinion, until I come to the discussion of the question,—whether general paralysis is or is not a curable disease?

It is not possible that physicians practically engaged in the treatment of the insane, should fail to recognise the peculiar type of mental disorder marking general paralysis, which they must so frequently see before there are any signs of physical weakness of a special character; many such cases are to be found among the patients in the large public asylums; they are still more frequently met with in private practice, because, as it has already been observed, the occupation and habits of life of the higher and middle classes render any morbid change in the brain function more rapidly apparent; now it is a curious illustration of the importance of discarding the idea of paralysis as being more than one symptom of the malady, which may exist without it, that such cases are entered in the case books and spoken of in reports, with a perfect recognition, indeed, of the nature of their malady, not as being in the first stage of the disease, but as patients attacked with "incipient general paralysis."

Confessedly unfortunate as the title of "general paralysis" is for the disease we are considering, I think the use of the word "incipient" almost equally objectionable, inasmuch as it involves the hypothesis that a certain disorder is about to supervene upon a form of *insanity*, which is therefore not admitted to be of a special character, although at the same time recognised as distinct from ordinary mania or melancholia. Patients presenting such symptoms as to cause them to be classed as incipient general paralytics, if the diagnosis be correct, and it is very rarely not so, may be fairly considered as in the first stage of general paralysis. It cannot be said that this is implied in the word "incipient," which is more usually employed to designate a prodromic set of symptoms antecedent to the disease itself; thus a state of incipient insanity means that absolute loss of reasoning power has not yet occurred, and therefore the phrase "incipient" general paralysis, employed to distinguish the nature of the malady in a patient under certificates of lunacy, would lead to the inference that general paralysis cannot be certainly distinguished till the physical symptoms have obtained a marked prominence, an inference entirely opposed to the facts of the case; nor will it avail to defend the expression by suggesting that it may describe a form of mental derangement upon which paralysis may supervene,—it really describes nothing when applied to a man already deranged. If general paralysis be a special mental malady, associated with failure of the muscular power, distinct from the paralysis caused by cerebral hæmorrhage or serous effusion, or other familiar causes of lesions of the motor power; then "incipient" is a word properly applied to the disease before the patient is either paralysed or insane, but clearly no longer applicable when the patient has become the inmate of an asylum.

There can be no question that a prodromic stage of "general paralysis" may be recognised by slight physical symptoms, which may be considered as constituting an incipient stage of the malady, but it appears to me impossible to apply the term "incipient" to a stage of an organic disease of the brain so far developed as to have once induced delusions or led the patient to commit overt acts of absolute insanity. I believe it to be impossible, without any guide from physical disease, to diagnose with certainty the incubation of general paralysis; it will in no respect differ from that of mania or monomania; there will be restlessness, change of character, and loss of memory equally in each, the exact advent of the so called "general paralysis" being marked by a particular form of delusion, almost always specific; its diagnosis to be afterwards rendered certain by an equally specific form of paralysis. It is most important to bear in mind the specific character of the paralysis; it would be an absurd mistake to mistake a paralysed gentleman who stuttered, or a case of lively mania, with hemiplegia, for forms of special organic

brain disease; the history of the paralysis in the specific disease is as I have described it; the principal points of difference in the symptoms may be shortly summed up as consisting in the slowness of the progress of the want of power in the general paralytic, contrasted with the suddenness of its invasion in the hemiplegic patient. In cases of general muscular weakness slowly attacking every organ, without insanity supervening at all, it will be found that the symptoms proceed from below upwards; the muscles of the tongue are the last attacked, if at all, and the reflex functions are not interfered with till the very last stage of the malady.

It is far easier to recognise the specific mental characteristics of paralytic insanity than to describe them; they are, however, marked enough, although sometimes overlooked even by trained observers, and we therefore find patients classed as cases of "mania" or "melancholia," or even "dementia with general paralysis," who, if the etiology of the disease were better understood, would have been recognised at the very outset of their malady as suffering under *la Folie Paralytique des alienées.*

The leading characteristic of this insanity is the sense of beatitude, the contentment under all circumstances, the expansive delirium already mentioned; but various circumstances, not, I think, sufficiently taken into account, complicate the mental phenomena, whose true nature may only appear at intervals during the disorder; but it is probable, also, that the authors who have written upon the disease describe it as occurring in very different classes of patients, and that while in the practice of one it has happened that great uniformity has been met with in the symptoms presented by the disease, in the experience of another greater varieties have been noticed. This difference seems to exist between the practice of the French and English physicians who have written on psychological medicine, and is very easily explained. The larger number of cases quoted by the French physicians have been taken of course from the public hospitals, especially those of Paris; and the class of patients to be found in all metropolitan asylums, and more particularly in those abroad, offer far greater varieties in idiosyncracies and in degrees of mental training, than are to be found among the agricultural labourers and uneducated mechanics of the provinces; moreover, the absurd restriction that in England prevents in many instances the highly trained superintendent of a public asylum from giving the advantage of his medical experience to the department of private practice, is unknown in France, where diseases of the brain are therefore more studied and better understood. It may seem, at first sight, absurd to draw a distinction between the insanity of the peer and that of the peasant, but there unquestionably are shades of difference in the initial symptoms; the educated brain is a more delicate instrument, and slight deviations from its normal state are

easily distinguished; the intellectual faculties of the lower classes, like the *dura messorum ilia*, may be much affected without discovery; patients of the same rank in life, working perhaps in the same asylum at the same accustomed occupation, will present a great similarity in their mutual condition, and it is from this class that the English physicians have drawn their portraits of the malady—hence the mental symptoms have not received so much attention in England as in France.

I believe that the study of the varieties of the mental symptoms is of less importance than the knowledge and recognition of the type of insanity underlying and connecting them all. M. Falret, in his excellent treatise, already quoted, describes two varieties, founded upon mental symptoms—these he calls the expansive and the melancholic; to these forms M. Brierre de Boismont has added a third, which he names hypochondriacal general paralysis, and more might be adduced constituting one and the same disease; and all equally tending to the same termination—in death or in dementia. I believe that in every variety, allowance being made for other disorders complicating it, and for differences in habits of life, and mental training, the key-note to the disorder will be found in the happiness, the contentment, the indescribable *bien-être* that is more or less inseparable from general paralysis in every case. That this should exist, even in patients who have hypochondriacal melancholia, seems to be a contradiction in terms, but it is, nevertheless, the case. A patient affected with this form of general paralysis died while under my care from another acute malady. Although he was always apparently miserable under his distressing hypochondriacal delusions, the feeling of contentment was still manifest. "I know you think," he said, with a smile, a few minutes before his death, "that I am dying, it is very silly of you, I shall live yet for years." There is a curious analogy in this symptom, with that so familiar to us in cases of phthisis, in which disease the patient, although visibly sinking, remains so often hopeful to the last. It is not unfrequent also to meet in cases of phthisical mania, mental symptoms singularly resembling those of general paralysis.

The fact that women in the upper and middle classes are very rarely attacked with general paralysis, while it is not uncommon among females in the rank below them, seems to confirm the idea that education and previous habits of self-control, may not only modify the disease, but absolutely prevent its appearance. The French and English physicians are agreed as to the rarity of the malady in women of the upper ranks of society. I have already mentioned that Dr. Conolly had never seen such a case in his practice; since that was written one such patient has come under his observation, and is now under my care. This poor lady suffers from convulsions, special delusions, and progressive paralysis, and there can be no doubt as to the specific nature of her disease.

Some few very distinguished physicians, some even in the French school of medicine, dispute the existence of any necessary connection between mental derangement and general paralysis; they doubt its existence as a special form of insanity. Chief among these is M. Pinel, the nephew of the celebrated preceptor of Esquirol. It may prove that this difference of opinion is more apparent than real; it is not, practically, of importance, inasmuch as no one of these gentlemen deny the very usual presence of insanity with this form of paralysis, and the propriety, in many cases, of recognising the conjoint symptoms as one morbid product. To the assertion of M. Pinel, that general paralysis is not recognised by those engaged solely in the treatment of insanity as a simple paralysis, because they see only those cases that are brought to lunatic asylums; the answer may be given, that it is strange that no one before Calmeil's work ever described a form of paralysis in men of sound mind, exactly such as he points out as existing among the insane; and many physicians must have recognised, and would have described such a disorder, had they met with it in the ordinary routine of their practice; Calmeil then must have at least the credit of drawing their attention to the disease, even if mistaken in claiming it as disorder always associated with insanity.

The opinion that the general paralysis of the insane is a specific disease of the brain, and not simply a complication of paralytic symptoms with mental derangement, can, perhaps, only be admitted as a plausible theory, while our knowledge of its pathological phenomena does not enable us to point out in every case an identity in the morbid change in the brain; at present we can seldom do this; in many cases we even fail to discover any morbid appearances that could account for the symptoms observed during life being either those of paralysis or lunacy. The claims, therefore, of general paralysis to rank in nosological tables as a special malady, must depend in some degree upon the peculiarities in the rise and progress of the symptoms which I have detailed, and, to a greater extent, upon the specific differences from ordinary insanity, on the one hand, and the usual forms of paralysis on the other, which we may discover by careful examination of the symptoms observed during life, and their comparison with other forms of known disease of the nervous centres.

With regard to the age of the patients in whom general paralysis appears, it would seem at first sight that it obeys the ordinary rules that govern the advent of mental diseases. In middle life the struggle with the world is generally at its height; the battle for fame or for fortune is about to end either in victory or defeat; the nerves are at their fullest tension, and the brain therefore most liable to those sympathetic and organic changes of which mania, melancholia, or general paralysis may be the symptoms. The age of maturity is

the one most prone to diseases of the mind, and therefore in two thirds of the cases of paralytic insanity quoted by Dr. Conolly in his Croonian Lectures already cited, we find the patients to have been, at their death, between thirty and fifty years of age. In seventy-one cases Calmeil found three fourths to be within the same decades of life when the malady first appeared. The age at which general paralysis is most to be feared is later than that in which ordinary lunacy occurs, whose invasion Dr. Thurnam has shown to be most frequent between thirty and forty.

But although general paralysis in this seems but simply to fall under the operation of the same law as to the epoch of its invasion, as other mental diseases which, taken together, attain the maximum of their frequency at the ages between thirty and forty, there is a marked exclusiveness in the attacks of general paralysis which has not, I think, received the attention it deserves as being characteristic of the disease; I allude to the fact that it seldom appears before the thirtieth or later than the sixtieth year of life; practically there is in childhood, youth, and old age, an immunity from paralytic insanity. I have never seen a case of general paralysis younger than thirty, or older, when the disease commenced, than sixty; the age of the youngest case that came under Calmeil's observation is given by him as being twenty-eight, the oldest sixty-two, while the average age at which the patients under his care had been first attacked by the malady, appears to have been forty-four. To estimate fully the greatness of this difference, the phenomena of general paralysis must be remembered; if not a special malady with distinctive symptoms, it may be said to present a combination of mental derangement tending to dementia, with palsy, and pseudo-epilepsy: do either of these follow the same rule as to the period of invasion as the conjoint disease? So entirely is the reverse the case, that dementia is almost peculiar to old age, and ordinary lunacy so common in later life as to have led the first psychologist of the world, Esquirol, to the opinion, proved since to be erroneous by Dr. Thurnam, that it was the period most prone to insanity; moreover, insanity attacks children, and is frequent in adults; epilepsy, again, is most common in childhood and youth, while paralysis attacks infancy not unfrequently, and is one of the disorders most fatal to old age.

If general paralysis be only a complication of insanity, as imagined by Esquirol, it might be expected to supervene very frequently upon the various chronic varieties of insanity, and especially upon monomania and dementia, but instances of such an occurrence are so rare that its possibility is denied by many competent observers; Calmeil mentions one case, and one only, in which paralytic symptoms of the true type supervened upon chronic dementia consecutive to melancholia; this patient's symptoms were peculiar, and attended with "convulsions similar to those produced by strychnia." The ordinary

forms of paralysis are frequently met with in asylums, and the great difficulty of the diagnosis between dementia, with hemiplegia or double paralysis, and paralytic insanity in its last stage, has been pointed out by Dr. Bucknill, and this difficulty may have led to an error in some cases: however that may be, the fact of the rarity of the disease in chronic cases is still an argument strongly in favour of its special nature, even although a few instances of it may have been seen. In the epileptic wards of Hanwell, although general paralytics must be sometimes sent there, Dr. Conolly states that the disease never appears, although the epileptiform seizures that accompany it are so nearly allied to the true epileptic convulsion. In idiotcy, a disease with an even closer affinity to dementia than epilepsy, paralytic insanity is unknown; I could never find a case either at Reigate or Red Hill. Dr. Downe, the physician to the asylum there, had never seen one instance of the disease in an idiot, and to Dr. Browne I am indebted for the information that neither in his wide experience, in his private practice, nor in his position as Commissioner of Lunacy in Scotland, nor in his examination for a special purpose of all the asylums of idiots in England and France, could he recognise one case of general paralysis.

It must be remarked that while general paralysis may thus be broadly stated as very seldom, if ever, supervening upon chronic insanity, and as never appearing among epileptic lunatics or idiots, all of whom are liable to true paralytic attacks; the paralytic insane themselves affected by the disease first described by Calmeil, are frequently sufferers under partial paralysis or hemiplegia, from which they may and do often recover, the original disease holding on its course unaltered; in this there seems another argument for the special nature of paralytic insanity, and a further proof of the mistake that is made by those who consider it as simply a complication of lunacy. It would be interesting to know the particular form of mental disease that existed in those cases of chronic insanity upon which general paralysis has appeared to supervene; in Calmeil's case, and probably in all others in which the history is fully given, it will be found that the advent of general paralysis altered entirely the mental symptoms, so that it was not only a muscular weakness of a special kind added to old standing intellectual aberration, but a distinct mental change took place synchronously with the approach of the physical symptoms; if this be always so, such an invasion of disease is rather, melancholia, changing its type to general paralysis, ceasing in fact to be melancholia, than a true supervention of paralysis simply upon the original disease.

(To be continued.)

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