

least fifty such cases within the last six months in this immediate neighbourhood. In three of our asylums, not to mention the numerous cases which could not, and cannot be admitted, owing to the overcrowded condition of the asylums, no fewer than thirty-three patients (five male and twenty-eight female) have been received, during the space of time above mentioned, whose derangement is clearly referable to this cause.

I am aware that apologists have been found for revivalism, even under this head of indictment; but few sober-minded and unprejudiced professors of Christianity will join them. The religion of Scripture and of Reason, revealed for the blessing and salvation of our race, and applied by the Spirit of Truth, never issued in insanity, however it may have rendered sane the mentally afflicted.

Such is a personal retrospect of the movement, strange but by no means unparalleled. Past eras and other lands, have furnished others quite as singular and almost identical in their features and results. Time is abundantly testing that which has but just rolled over Ulster; nor have I the least doubt but that the verdict of all who can judge with unbiassed minds and Christian discernment, will, before long, be given in favour of the views which, as an attentive observer, I have here ventured to submit to public consideration.

*On General Paralysis.* By DR. HARRINGTON TUKE.

(Continued from page 93.)

In attempting to describe the rise and progress of the paralysis, that forms one of the most remarkable symptoms of 'paralytic insanity,' I propose to notice first the affection of the muscles of the tongue, which is generally that which most strongly arrests the attention of the physician, who sees a patient in the second or fully-developed stage of the malady. In the last stage, the power of articulation is entirely gone; in both of these the paralysis is so marked, and the evidence of mental disease so clear, that the nature of the case can hardly be mistaken. It is in the very onset of the malady, that the peculiar lisp or failure of utterance, indicating disorder of the nervous centres, at or near the orifice of the nerves supply-

ing the tongue muscles, is of paramount importance in the diagnosis, because if this symptom be superadded to eccentricity of conduct, or distinct delusion, there can remain but little doubt as to the existence of this special and almost invariably fatal form of disease. The alienist physician accustomed to watch the progress of general paralysis, and to recognize its slightest indication, cannot mistake the faulty pronunciation in question, for that of any other form of malady; but inasmuch as there are several affections of the speech that might mislead an unskilled practitioner, it may be useful to describe some of these derangements of the apparatus of articulation, and specify their points of difference. In the first place, an affection of the speech, very much resembling the embarrassed articulation of incipient paralytic insanity, may be the result of temporary local congestion at the base of the brain, or may be produced by sudden fright, or by the action of poisons, particularly aconite; the indistinct utterance attending intoxication, is a familiar instance of poisoning of this kind: and all these are easily distinguished by the suddenness of their occurrence, and by their history, from the stutter of general paralysis. The articulation of the habitual stammerer is sometimes not unlike that which is the result of serious organic mischief; and still more striking in its resemblance, is the hesitation of speech, that may be observed in some cases of poisoning by lead. The ordinary signs of saturnine poisoning, the blue gum-line, the dropping of the wrist, &c., will mark this latter malady—the history of the case will prevent any mistake in the former. I may mention here, that I believe it to be an exceptional occurrence to find a person of unsound mind who stammers; such a case at least must be very uncommon, a fact which I can only account for on the supposition that the greater disease prevents any manifestation of the minor nervous derangement.

There is another very remarkable speech affection which is not uncommon, and is important to recognize as being evidence of a serious brain disease, although altogether distinct from the disorder we are considering. This symptom may be either apparent in the utterance of one word for another, without the consciousness of the patient, or in the changing of one word for another from a defect of memory, or from both of these causes combined. Dr. Watson gives a remarkable instance of the first form in his "Lectures," the case was one of effusion on the brain, which ended at last fatally, the patient wishing to say "pamphlet" called it "camphor," and wishing to say "not quite right" he abbreviated it into "n' i' quite." His

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intellect appeared undisturbed. In these cases the same word is sometimes always applied to the same thing, so that those in attendance on the patient learn to understand him; Dr. Abercrombie gives as an instance the case of a gentleman who, when he wanted "coals," said "paper," conversely asking for paper, when he required it under the name of "coals." In the case of a lady, whose state of mind became the subject of a legal enquiry, in the course of which I was consulted, this symptom was strangely marked: she had had an apoplectic seizure some months before, but there were at that time no symptoms of paralysis of the limbs remaining; she spoke volubly, frequently, however, putting one word for another, as 'sister' for 'brother,' 'workhouse' for 'asylum,' sometimes appearing conscious, and sometimes not, of the mistakes she was making. Another most marvellous speech affection is manifested in those cases, in which the patient, after disease that has attacked the brain, speaks in spite of himself another language. This is not so purely mental as may be imagined. In a case that came under my own observation, after a long continued cataleptic seizure, the patient entirely lost the power of utterance; the first articulate sounds he made for some months, were an imitation of the key bugle, and for a long time he expressed his wants by a rude imitation of its notes, he afterwards spoke a Dutch patois, which no one could understand, and it was twelve months before he could express himself in English.

Serious as are all these forms of speech affection, and important as they must be considered in their bearing upon disease, they are entirely distinct from the stammer of incipient general paralysis, which slight as it is, is yet of an import as grave as that of any one of them. The ear of the physician accustomed to the treatment of the insane, detects instantly this fatal lisp; it is to him an almost unerring index, not only of the malady itself, but of the stage which it has reached; and whether he does, or does not, believe that the disease of the brain it indicates is incurable, he must know that it is serious, and by no means likely to yield quickly to treatment.

Easy as this symptom is to recognize in practice, it is by no means easy to describe it in words. Guislain, who speaks of the "characteristic hesitation" of general paralysis, and of the trembling of the tongue in the formation of words and sentences, does not attempt to do more, resting satisfied with having pointed out its value in diagnosis. Calmeil lays special stress upon the embarrassment of the articulation in these cases, and thus describes it: "The words are no longer dis-

tinctly articulated, the patient is forced to make an effort to speak, the words do not follow readily; there is a kind of *bégaiement* much resembling that which is observable in drunken men."

Superior in graphic portraiture to this description of Calmeil's, is the account of the affection of the speech in general paralysis, which Dr. Conolly has given in the Croonian Lecture already referred to. Dr. Conolly has, moreover, described a more initial stage of the malady, one still more difficult to describe in words. There is in these patients, he says, "not a stammer, no letter or syllable is repeated, but there is a slight delay, a lingering or error, a quivering in the formation of the successive words or syllables, apparently from a want of prompt nervous or motive influence in the lips and the tongue." Dr. Bucknill, speaks of this speech-affection as being of "more value in the diagnosis of the early stage of paralysis than all the others," and he very happily likens the "tremulous motion of the lips" so frequent in these cases, to that seen in persons "about to burst into passionate weeping." It is impossible for those who have once seen the symptoms, not to be struck with the exact fidelity of this description.

It is not difficult to understand why it is that the articulation should so soon be affected in this disorder. The number and variety of muscles that move the tongue, and the necessity for their exact co-ordination to produce the complex movements concerned in the human utterance, render it obvious that a paralysis affecting the general nervous system, would be likely to appear first in muscles so delicate in their action, and so much under the immediate influence of the nerves. The progress of these cases demonstrates that this is probably the correct view; the patient, although the practised ear detects the fatal *bégaiement*, can at first protrude his tongue with ease, and does so sometimes to the last; but in the great majority of cases, the tongue-muscles in a later stage become distinctly paralyzed, the patient can only thrust it from his mouth by a succession of efforts, and withdraws it in the same manner; some patients will even attempt to drag it from their mouths with their fingers, conscious of their inability to effect its protrusion by natural efforts. In this particular form of paralysis, the tongue is not turned more to one side than the other, unless from some accidental mal-position, or absence of teeth, and this will assist in the diagnosis of general from ordinary paralysis, already, however, sufficiently separated by

the suddenness or slowness of their respective approaches. Dr. Bucknill has attempted to classify the letters in the pronunciation of which there seems to be the greatest difficulty, words, he says, "composed of numerous consonants are shuffled over in a very marked manner." I have not succeeded in verifying this, no two patients seem to me alike in this respect, nor does the same patient always fail upon the same sounds. The fact has not escaped Dr. Bucknill, that the speech of these patients will sometimes become temporarily much more distinct, and that in the early stage of the disorder, by an effort of volition, they can articulate any given word correctly. A clergyman under my care, whose speech is almost unintelligible, will yet *read* the church service seldom failing in any word, and although not able to read fast, he can read distinctly. I have sometimes fancied that the liquids, especially the L's, are more difficult to pronounce, but it is almost impossible to demonstrate this, or to find two physicians whose experience will coincide. There is another symptom, which although not strictly connected with any abnormal change in the mechanism of speech, is still common in general paralysis. At the end of a sentence the patient will repeat the last word over and over again, without any regard to its value in the emphasis, sometimes a whole sentence is thus repeated. In some patients there is great loquacity at the commencement of the illness; others are less talkative; both finally become totally speechless.

As the earlier approaches of the physical symptoms of general paralysis clearly indicate the base of the brain as being one of the seats of morbid deposit, or structural change, it might be expected that the nerves supplying the organs of special sense, together with the fifth pair, and the facial nerves would soon give evidence of diseased action. Accordingly, a failure of power in the auditory nerve is common, and amaurosis, even going to total blindness, not very rare; I have myself seen it occur in two cases. The effect of the diminution of nerve force, and loss of tone in the nerves supplying the muscles of the face, is evinced by the trembling of the lips, mentioned already, and by a very characteristic symptom, that has not, I think, been sufficiently remarked. The pathognomonic value of the drawing up of the angle of the mouth, and of the flaccid buccinator widely blown out in the coma of effusion, is well understood; equally valuable to the alienist physician, is the peculiar expression of the face which marks the incipient stage of general paralysis. It is not an entire loss of motion, the muscles still act, although in a later

stage they do become really paralyzed, and the patient lies with the face covered as it were with a mask of immovable muscular tissue; but even in a very early stage, there is a marked look of indifference, frequently accompanied with drooping of the upper, and infiltration of the lower eyelids. There is a heavy and sensuous expression about the mouth, the lips becoming full and relaxed; the eyes are prominent; the features rounded from deposition of adipose tissue; the whole character of the face changes, the emotions are no longer expressed in it, or at least not so vividly, and its rigidity is in startling contrast with the general vivacity of speech, and restless movement of the patients.

The absence of all anxiety in the countenance, producing the same appearance of youth, which is frequently so striking in the face of the dead, is often manifest in these cases of general paralysis. I was much struck by the remark of a witness in an important lunacy inquiry into the state of mind of a gentleman whom I believed to be a subject of this disease, but whom the witness considered perfectly well, and had indeed met for the purpose of attesting his signature to a will: "I had not seen my friend," he said, "since we were boys at Eton, and I was much surprised at his still youthful appearance, he seemed quite unchanged." This boyish look in men past even the middle period of life is very striking, and is not, I think, observable in any other form of brain disease. The tone of the muscles of the face being impaired, they no longer vary with the emotions of the swift-divining mind: the partially paralyzed muscles no longer show the lines indicative of care, of sorrow, of ambition, or remorse, but reassume the look they wore in boyhood, before the physiognomy was stamped with the traces of other passions than hope and love. It is quite possible that the peculiar mental contentment which is so characteristic of some forms of paralytic insanity may have some share in producing this peculiar *facies*; but the rigid look, the fearfully youthful face, may be found conjoined with the sighs of a melancholic, the suspicious reveries of the monomaniac, or the mutterings of the perfectly demented lunatic, as frequently as in the earliest stage of that general paralysis, in which none of these symptoms appear till towards the close of life.

I have spoken of the deranged action of the muscles of the tongue, of the impairment in the power of the special senses, of the want of tone, ending at last in perfect paralysis of the facial muscles, and I have stated the universal opinion that all these depend upon centric disorders affecting the nervous

functions. It may then be asked, to what extent is the power of sensation in the nerves impaired. The evidence on this point is not so clear. It is abundantly certain that in the later stages, sensation is blunted to a very great extent, if not entirely lost. I have seen patients bear without sign of suffering what would be to others absolute torture; but in the earlier stage it is difficult to get any reliable data for our decision. The symptom mentioned by Dr. Bucknill, the grinding of the teeth by some of these patients, is evidence that in them at least sensation is gone, as there can be no more forcible example of delicate sensory power than is afforded by the dental division of the superior maxillary nerves, and if any sensation remained it is hardly possible that so painful a process could be continued; and that the grinding movement is not simply spasmodic, is proved by the fact of its being discontinued during sleep.

The origin of the motor portion of the fifth nerve is so entirely distinct from that which supplies the sensory nerves of the teeth are derived, that it is easy to understand the possibility of the function of one being impaired or destroyed, while that of the other is only weakened or even unaffected; but the presence of active grinding movements of the jaw, produced by muscles supplied from the same nerve would be almost inexplicable did we not know that the internal pterygoid nerve, which is mainly concerned in the production of the grinding movement of the jaw, receives a large branch from the optic ganglion, and therefore the muscle it supplies becomes independent to some extent, of any injury or disease affecting only the fifth nerve.

At an early period after the accession of physical symptoms in paralytic insanity, a peculiar carriage of the head forms a very prominent feature. It is no longer unconsciously balanced upon the shoulders as in health; the patient seems to support it by a voluntary effort, and there is thus a rigidity of the neck induced which is very characteristic of the disease.

It has been a much discussed question whether the progressive paralysis that usually marks this disorder, appears first in the lower or in the upper extremities; from my own observation, and from an examination of the arguments adduced on both sides, I have no doubt whatever that the upper extremities are really first attacked, although the want of power in the lower limbs, would naturally be the first to attract attention. In the onset of the malady as Foville has pointed out there is rather a want of precision of the muscular movements than absolute paralysis, and in such cases as I am describing

in which the disease is gradual in its advances, the progress from this impairment of muscular power to its entire loss can be traced. In the early stage there is a want of equilibrium; in walking the legs are set apart, the balance of the column is attempted to be preserved by widening its base, the gait is staggering, the patient walks as if about to run, jerking one leg forward; at a later period he stumbles, the limbs can no longer support the trunk, which lies finally an inert mass. The course of the disorder in the upper extremities is not so demonstrable, but it will be found at an early stage, that the power of delicate manipulation is lost, the hand-writing is greatly changed, the patient lifts his arm slowly and with difficulty to his head, the grasp is weakened, and at last the upper extremities become motionless. A curious illustration of the truth of Foville's remark as to want of precision in the muscles being rather the fault than want of power, at least in the early stage of general paralysis, was afforded by a patient of mine, who, though he walked very badly, and with the jerk so characteristic of the malady, yet could dance to music very well, and often did so, although soon obliged to desist from fatigue.

In thus going through the physical symptoms of paralytic insanity, it must be remembered that I am only describing the type of the disease, when occurring, as it frequently does, in a young subject, and running its course without complication. In the great majority of cases the supervention of 'fits,' the disturbance of the circulation in attacks of maniacal fury, either as their cause or their effect, produce changes in the sequence of the symptoms and in the symptoms themselves, it is not uncommon to have true paralysis of one side arising from the presence of a clot of blood poured out upon the brain, which will again become absorbed, leaving the patient perhaps a little worse than before, but still not the less a sufferer from paralytic insanity. The possibility of complications of this nature is obvious, and the frequency of their occurrence is demonstrable, and will merit consideration, when I enter upon the pathology of the malady.

One of the most distressing symptoms in this fearful malady, is almost invariable in its later stage, and is sometimes present from its very commencement. I allude to the paralysis of the sphincters which is a source of so much trouble and annoyance to those around the patient, although fortunately little noticed by himself. This once set in is believed to be an evidence of serious disorganization of the brain, and renders the prospect of recovery almost if not entirely hopeless.