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PART 1.—ORIGINAL ARTICLES.

On the Relation between Syphilis and General Paralysis. The difficulty of distinguishing General Paralysis from certain Syphilitic changes of the Brain. By Dr. ACHILLE FOVILLE, Medical Superintendent of the Asylum of Quatre Mares, near Rouen (translated and condensed by T. W. McDOWALL, M.D.).

In the article on General Paralysis in the "Nouveau Dictionnaire de Médicine et de Chirurgie Pratiques "(vol. xvi, p. 89., 1878), I thought I had settled the differential diagnosis of this affection when I said:—

"Multiple tumours of the brain, especially those of a syphilitic character, may be accompanied by motor and mental symptoms identical with those of general paralysis. More than once we have observed cases of this kind, and we believe that some do occur in which the differential diagnosis is impossible, except, perhaps, by means of the history. The autopsy alone discloses the error which has existed during the whole duration of the affection."

This statement may excite incredulity or objections; at any rate, it must be supported by facts. The most important is the case of an officer, whom I had under observation at Charenton, from July to November, 1870. During the previous six months he had been under treatment at Gros-Caillou and Val-de-Grâce. At Gros-Caillou he was considered a lunatic, but I do not know if general paralysis was diagnosed. At Val-de-Grâce and at Charenton he was regarded as a general paralytic, and his symptoms were such that it appeared impossible to doubt the correctness of the diagnosis. At none of these three asylums did they think of subjecting the patient to anti-syphilitic treatment. Death occurred subsequent to a well-marked stage of dementia and paralysis.

The autopsy showed that the lesions characteristic of general paralysis were completely absent; but we found, in the interior of the hemispheres, multiple tumours, apparently syphilitic. I subsequently learned that he had had syphilis, and that shortly before his mental disease he had presented undoubted tertiary symptoms.

Struck by the exceptional importance of this case, I wrote it out very fully, and subsequent research confirmed me in my opinion as to its rarity and interest. I have delayed publishing this paper until now; but a paper by M. Fournier, in the "Annales Médico-Psychologiques" (Jan., 1879, p. 98), designated "Pseudo General Paralysis of Syphilitic Origin," calls attention to this subject. M. Baillarger thinks that we must wait the publication of new cases before we can discuss the doctrine of M. Fournier, and I know that he considers the study of the relations between general paralysis and syphilis as peculiarly interesting.

It appears to me that I should now publish the case which I observed at Charenton.

Syphilitic Tumours of the Brain simulating General Paralysis.—M. L., æt 37, an infantry lieutenant, was admitted into Charenton from Val-de-Grâce on 10th July, 1870. Dr. Colin certified him as suffering from general paralysis. On seeing M. L. next day, I was much struck by the fact that he suffered from left hemiplegia. The occurrence of hemiplegia in such an early stage of the disease was unusual, and deserving of attention.

State of Patient.—He is affected with incomplete hemiplegia of the left side: in the face the paralysis is almost imperceptible when the features are at rest. There is a very slight amount of flacidity and flattening of this side; but when the patient speaks, and especially when he laughs and is animated, it is seen that the muscles contract more powerfully towards the right than to the left.

The left upper limb is almost motionless, the arm being pendant, the fore-arm flexed upon the arm; the hand slightly flexed on the fore-arm, and the fingers retracted. The whole limb has the appearance characteristic of chronic hemiplegia. The leg is much less affected; movement is difficult, but not impossible. The patient drags it *en fauchant*, but he is able to stand upright, and even to walk pretty quickly, though lamely.

The left pupil is much contracted, and almost motionless. The right appears normal. Nevertheless, the patient says that for several months he has scarcely been able to see with the right eye, whilst the left has given no trouble.

The general sensibility does not appear to be affected. The face is red, caused by marked injection of dilated capillaries; the ears are

red, hot and turgid; the eyes brilliant and injected; the saliva abundant.

The patient is very restless: during the three days he has been in the asylum he has seldom sat still, but has been almost constantly walking in the infirmary or on the terrace. He also speaks much, and almost exclusively about himself. The majority of the words are pretty distinctly articulated; but they do not follow one another very quickly, and they appear to experience a difficulty in coming out. Occasionally he hesitates in pronouncing a word, but this appears due to a difficulty in finding the word rather than to a muscular lesion of the lips, cheeks or tongue.

His conversation is not very coherent, but his meaning can be made out. He states that he has been ill since Christmas Day of the preceding year. At that time he was actively engaged in large business transactions in the extreme East, which promised to be very profitable. On the 25th December, after having dined temperately with his brother, he had during the night a severe epileptiform attack. Next day, however, he went about as usual, and resumed duty without difficulty. In about fifteen days another similar attack occurred, followed by paralysis of the left side of the body. He entered the military hospital at Gros-Caillou, where he remained about three months; he then left for home, convalescent. From there he was quite recently removed to Val-de-Grâce, and then transferred to Charenton. He adds that he cannot remain here, but must go at once to Paris to look after his affairs, and that a carriage is waiting for him at the door.

All this was related slowly, without spontaneity. He scarcely said anything except in answer to pressing questions.

The result of this examination was not decisive. The case might be one of simple dementia, due to an organic lesion of the brain, or one of paralytic dementia with hemiplegia, though I rather inclined to the former opinion.

From his brother I learned further that the patient had seen much service in Mexico, China, and Cochin China; that he had proved himself an excellent officer, but was often quarrelsome, had got into debt, and had been obliged to exchange several times. On account of his special qualifications, he had been appointed chief agent for a great commercial company. His prospects were splendid, when suddenly they were dashed in November, 1869. He was still greatly affected by this disappointment when he was seized by the epileptiform attack on Christmas night.

During M. L.'s first residence in hospital (Jan.-Mar., 1870), his mental condition attracted attention; he was extravagant and unreasonable. His family then took him home to the country, but with no good result. His speech was occasionally much embarrassed; he took no care of his person; his clothes were untidy; he ate ravenously at meals; during the intervals between meals he tried to lay hold of

bottles of wine and liqueurs. He next became disagreeable with women and children. At the same time he was insanely religious. He wished to build a church; he heard angels encouraging him in his project, &c. He also exhibited peculiar alterations of the general sensibility, and complained of having a torpedo in his left foot and leg.

As his family could no longer take care of him, he was sent to Val-de-Grâce, where general paralysis was diagnosed, and in a few days he was transferred to my care. Further examination strengthened the diagnosis. M. L. was very excited, restless, and full of grand delusions. His speech was no longer distinct; articulation was evidently embarrassed. The whole head was always much congested. The pupils and visions remained unchanged.

M. L.'s condition rapidly became worse. On the 15th August I noticed a general enfeeblement; intelligence was completely deadened. He scarcely manifested any spontaneous idea; with difficulty he answered questions; his speech was more and more thick and embarrassed. He was often dirty, and though feeble he insisted on walking incessantly. A new symptom had appeared: when he rested on his pillow or in his arm-chair, he always rested his head on the left shoulder, the face being turned to the right and slightly upwards.

At this time the publication of a paper by M. Colin greatly increased my interest in the case. ("De la paralysie generale des aliénés consécutive à des lésions locales du cerveau, spécialement à l'hémorrhagie cérébrale." An abstract of this paper appeared in "Annales Médico-Psych.", 1872, vol. xiv, p. 286.) Although M. Colin relates the case of M. L., I do not think he establishes the occurrence of cerebral hæmorrhage.

During the following week his condition became rapidly worse. The head, always congested, was constantly retained in the position already described. There were occasional slight convulsive twitchings of the facial muscles. The left upper eyelid drooped, but not constantly. Difficulty in swallowing was a very marked symptom. From the end of September he was unable to take solid food. He died on the 1st November.

Autopsy.—In making this examination I expected to find, on the one hand, the lesions characteristic of general paralysis, and on the other, a unilateral lesion, to explain the hemiplegia, near the base or towards the medulla, implicating the origin of the spinal, the pneumogastric and glosso-pharyngeal nerves, and thereby causing the torticollis and dysphagia. But the brain did not exhibit a trace of the changes found in general paralysis, the important lesions which did exist were not those which succeed hæmorrhage, neither were they near the medulla.

The dura mater presented no special feature. The meninges were transparent and thin; there was no marked injection, no ecchymosis.

They stript readily everywhere, except at one limited spot. The surface of the convolutions was normal, rather pale than red, and of normal consistence; no trace of superficial ulceration. On scraping with a scalpel, it did not come away in films, and there was no granular softening of the middle layer of the grey matter.

Only on the external surface of the left hemisphere, towards the union of the posterior and middle thirds, there existed an abnormal spot, about the size of a two-franc piece. There the membranes adhered a little, but still could be detached. The grey matter of two or three convolutions was altered in texture, consistence, colour and appearance. It was hardened at various spots, yellow here and there, but more red and injected at other places—irregularly shrivelled. The cerebral substance was, here and there, infiltrated by a hard caseous substance, around which was increased vascularity. A vertical section showed that this condition was not clearly limited as to depth, that it penetrated to the white matter, and varied in thickness from 5 mill. to 1 centimetre.

The two hemispheres were then separated by vertical section of the corpus callosum. It was immediately evident that the optic thalami were the seat of profound structural change. On the right side, the posterior half of the optic thalamus was affected without any material change in form being produced. Its consistence was greater than usual; its form irregularly knobbed. Its colour indicated diffuse congestion. The cerebral substance appeared to form the basis of the tissue, but it was infiltrated here and there, and hyperæmic all round. A deep incision showed that the interior was like the external, and that the diseased tissue had no distinct limit.

In the left optic thalamus, however, it was the anterior half which was affected. As a rule, the morbid change resembled that already described in the other thalamus and convolutions. But there was, also, below and in front of the altered portion, immediately beyond the optic commissure, two hardened nodules, more resistant than the surrounding parts, and making a certain projection, the one a little in front, and the other considerably behind the optic tract. On section, one observed first a layer of hyperæmic cerebral substance; then a very resistant double nodule, yellow in colour, fibro-fatty in appearance, distinctly limited towards the surface of the optic thalamus, but, in the other direction lost in the cerebral substance, which was hardened in spots, whilst elsewhere it had a gelatinous appearance. These nodules were about the size of a small nut.

In all respects the remainder of the brain, the cerebellum, pons and cord were normal.

Remarks.—I. On observing these morbid changes, I immediately concluded that they were of a syphilitic character, and research confirmed this opinion. (For descriptions of appearances of syphilitic guminata, see the works of Zam-

baco, de Gros, and Lancereaux; also Fournier's "La Syphilis du Cerveau," p, 54; Paris, 1879.) As it was of the greatest importance to learn definitely if the patient ever had syphilis, I succeeded in learning that, during his residence in Cochin China, he had a very severe attack, followed soon by constitutional symptoms, which had required prolonged specific treatment. He subsequently had many relapses, and had been admitted to the Gros-Caillou hospital with tertiary symptoms, and finally, he had, during these latter years, been treated for a gummatous tumour in the base of the tongue, a growth which produced almost complete aphonia. (On the structure of syphilitic cerebral tumours, see also the article, "Tumeurs de l'encéphale," by Jaccoud and Hallopeau, in vol. xiii. of "Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques.")

II. The absence of the lesions characteristic of general paralysis in the case of M. L., proves that the scruples which made me hesitate at first in my diagnosis, were well founded, and that I ultimately fell into an error in coming to the conclusion I did. But how could I have avoided this mistake? All the symptoms were characteristic but one—the hemiplegia. It embarrassed me and made me doubt. But was it, in itself, sufficient to make me reject the diagnosis of general paralysis, in spite of all the other facts which appeared to indicate its existence? It is worthy of special note that I cannot recall a single case in which genuine hemiplegia was associated with general paralysis, and, amongst the multitude of observations on record, I have only been able to find two. In one of these, the symptoms of general paralysis were not as well marked as in M. L.; in both, as in M. L., the characteristic anatomical lesions were wanting. (See Parchappe's "Traité de la Folie" [1841], p. 184, and Calmeil's "Traité des Maladies Inflammatoires du Cerveau," vol. ii., p. 61.)

III.—I carefully studied the works on syphilitic nervous diseases by Zambaco and by Gros and Lancereaux, with the object of finding a case like M. L.'s. I found, however, nothing at all similar. Either the cases were those of general paralysis, presenting all the usual symptoms of this disease, and having had, at some time or other, syphilitic symptoms, which fact would be far from demonstrating the syphilitic nature of the disease; or they were cases of localised changes of the brain, probably syphilitic, where the motor and mental symptoms had been mistaken for genuine general paralysis by careless or ignorant physicians.

IV.—Whether or not M. L.'s case resembles others on record, the fact remains that the mental symptoms during life were exactly those of general paralysis; and yet, at the autopsy, the anatomical lesions peculiar to this disease were absent. We are, therefore, forced to conclude that these symptoms are not absolutely dependent on these lesions.

But these mental symptoms must have had a cause, and it was, so far as I can see, connected with the disorders of the circulation, congestive in character, which were observed in this case. Judging from the facts already recorded, it is possible that he suffered from paralysis of the vaso-motor nerves of the head, which produced a habitual state of vascular distention, which was sufficient to cause the mental disturbances observed, and yet produce no recognisable structural change. In other words, we are led to admit, with M. Baillarger, that, occasionally, grandiose delusions may be due to simple cerebral congestion.

V.—The motor phenomena in this case were interesting. Whilst the hemiplegia was limited to the left side, disease was found in both optic thalami and on the external surface of the left hemisphere.

II.

The foregoing case, and its accompanying remarks, written more than eight years ago, appear to me to prove that, in certain cases, the diagnosis between general paralysis and syphilitic tumours of the brain is extremely difficult, if not altogether impossible.

Lancereaux, in his chapter upon syphilitic meningitis and encephalitis ("Gazette Hebdomadaire," 1873), says: "Certain syphilitic lesions of the encephalon may produce a symptomatic ensemble greatly resembling the morbid conditions known as general paralysis and paralytic dementia."

Müller calls attention to the fact that, according to many writers, syphilis has a most decided influence on the development of general paralysis, and he adds that the differential diagnosis is often impossible. (See also Otto-Braus' "Ueber Gehirn Syphilis"; Berlin, 1873.)

Huguenin is of opinion that a number of cases of paralytic dementia have their origin in a chronic meningitis caused by syphilis. ("Revue des Sciences Médicales de Hayem," vol. vii., p. 242, 1876.)

Erlenmeyer, in a work published in 1877, on the different forms of syphilitic insanity, describes three typical forms:—

1—Simple psychoses; 2—Psychoses complicated by disorders of sensation and motion; 3—Mental deterioration, to which may be added convulsive or paralytic symptoms. In many instances, the last class cannot be distinguished from general paralysis.

Julius Mickle's paper, in the "Brit. and For. Medico-Chir. Rev.," 1877, is to the same effect.

A. Voisin, in his recent "Traité de la Paralysie Générale des Aliénés" (Paris, 1879), discusses at length the differentiation between paralytic insanity in its first stage and secondary and tertiary syphilitic diseases of the brain. He remarks that the difficulty increases when the syphilitic lesions, instead of being limited, are multiple and diffuse, and especially when epileptic, or epileptiform attacks occur.

Numerous quotations to the same effect might be given, and I shall content myself by simply referring to the works of Wille ("Annales Médico-Psychologiques," 1872 and 1873), Heubner (ibid. 1872), Linstow ("Archiv. für Psychiatrie," 1873), Batty Tuke ("Journal of Mental Science," 1873), and Hughlings Jackson (ibid. 1873). I may as well also mention the opinion expressed in 1857 by Jessen and Esmark, that general paralysis is always and invariably of syphilitic origin. This assertion has—now, at least—no supporters.

Although Müller and Julius Mickle profess to be able to differentiate the cases by their clinical characters, I do not believe that they can. They do not base their diagnosis on the existence, in one case, of symptoms which are not found in the other, but only upon a difference of degree, frequency, and intensity of the same symptoms.

III.

As the result of further recent research, I have found but few cases at all like that of M. L., or bearing upon the relations between syphilis and general paralysis.

One of the least imperfect is recorded by Virchow, in his work on cerebral syphilis. ("Allgemeine Zeitschrift für Psychiatrie," 1861; abstract in "Annales Médico-Psychologiques," 1863, vol. ii., p. 115.) The leading features were secondary syphilis, pains in the head and bones, hypochondriacal melancholia. After three years, progressive general paralysis, with megalomania, with all the usual symptoms of a typical case. At the autopsy there were found multiple

lesions of a syphilitic character, pachymeningitis of the base, gummata of the dura mater, and secondary softening of the cortical substance.

Another case by Esmark and Jessen, reproduced by Renaudin, is not satisfactory, the diagnosis being doubtful.

A case by Müller is peculiarly interesting. A man was affected with typical general paralysis, and was regarded as hopeless, when an exostosis of the sternum showed the true nature of the disease. Iodide of potassium was given, and the patient completely recovered. ("Annal. Méd.-Psych.," 1875, vol. i., p. 464.)

It is, however, unnecessary to give further details. Those specially interested in the subject may look up the following references:—"Annales Médico-Psychologiques," 1873, vol. i., p. 323; 1870, vol. ii., p. 168; "Revue des Sciences Médicales de Hayem," vol. i., p. 245; "Lancet," 1874. vol. i.; "Medical Times and Gazette," 1872, 26th Oct.; "Allgemeine Zeitschritt für Psychiatrie, 1875; "Archiv der Heilkunde," vol. i.

IV.

M. Alfred Fournier has lately published a collection of clinical lectures delivered by him during the last few years in various Paris hospitals, of which the majority have already appeared separately in different medical journals.

The thirteenth lecture of this very interesting work is specially devoted to an affection, called by the author "pseudo-general paralysis of syphilitic origin."

This work is the most important which has yet been published in France, and certain of the ideas therein expressed are quite peculiar to the author.

M. Fournier begins by saying that if, in the present state of science, we attempt to explain the relations between syphilis and general paralysis, we find only obscurity and confusion. Besides, he adds, the majority of physicians in our specialty ignore the question altogether, and if, in their writings, syphilis is mentioned incidentally as one of the causes of general paralysis, this is done vaguely and as a matter of form.

This criticism is certainly not without foundation: M. Fournier has, therefore, done good service in bringing this question prominently forward.

It presents itself, he says, under two aspects.

The first group of patients includes those who are affected by genuine general paralysis, and who, at some period of

their life, have had syphilitic symptoms. Is that a simple coincidence, a pure accident, or rather a certain relation of cause and effect? There is some support for the latter idea, at least in certain cases, and syphilis may have its influence, like every other disturbing and debilitating cause, in the ætiology of affections of the nervous system, especially of general paralysis; but this is only a hypothesis, to demonstrate which is at present impossible, and whose solution is not of great interest. [A very curious remark!—TRANS.]

A second group, much more important from a theoretical and practical point of view, includes "cases of another kind, presenting, indeed, the majority of the characters of general paralysis, but differing from it in numerous features. The symptoms of this disease, it is true, resemble in certain respects general paralysis, even to simulating it; and yet they are removed and differentiated from it by other characters, so that it is impossible to confound them with it."—p. 337-8.

"These cases, closely allied to, but differing from ordinary paralytic insanity, are those which I have distinguished by the name of *pseudo-general paralysis of syphilitic origin.*" —p. 341.

According to Dr. Fournier, we meet occasionally in cerebral syphilis types more or less complex in their symptoms, but capable of arrangement as follows:—

1st. *Intellectual disorders.*—Cerebral excitement alone, or complicated by incoherence, habitude, or maniacal delirium.

2nd. *Motor disorders* consisting in *uncertainty of movements without paralysis,* awkwardness of the hands, unsteadiness in walking, hesitation in speech, stammering, trembling, and certain partial pareses, transient or more or less persistent.

3rd. Phenomena more variable and less constant; congestive disorders, giddiness, vertigo, disorders of sight and hearing—epileptiform attacks—congestive or apoplectic strokes.

Here is, in a word, one of the possible types of syphilis of the brain. But compare this morbid type with general paralysis. Do not both present similar phenomena, the same combination of symptoms? Does not this type of cerebral syphilis recall, reproduce, in pathological features, ordinary general paralysis?

To support his theory by a clinical example, M. Fournier quotes a case published by M. Baillarger, in the "Annales Médico-Psychologiques" for Jan. 1879, p. 68. Finally, to complete the parallel, he adds that one finds at the autopsy, in the cases of syphilis of which he speaks, "exactly the

same morbid appearances as in general paralysis; namely, on the one hand, the meninges are thickened, infiltrated, opaque, tough; and on the other, the grey substance is strongly adherent to the membranes, and more or less infiltrated, softened, &c."

Is it not, therefore, difficult to see in what the one type differs from the other, and does it not appear logical to say that, since the resemblance of the anatomical lesions is added to that of the symptoms, we have to do with one and the same disease? Such, however, is not the opinion of M. Fournier; the combination of all these points of similarity constitutes only, he thinks, a specious, fictitious identity, more apparent than real. Having shown the points in which the types are related, he undertakes to show in which they differ:—

I.—In relation to intellectual disorders, the characteristic grand delusions of general paralysis are, if not always, at least almost always absent in cerebral syphilis.

II.—As to disorders of motility:—

A.—Tremor is less common in cerebral syphilis; it is almost never observed in the upper lip; tremor, when it exists, is ordinary trembling, and quite different from the constant tremor, the fibrillar, vermicular quivering so characteristic of general paralysis.

B.—Paralytic disorders, in cerebral syphilis, consist of genuine paralysis, characterised by a diminution of the muscular power; whilst in general paralysis, the modification of the muscular power is a defective direction of the force, and not its abolition. In other words, the muscular disorders are ataxic, and not paralytic.

C.—Cerebral syphilis can be recognised by the frequency of distinctly localised partial paralyses, and especially by ocular paralysis, and by hemiplegia.

III.—Besides the disorders of intelligence and motility, there are the following differences:—

1st.—Progress of the disease: cerebral syphilis often begins by apoplectic attacks, and sudden paralyses; then, later, mental disorders make their appearance; excessive variability of symptoms, and their succession, and the impossibility of foretelling their duration. General paralysis, on the contrary, begins with mental derangement; its evolution is definite and regularly progressive; its duration can be stated with tolerable accuracy.

2nd.—General state of the patients: in syphilis, a general cachectic alteration, more or less evident, often from the

beginning; in general paralysis, preservation of the physical health; surprising integrity of nutritive functions until the third stage.

IV.—Further, anatomically, the lesions chiefly affect the grey substance of the convolutions in general paralysis, and the membranes in cerebral syphilis; the pia mater is, especially, much thickened, opaque, resisting, tough; it may be described as a hyperplasic meningitis, a meningeal sclerosis.

Dr. Foville very justly objects to many of the statements of M. Fournier, especially in regard to the distinctions between the two diseases. He summarises his remarks as follows:—

I.—The distinction proposed by M. Fournier between classical general paralysis and another cerebral affection which he calls pseudo-general paralysis of syphilitic origin, is not justified in the present state of science.

II.—Indeed, the essential symptoms being the same, the seat and nature of the lesions presenting the greatest resemblance, the differential diagnosis can only be based upon shades or secondary details, none of which have any really pathognomonic value.

III.—On the other hand, there are some exceptional cases where syphilitic tumours, insulated in the cerebral hemispheres, lead to a collection of symptoms so like those of general paralysis that a differential diagnosis is impossible, at least by clinical signs alone, although the nature and locality of the anatomical lesions may be completely different.

IV.—The name of pseudo-general paralysis is much more applicable to these cases than to those proposed by M. Fournier.

V.—Whatever truth may be in these theoretical views, it is essential, in every case presenting the symptoms of general paralysis, to search carefully for syphilitic antecedents, and, if necessary, to apply a specific treatment.

[Note by the Translator.—I have been tempted to make the above abstract, in the hope that the subject with which it deals may receive the attention of English asylum physicians. Any one familiar with foreign medical literature must have noticed that during the last few years there has been a growing tendency to regard syphilis as an important cause of general paralysis. My own experience would lead me a step further, and say that syphilis is the most important cause of general paralysis.

My attention was directed to the subject whilst residing in the Perth District Asylum. It struck me as a very curious circumstance that all cases of general paralysis from purely rural districts had not been continuously resident there, but had been, at some time or other of their lives, resident in large towns or abroad. They had been soldiers, railway guards, &c., and exposed to the dangers of town life. I noticed that no man who had spent his life in a highland glen, or small country town, ever presented symptoms of general paralysis. During my subsequent residence in the Inverness District Asylum the same facts presented themselves to my observation, but I was unable to explain them. I was constantly asking myself: What essential difference is there between town and country life to account for the fact that general paralysis only attacks those who have lived in the former? It was, and indeed is in England, the opinion of the profession that general paralysis is due to two chief causes, excessive sexual intercourse and drunkenness. But it is notorious that in the rural parts of Scotland drunkenness and illicit intercourse prevail to a shameful extent. At last circumstances pointed to the prevalence of syphilis as a probable explanation. Two of my own friends, who had suffered severely from syphilis, broke down from general paralysis. About the same time I had under treatment in this asylum two women who were typical G. P.'s. Both these women were infected with syphilis by their husbands. Since that time I have examined every male patient for chancres, and have found them in the large proportion of general paralytics. My numbers are too small to settle such a great question, but I feel that they point to the conclusion that in the great majority of cases, say 8 in 10, syphilis is *the* cause of general paralysis.

This probability as to the cause of general paralysis receives support from a statement in a recent Report of the "Retreat," at York. It is, I think, undeniable that the Quakers, of all religious sects, lead the most "godly, righteous, and sober life." What is the result? Since the asylum opened, now eighty-three years ago, only *three* cases of general paralysis affecting the Friends have been admitted.

This is a subject of so much importance that it would be well if it were thoroughly examined. To do so would require the co-operation of every Asylum Superintendent in the Kingdom, and, therefore it would be well if the Medico-Psychological Association took it in hand.]