*Pseudo-General Paralysis.** By Theo. B. Hyslop, M.D., Assistant Physician, Bethlem Royal Hospital.

By using the expression pseudo-general paralysis I am quite aware that I lay myself open to criticism. It may be said that the term is not only useless, but even misleading. Some will say the diseases under question are either instances of general paralysis, or, if not of general paralysis, they are other forms of disease and ought to be named accordingly. In anticipation of such an objection I venture to remark that the term general paralysis, as at present used, tends to cover many cases which are not truly *general* paralyses, but rather cases of insanity associated with a form of paralysis which strictly speaking is only partial. Or, to put the matter conversely, are we not too apt to include under the term general paralysis cases which are really cases of special paralyses associated with insanity?

Perhaps it might be well to look for a moment at the twofold meaning, in extension and intention, of the term general paralysis. By extension we of course refer to the objects to which the term may be applied, and by intention we mean the qualities which are necessarily possessed by the objects included under the term. For example, just as the term metal denotes gold, silver, etc., so the term paralysis denotes tabes, hemiplegia, etc. Further, just as the word malleable qualifying metal narrows the denotation of the term metal, so general applied to paralysis narrows the denotation of paralysis. In the present instance the addition of "of the insane" renders the denotation of the expression still more limited. In fact the limitations involved are so great that there is a distinct tendency to be illogical in including under the term, as we know it, either paralyses occurring in the not-insane, or paralyses which, more correctly speaking, are partial (although progressive) occurring in association with insanity.

This limitation imposed upon us naturally makes us look for a disease which we can regard as truly general in contradistinction to partial. The only exemplification is in the stage immediately preceding dissolution, and this I take to be the explanation of the wonderful truism that true general paralysis is invariably fatal. I do not wish, how-

* Read at the Cambridge Meeting of the Medico-Psychological Association 20th February, 1896.

ever, to quarrel with the nomenclature. The term general paralysis may be advisedly descriptive of a certain affection which is progressive and which terminates fatally. At the same time it appears to me that we who have the opportunities of observation should, instead of countenancing possible misconceptions by the use of an ill-defined term, seek rather a more complete differentiation of the factors of this chaotic disease and surrender the term "general" to what we really regard as special though progressive. For my part I have always failed to appreciate the entity theory of general paralysis. As it at present stands, general paralysis would appear to be best defined as a progressive disease which begins anyhow but ends somehow.

We are all conversant with the classical descriptions of general paralysis, and occasionally we see cases which fall under the recognised types. But the inclusion of the exceptions, which appear to be more numerous than the confirmatory cases, has always appeared to me to be merely a matter of convenience and in reality only a cloak for our ignorance of the special nature of the paralyses.

One of the greatest authorities of the day upon general paralysis defines it as "a disease of the nervous system, especially of the brain, marked clinically by some general affections of motility, viz., ataxy, and finally paresis, usually following a definite order and course of development, and especially obvious in the apparatus of speech and of locomotion; also, but in a less degree, by sensory disorder or defect; and marked also by mental symptoms, which constitute, or invariably tend to, dementia, but often consist in part of exaltation of feeling, or even expansive delirium. Finally, it is evidenced by certain organic changes in the encephalon and its tunics, often in the spinal cord and membranes also, and sometimes in some sympathetic ganglia as well."

Another eminent authority says, "general paralysis is not only a variety of insanity but a true cerebral disease, as distinct from any other disease as small-pox is from scarlatina. Being a distinct disease, it can be defined or described definitely." It is therefore defined as "a disease of the cortical part of the brain, characterised by progression, by the combined presence of mental and motor symptoms, the former always including mental enfeeblement and mental facility, and often delusions of grandeur,

and ideas of morbid expansion or self-satisfaction; the motor deficiencies always including a peculiar defective articulation of words, and always passing through the stages of fibrillar convulsion, inco-ordination, paresis and paralysis; the diseased process spreading to the whole of the nervous tissues in the body; being as yet incurable, and fatal in a few years." The same author next proceeds to the description of its variations, the most marked varieties being the peripheral form, where the pathological process does not begin in the brain cortex but in the cord, or in the neurine portions of the organs of special sense, or in the peripheral nerves. Both these descriptions are by advocates of the entity theory, and this much I am prepared to admit. The wide-reaching inclusion of factors in the olla podrida of general paralysis is unequalled in any other disease, and in that sense it can claim, as I think, to be distinct from any other disease.

Now before we can decide the question of the existence of truly *general* paralysis, we have to ask the question, what are its symptoms, and how are we to distinguish them from those of progressive partial paralyses?

From the physical point of view there are innumerable forms of paralysis which are "evidenced by certain organic changes in the encephalon and its tunics, often in the spinal cord and membranes also, and sometimes in some sympathetic ganglia as well." From a pathological standpoint, therefore, general paralysis, as we at present know it, seems to include every known cerebral degeneration as possible adjuncts of its pathology, *i.e.*, it includes many affections which often, occurring independently, are in reality special paralyses. From the physical side I consider that we have two broad types of disorder with which to deal, namely: paralyses which tend to progress and become more or less general, and paralyses which tend to progress, but which nevertheless remain, broadly speaking, only partial. Provisionally, therefore, I accept this as my text.

From the mental side we have nearly every possible abnormal mental manifestation included under general paralysis. The symptoms are said "invariably to tend to dementia, but often consist in part of exaltation of feeling, or even expansive delirium." The usual halo around the idea of expansive delirium seems to be quite sufficient for the diagnostic purposes of some observers; but how often do we really meet with it in the cases we are in the habit of

calling cases of general paralysis? And how often do we meet with it in cases which we know are not cases of general paralysis? At once the obvious reply is "certainly we do not diagnose general paralysis from the psychical side alone; in fact, we grant that there are no symptoms which invariably indicate the existence of a disease which is an entity, but the existence of a certain well-defined group of psychical symptoms associated with another well-defined group of physical symptoms would appear to warrant the conclusion that their co-existence is indicative of a disease which we may fitly describe as general paralysis."

General paralysis, as I understand it, is a disease in which there is progressive paralysis of all mental and physical functions, terminating respectively in complete dementia and complete paralysis. Strictly speaking, the only condition which fulfils all those expectations is, as I indicated before, death; and my belief is, that so-called general paralysis is merely a term used to signify the existence of widely varied partial paralyses (spinal, bulbar, and cerebral), associated with pathological affections of the organic substratum of mind, and therefore of the individual. The title of my paper, however, is Pseudo-General Paralysis of the Insane, and I will at once explain that by pseudo-general paralysis I mean to imply the existence of certain forms of paralysis which are like general paralysis, and which have been mistaken for it, but which in reality are, truly speaking, partial paralysis (mainly cerebral), with associated mental degenerations. Far be it from me to suggest the existence of a disease which might bear the name of pseudo-general paralysis. I have no such intention. I merely suggest that some cases so called are not general paralysis, and that under the general term there is a possibility of misconception.

The discovery of general paralysis was said by Baillarger to have been the most prominent advance recorded in the history of mental disease. As a matter of fact the discovery consisted in the recognition that dementia associated with paralysis and bulbar symptoms formed in some instances an incurable affection. Georget, Delaye, and Calmeil regarded the malady as a special form of paralysis superimposed upon the insanity. Bayle and Parchappe, on the other hand, regarded general paralysis as a special form of insanity characterised by certain anatomico-pathological characters and designated paralytic insanity. Subsequently Requin, Sandras, Lunier, and Baillarger somewhat

modified their views and recognised that general paralysis may exist with or without mental symptoms. Baillarger further claimed that, from a psychical point of view, the dementia and not the delusions constituted the essential symptom of the disease. Since that period the numerous anatomico-pathological lesions found post-mortem have led to the belief that this so-called entity is a chronic meningitis or meningo-encephalitis, a sclerosis of the connective tissue of the brain, a degenerative lesion of the great sympathetic, a myelitis, a diffuse, chronic, interstitial, meningo-myelo-encephalitis, and, lastly, an affection beginning in the brain cortex, or in the cord, or in the neurine portions of the organs of special sense, or in the peripheral nerves. Régis states, and I believe truthfully, that new clinical facts, such as the remissions, latent general paralysis, general paralysis of the double form, and in particular syphilitic saturnine and alcoholic pseudo-general paralysis, have gradually overthrown the entity theory which fails to explain them. General paralysis, as we know it, is a paralytic dementia essentially made up of a dementia and a progressive paralysis; and using the term general paralysis as thus understood, I now proceed to mention some of the more common of what have been called pseudo-forms, *i.e.*, those forms which simulate progressive paralysis, with or without dementia, but with no fulfilment of the *rôle*.

Examples of Pseudo-Form.

Epilepsy may lead to complete fatuity, or definite paralysis, or definite paralysis may result from local lesions in the brain structures. Some cases resemble general paralysis in their main symptoms, inasmuch as there is progressive mental degeneration associated with the steady development of a paralysis which tends to become general, and is attended with emaciation.

Alcoholism.—The late Professor Ball, Lacaille, Rousset, and many others have admitted the existence of, and described *alcoholic* pseudo-general paralysis. From the symptomatic point of view the similarity is well-nigh complete, but these pseudo-forms differ in that they are essentially curable, or at least susceptible of amelioration under appropriate treatment. They begin either with epileptiform or even apoplectiform attacks, or the pseudo-paralysis immediately follows a subacute attack of alcoholism. The symptoms almost at once attain their greatest severity. Inequality of

the pupils is almost invariably present, and, according to Régis, "the pupils are invariably very paretic, and in some cases absolutely immobile, especially the one that is most dilated. Besides this the pupillary aperture is very often misshapen, oval, notched on its borders; the coloration of the pupil loses its sparkle and transparency; it is usually dull and cloudy; and, lastly, the visual acuteness is ordinarily diminished—these last peculiarities being exceptional in general paralysis." The mental state is not one of progressive enfeeblement, but rather of confusion and stupidity. These bodily and mental symptoms gradually disappear, the inequality of the pupils being the most fixed and durable of the symptoms. The speech affections, on the other hand, tend to improve early. Such attacks may be repeated time after time. Professors Ball and Régis have reported a case in which alcoholic pseudo-general paralysis was recovered from 16 times in 13 years. Ultimately, however, such patients become alcoholic dements.

Saturnine.—Poisoning by lead gives rise to the form of insanity known as Saturnine. Several investigators have described a form of disorder closely resembling general paralysis to which they have given the name of saturnine pseudo-general paralysis. For an account of this affection I am again indebted to Régis. He says: "Like alcoholic pseudo-paresis, the saturnine pseudo-general paralysis most generally develops in the course, or rather as the result, of a subacute attack of saturnine insanity. Contrary to what occurs in true general paralysis, its beginning is abrupt, it breaks out noisily and reaches its apogee at once. As soon as the hallucinatory and delirious symptoms that constitute the lead intoxication have passed off, the pseudo-general paralysis appears, not with the mild symptoms of the period of invasion, but with the gravest characters of the full-fledged disorder. In most cases the patients are plunged from the beginning into the most profound cachectic marasmus. They are untidy, paralysed, demented, incapable of making a movement or uttering a syllable, and seem to be on the point of succumbing. At the same time they present the usual symptoms of lead intoxication, such as the blue line on the gums, clayey complexion, cephalalgia, dizziness, cramps, various neuralgias, partial anæsthesias or hyperæsthesias, paralysis, epileptic or eclamptic disorders, etc." "The symptoms common to true general paralysis and saturnine pseudo-general paralysis, present in the latter

some special shades of difference. Thus the pupillary inequality is often lacking, the tremor, while more intermittent, is also more marked and spasmodic, and the embarrassment of speech is occasionally so marked at the beginning that the voice is unintelligible. The patients, as we have seen, are often untidy and completely paralysed on their first admission to the asylum. Mentally, besides the delirious and hallucinatory manifestations, which speedily disappear, they show a type of depression very different from that of general paralysis. While, in ordinary paretics, the mental enfeeblement, at first slight, follows a progressive course and finally terminates in complete dementia, in the case of saturnine pseudo-general paralytics, this enfeeblement which appears at once in its greatest intensity, is much more apparent than real."

There are many other facts which are essential to the determining of a complete differential diagnosis. It is especially as regards its course and prognosis, however, that saturnine pseudo-paralysis is distinct from true progressive general paralysis. The affection is an essentially curable one, and, like alcoholic pseudo-paralysis, it has a decided tendency to recur under the influence of the same causes.

Fevers.—Febrile affections are not uncommonly complicated with or followed by mental disturbances. Typhoid, typhus, small-pox, scarlatina, cholera, diphtheria, influenza, and malaria may be followed by physical symptoms which, when associated with insanity, closely simulate progressive paralytic dementia. The general constitutional disturbances and degeneration of the tissues of the cerebro-spinal system which occur in pellagra also sometimes simulate general paralysis. After *typhoid* there may be affections of speech or ataxy of movement. As mentioned by Mickle, the speech is sometimes slow, and exhibits a characteristic drawl; the syllables are articulated in a monotonous tone, and with a nasal twang. The affections of the motor system may further be evidenced by muscular weakness, with or without tremors or tremblings of the lips, facial muscles, or even limbs. Westphal has described a peculiar trembling of the head when unsupported in a case in which there were no lip tremors, and in which sensation was unaffected. The pathology of this condition is little known. In chronic cases terminated by death in asylums, anæmia of the brain, or atrophy of the cortical substance, opacity of the pia mater, and excess of the subarachnoid fluid have been found. These

cases do not run the usual course of general paralysis, but tend to become chronic in the form of partial dementia, dementia, or of paralysis associated with delusions, and termed by some authors pseudo-general paralysis. Many other febrile conditions are followed by various paralyses and insanity. It would involve too much time, however, to enter upon the consideration of these affections. General paralysis is said to follow typhus, cholera, typhoid, dysentery, diphtheria, pneumonia, articular rheumatism, erysipelas, etc. I believe, however, that these affections are followed much more commonly by localised or even diffused paralyses which simulate general paralysis in many respects, but differ from it in that the course of the disease is widely divergent and the pathology consequently at variance.

Malaria.—The pseudo-general paralytic type of insanity following malaria has been repeatedly observed. It sometimes presents most of the features of general paralysis, with mental and physical symptoms, which, although difficult to distinguish from those of general paralysis, are, nevertheless, somewhat different in their course and duration. Mentally, there is frequently weak-mindedness or slight exaltation, with or without marked delusions. In one case admitted to Bethlem there was partial dementia with confusion, and in another, confusion and hallucinations of hearing. The physical symptoms were those of nervous debility with tremors, alteration of the reflexes, and even definite symptoms of a cord lesion. Although the pathology of such cases is as yet indefinite, there is sufficient evidence to warrant the conclusion that the affection is probably due to micro-organisms or to the existence of pigmentary deposits. From the clinical standpoint the diagnosis is often a matter of extreme difficulty. The periodic or intermittent nature of the mental troubles may suggest a malarial origin. The diagnosis would appear to rest between malarial pseudo-general paralysis, insanity with paralysis, and progressive paralytic dementia or general paralysis. Mental disorders occurring during an attack of malaria are generally transitory and curable unless the malaria be of undue severity, when there is apt to be permanent instability or chronic insanity. The prognosis in the pseudo-general paralytic forms is, in my experience, more unfavourable than in the other varieties of pseudo-general paralysis. They seldom terminate like general paralysis, but go on for years, and die of some complication, or succumb to the advance of a special degenera-

tive lesion. Sometimes when alcohol has formed an additional factor of causation the case may do well. When syphilis forms a complication recovery is rare. In one case formerly in Bethlem, with a history of malaria and syphilis, there was partial dementia with hallucinations of hearing and lateral sclerosis of the cord. The mental symptoms on the one hand were of an intermittent type, and did not advance in severity, whilst, on the other hand, the lesion in the cord progressed unfavourably until death ensued.

Syphilis.—The relationship of syphilis and insanity is a subject fraught with much difficulty, and hitherto it has provided much matter for contention. The literature of the subject is so extensive, and the conclusions of various observers so contradictory, that I may well be excused from propounding any definite statements with regard to it. It is difficult to prove that syphilis is the actual and immediate cause of insanity. The most one can say is that the syphilitic virus does induce pathological changes in the vascular and connective tissues of the cerebro-spinal system, and these changes act mechanically by pressure or otherwise, and so modify the nutrition of the nervous structures as to impair their functions.

It is impossible to define the organic types from the clinical symptoms alone, for any one symptom may be simulated by many other factors, a syphilitic tumour may be simulated by an abscess, hydatid cyst, or glioma; or the hemiplegia due to thrombosis of an atheromatous cerebral artery may not differ from thrombosis due to syphilitic arteritis. We can, in some cases, only rely upon the history of syphilis with its succession of symptoms. By some authors syphilis of the nervous system is said not to exist. They maintain that it does not attack the nervous substance, but that it affects the neuroglia, fibrous tissue, blood-vessels, lymphatics, membranes, or horny coverings, involving the nerve tissue only secondarily by pressure, and so causing irritation, inflammation, etc., or by starvation from deficient blood supply so causing degeneration and atrophy.

There is a group of symptoms which has been repeatedly described, and which possibly may be due to inherited syphilis. These symptoms occur in children, and sometimes present a remarkable resemblance to those of early general paralysis. The salient features of some of them are slow but steady development of paralysis with great emaciation. I have seen several cases of this type, and I am unable

to say upon what grounds they are sometimes regarded as cases of general paralysis. In adults the syphilitic process may attack the cerebral vessels and cause thrombosis, with subsequent atrophy, or the gummatous material may affect the surface of the convolutions or the internal tracts. Possibly the same occurs in children who are congenitally affected by syphilitic disease.

Syphilitic disease may manifest itself in lesions of the bones of the cranium, the membranes, blood-vessels, brain substance, cerebral nerves, or of the organs of special sense. The skull bones may be absorbed owing to gummatous infiltrations, or small areas of caries with exfoliation may occur. The dura mater and the pia arachnoid may be thickened and affected by various inflammatory deposits, or there may be gummata. The middle and inner coats of the arteries may show the characteristic endarteritis. Inflammatory deposits round the smaller arteries also occur. The brain substance may be affected by means of an extension of the disease from the membranes, or as the result of deficiency of blood supply. The nerve structures of the cortex are apt to degenerate in proportion to the amount of overgrowth of the neuroglia substance. The cerebral nerves and the organs of special sense may be affected symmetrically or otherwise. The nerve fibres may become atrophied and fail to perform their functions. This brief enumeration of some of the pathological data which may occur in association with syphilis ought to suffice to show that clinical effects may be produced which progress towards dementia and paralysis, and which may or may not terminate in death in two or three years from their onset.

There is much difference of opinion as to the part played by syphilis in the production of general paralysis. My experience in Bethlem leads me to believe that a large proportion of the general paralytics admitted to that hospital suffer from cerebral degeneration due to syphilitic diseases. It is well recognised that syphilis sometimes gives rise to a pseudo-progressive paralysis in which, during the early stages, the symptoms may be identical with those of so-called general paralysis; but subsequently there is an arrest or protraction of the disease in the pseudo-form, so that the patient may live for many years. It must also be remembered that sometimes patients appear to recover from syphilitic affections of the nervous system, but they subsequently relapse and suffer from cerebral symptoms which are totally different from those of their former attack. With regard to syphilis, there-

fore, I beg to submit that the transfer of the cases of cerebral syphilis to the category of syphilitic nervous affections would be an advance in the differentiation of disease, and an advantage in that it would relieve that chaotic disease general paralysis of some of the factors which serve to make it chaotic.

Apoplectic dementia usually occurs at a more advanced age than ordinary progressive paralytic dementia, and hemiplegic symptoms are more common in the former. General paralysis is also sometimes simulated by intracranial tumours, but the symptoms of the latter are seldom as diffuse and generalised. The greatest difficulty, however, is to be met with where the cerebral affections are clinically very similar to those of general paralysis, only differing from it in that the symptoms may partially or even entirely disappear. Régis says, "Some authorities who do not recognise in principle the existence of pseudo-general paralysis consider these conditions as special forms of paresis. The greater number, however, see in them only more or less exact morbid imitations of general paralysis. Substantially there is between these two ways of viewing the subject only a simple difference of the names of "special general paralysis" and "pseudo-general paralysis," all the world being in accord as to the reality of the clinical facts. The pseudo-general paralyses are, for the most part, the result either of an infection (syphilitic pseudo-general paralysis) or of an intoxication (alcoholic saturnine, etc.). The clinical picture may be more or less identical; it is often of such a character that any symptomatic diagnosis is impracticable from the beginning. Thus it is certainly not from the difference of the symptoms that such a distinction can be made, as many authors would seem to imply. The true distinction is, I think, only to be found in the difference of the course of prognosis, and consequently in the lesions. Pseudo-general paralysis, whether due to infection as in syphilis, or toxic as in alcoholism, has a regressive course, a relatively favourable prognosis, and is associated with comparatively curable lesions. In progressive paralytic dementia, on the other hand, we have a fatal prognosis and irremediable lesions. It follows, therefore, that the diagnosis depends essentially on the radically different evolution in the two cases.

Sunstroke.—Sometimes the symptoms found intercurrent with the sopor and coma following the shock of sunstroke may take the form of delirium or of excitement with

hallucinations, passing into a condition somewhat similar to that of primary dementia. As a general rule, however, although there may be some trace left of the primary injury to the brain, the progress of the case is more favourable than when the psychosis develops some months, or even years, after the injury. Epilepsy is one of the most common of the sequelæ of sunstroke, and occurs in various degrees of severity, from slight epileptiform convulsions to the severest forms of the disease. Dr. Mickle appears to believe that the apoplectiform seizure or the epileptiform *petit mal* of general paralysis has been mistaken for sunstroke. While acknowledging that such an error may possibly occur, I stated some years ago, and from an analysis of 55 cases of insanity following sunstroke, that it would appear to be more common for the sequelæ of sunstroke to be mistaken for general paralysis.

Dr. Mickle also believes that sunstroke is not uncommonly a cause of general paralysis. On careful analysis of the cases above mentioned I was able to find only one case in which general paralysis really existed, whereas the number that simulated that affection was remarkable. In fourteen cases I found associated mental and physical defects which rendered a diagnosis extremely difficult. The physical symptoms consisted in tongue tremors, pupillar anomalies, altered reflexes, shaky and interrupted handwriting, tottering or weak gait, loss of control over the bladder and rectum, hallucinations or perversions of some or all of the senses, and mental affections such as melancholia or hypochondriasis, but more commonly exaltation, extravagance, excitement, or even acute mania. With such a combination of symptoms the diagnosis of general paralysis appeared to be warrantable, but the cases proved to be deceptive, for after a time the physical signs disappeared, and the patient recovered mentally, or the mental health remained in a weak and permanently impaired condition, as shown by some irrelevancy or inattentiveness, or more commonly by some obstinate or permanent traces of exaltation or by fixed delusions, with a bland, self-satisfied manner. Such patients become docile, cheerful, tractable, and industrious, and perhaps able to resume work, and so they may go on for years, with no marked change mentally from year to year.

The symptoms arising from locomotor ataxia, various paralyses (either diffused or circumscribed), epilepsy, senile dementia, and many other conditions may, in some particulars, render the diagnosis difficult, but the greatest

difficulty is experienced with such affections as progressive paralytic dementia, syphilitic disease of the brain and membranes, alcoholic degeneration and dementia, with paralysis from local lesions, or circumscribed brain lesions, with dementia and paralysis (from softening, from hæmorrhage, embolism, or thrombosis).

In conclusion, gentlemen, I would submit, with all due deference to the various learned authorities upon this intricate subject, two points for consideration, viz.:—

(1.) Whether the term general paralysis is entirely satisfactory, and not merely a term having, at least in some hands, convenience as its chief recommendation. I, for my part, regard the term as applicable theoretically to a certain number of cases only, and possibly its practical application to these cases may still be deemed advisable. If, as an alternative, it may be thought better to adopt such terms as progressive paralytic dementia, and to differentiate the varieties of this affection, my remarks may have been of some slight use. If not, they are premature, and not likely to prove beneficial.

(2.) Whether by viewing general paralysis as an entity, or whether by differentiation and undermining the fort with a view to later storming, we shall be the better able at least to avoid the danger of false prediction as to the course of the disease. Numerous instances occur in which questions of the administration of property are dependent upon the recognition of the probable course and duration of the disorder. I for my part believe that the "glorious uncertainties" of the disease will gradually disappear as we succeed in limiting and defining its numerous contents.

On the Increase of Insanity, and the Boarding-out System. By Dr. J. BRESLER, Freiburg in Silesia.

Public opinion will have it that this is a neurotic age, and that insanity is increasing year by year. The facts which have called forth this opinion, and appear to confirm it, are not by any means flattering to our civilisation or to the resistive power of latter-day humanity. The multiplication of asylums, and the numerical increase of the insane written large on the statistical returns of every civilised country during the past decade, apparently admit of no dubiety in regard to this question. It is necessary, therefore, that we