

A Clinical Lecture

ON

INSULAR SCLEROSIS AND HYSTERIA.

Delivered at the National Hospital for the Paralysed and Epileptic, Queen-square, on Nov. 10th, 1896,

BY THOMAS BUZZARD, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—It need scarcely be said that to enter at all fully into the subject either of Insular (disseminated) Sclerosis or of Hysteria would require a good many lectures. My object to-day is to give you a sketch illustrative of a single point, viz.—the extraordinary liability of Insular Sclerosis to be diagnosed as Hysteria. In making a sketch of a landscape from nature the art largely consists in knowing what to leave out. In my sketch it will be understood, in like manner, that everything which is not essential to the particular object in view will necessarily be omitted.

Of the two patients present, one, aged forty-two years, I have the opportunity of showing by the courtesy of Dr. Hughlings Jackson; the other, aged twenty-eight years, is under my own care. The first is a married woman who, ten years ago, began to suffer from giddiness and complained of weakness in her legs, which has continued to the present time, and has been accompanied occasionally by pains. Four years ago she first noticed trembling and inability to hold things with her right hand, and two years ago the left arm became similarly affected. One year ago she began to have delay in micturition, and more recently incontinence of urine. She suffered also from double vision. During the last six months there has been some trembling of the hand and her articulation has been impaired. On admission to the hospital she appeared to be well nourished, and nothing wrong was found in the digestive, circulatory, or respiratory systems. Her mental state appeared to be normal. Her utterance was slow and inclined to be syllabic. There was diminution of power in the arms and great incoördination in voluntary movements. There was no marked wasting. She could not walk, and when lying was unable to raise the legs from the bed. The legs were stiff and spastic. The sensory system was unimpaired. Of the organic reflexes the act of swallowing was normal; there was complete loss of control over the bladder; the bowels were constipated. Of the superficial reflexes the abdominal and epigastric were absent, but the plantars were present. (I shall have something to say presently about the retention of the plantar reflex.) Of the deep reflexes those at the knees were exaggerated. There was no ankle clonus. There was very marked nystagmus. The vision of the right eye was $\frac{3}{8}$, Jaeger 12 (– 1); that of the left eye was $\frac{3}{8}$, Jaeger 7 (– 3). The optic discs were pale. The patient's present condition will be seen to correspond with this description, for which I am indebted to Dr. Harris, senior house physician. She may be taken as a typical example of insular sclerosis. She has slowly but uninterruptedly grown worse since her illness commenced, some ten years ago, and there is no record of a diagnosis of hysteria having been made in the earlier stages of her disease. If this be so it is a rare exception. Both in hospital and private practice we almost invariably find that a female patient presenting a characteristic picture of insular sclerosis has in the earlier part of her illness been considered, for longer or shorter periods, to be suffering only from hysteria.

Before proceeding to dwell in some detail on this point I will show you the other patient, a single woman aged twenty-eight years, who applied at this hospital in March, 1894, on account of a difficulty in walking from which she had suffered more or less for ten months. It appeared that in May, 1893, she began to complain of weakness of the left arm and leg. She dragged the leg a little, and it felt numbed, "like a log of wood." She had had some considerable mental trouble before this, and the symptoms were set down to "hysteria." This diagnosis appeared to be confirmed when, in the course of a month, the arm had recovered. Although her leg dragged a little she continued to walk until February, 1894. There had been a progressively increasing weakness, which at Christmas, 1893, had extended slightly to the

right leg. On examination in the out-patient department the knee jerks were found to be very well marked on both sides. Ankle clonus was obtained readily on the left side at the first attempt, but on the second trial it could not be elicited. There was no sign of ankle clonus on the right side. There was no nystagmus and there had not been any double vision. On the other hand, micturition had been inclined to be precipitate. The patient was a well-grown, healthy-looking young woman. Some doubt was felt by my colleague in the out-patient department as to the diagnosis of this case, and she was sent to Finchley, to our convalescent home, to be under observation and treatment. In May it was noted that she walked much better. It was also remarked that she would get better one day and then worse again. On May 3rd ankle clonus was observed to be definite, though not prolonged, on each side, and about equally well-marked in the two legs. At this time the plantar reflex was present on the right side, but doubtfully expressed on the left. Sensation was apparently normal to touch and pain. On May 31st it was noted that she walked much better—in fact, fairly well; but the left leg was considered rather weaker than the right. There was now an attempt at ankle clonus in the right leg and on the left side it was well marked. For the first time, too, some fine though definite nystagmus was noted in the left eye. In the right eye this was barely perceptible. At this date it was remarked that no plantar reflex was obtained, but the patient appeared to feel both touch and the prick of a pin well. She was discharged from Finchley, but continued to attend the out-patient department in Queen-square till October, 1894, when she was admitted into the hospital for five months, improving considerably during this time under treatment. She was discharged in February, 1895, and re-admitted last August in the condition which she now presents. The patient keeps her bed, but can walk alone for a very few minutes and then becomes exhausted. Her gait is very staggering and the act of walking occasions incontinence of urine. The left foot is slightly dragged. When recumbent she can just lift the left leg off the bed, the right being much stronger. The left arm is weaker than the right, but its movements are fairly good. Sensation appears to be normal and equal on both legs and arms. The patient can stand with feet together, the eyes being closed. She can thread a needle if given plenty of time, but is very clumsy and shows tremor in picking up a pin, especially with the left hand. This is also noted when she touches the forehead with her finger. There is incontinence both in regard to the bladder and rectum. The knee-jerks are greatly in excess and there is double ankle clonus. The plantar reflexes are present. There is marked horizontal nystagmus in each eye. Two years ago it appears that the sight of the right eye was dim for a time, but now she says that she can see perfectly, and in effect $V = \frac{5}{6}$ and Jaeger 1 with each eye. Notwithstanding this, when we examine the fundus oculi with the ophthalmoscope we find the optic discs pale, the right showing rather more pallor than the left. I shall presently have to advert to an important feature in the state of her visual fields.

I suppose it can hardly be doubted that both these patients are examples of organic disease and probably of insular sclerosis. Yet the last case was considered before her admission to be one of hysteria, and in hospital some doubt was at first felt as to the nature of her affection. This is evidenced by a note on the out-patient letter. The patient was first examined in March, 1894, and under the heading "Diagnosis" a note of interrogation appears. On May 31st, when the patient had been under observation for two or three months, the following note was made: "Diagnosis uncertain. Thought to be perhaps hysterical, but the definite ankle clonus and the observation of slight nystagmus rather suggest disseminated sclerosis."

I take it that we have all of us at various times given the name of hysteria to an early stage of insular sclerosis. One reason for the common fallacy in diagnosis appears to be that we have somehow failed to remember that insular sclerosis does not spring suddenly into existence in a typical form. Like most other chronic or sub-acute ailments it has to go through a budding period, during which the aspect presented differs much from that of the full-blown disease. Several years ago I expressed the opinion that "many symptoms which have come to be considered characteristic of hysteria will, if examined by the light of improved knowledge and experience, be relegated to disseminated sclerosis." In the case just shown you there are illustrations of this. The sudden loss of power in a limb, occurring after mental shock in an otherwise apparently healthy girl and passing off completely in a

month, is a symptom which is practically certain to be set down to hysteria. And so with the dimness of vision in one eye of temporary character, recovering without treatment; and, again, the dragging of a leg, which felt "numbed and like a log of wood." Whatever may be the case with regard to hysteria I have no hesitation in saying that these are as much symptoms of insular sclerosis as cough is of bronchitis or pain of peritonitis (of course, this is not to say that the symptoms are pathognomonic). I would therefore urge you, when you come across such symptoms in an apparently healthy young woman, to remember that they may possibly point to insular sclerosis. Whatever you think of them do not jump to the conclusion that they are any proof that the girl is only suffering from hysteria. Insular sclerosis must be studied in its infancy, so to speak. The full-grown disease is frequently not recognised, the infant disease practically never. In its infancy, according to my observation, the name given to insular sclerosis is "hysteria." This is not a hasty expression of opinion; it is founded upon observation of the sequels of numerous cases during the last twenty years. Some of these have been patients of my own, the progress of whose cases has taught me that I had been in error in originally regarding them as examples of hysteria. Let me refer in the briefest possible manner to some cases illustrating this point which have more or less recently come under my notice in private practice.

CASE 1.—A single woman at twenty-one years of age suffered from weakness in her legs and also in the left arm. After a few months the left hand recovered and then the right hand became weak, so that she could scarcely write for three months. Since then sometimes one and sometimes the other leg has dragged. Her case had been treated always as one of hysteria. When I saw her, four years after the commencement, examination showed nystagmoid movements of the eyes, inability to lift the knees or, except to a trifling degree, to extend the legs, incontinence of urine, grasp of the right hand very weak, that of the left a little stronger, spasticity of legs.

CASE 2.—A married woman aged forty years. For three and a half years she had been unable to walk properly, though at times this had very greatly improved. Six years ago she had diplopia for two months after a great shock. For the last six months she had been getting worse. When seen by me the gait was staggering and the knee-jerks were exaggerated. There was double ankle clonus. There was no manifest unsteadiness of the arms. The sight of the left eye was much better than that of the right. The right optic disc was distinctly pale, the left probably normal. Some weakness of the bladder. She had been treated as a case of hysteria.

CASE 3.—A single woman aged thirty-five years. Difficulty in walking had been observed for four years, and especially for two years, past. For a long time she could not retain urine, but that is now better. Her gait was staggering and stiff. Her knee-jerks were exaggerated and there was double ankle clonus. There was no tremor of the hands on voluntary movement. The first appearance of symptoms was after mental shock and physical fatigue. There was no nystagmus or articulatory difficulty. At times she has improved, but has never been able to run. Medical advisers, of whom she has seen three, all agreed that it was a nervous functional affection, that "it was merely a matter of time and she would recover." She has been told that she could "throw it off by her will." The right disc is paler than the left and sight of the left eye rather better than that of the right.

CASE 4.—A married woman aged thirty-nine years. For many years she had had attacks in which she "would feel that she could not walk." Five years ago she was very anæmic and lost power in her legs, but quite recovered under chalybeate treatment and walked up hills. Seven years ago she lost the use of one arm and saw double; she was in bed for three months, during which the diplopia continued. When seen by me there was nystagmus and marked tremor of the right hand on voluntary movement, so that she was obliged to carry a cup to the lips with both hands. She had been treated as a case of hysteria and had twice undergone Weir-Mitchell treatment. The physician by whom she was sent to me, however, doubted the correctness of this diagnosis, and I agreed with him that it was a case of organic disease. I thought it one of insular sclerosis. Some months later I found partial paralysis of the right external rectus muscle. The sight of the right eye was

$\frac{6}{18}$, and that of the left $\frac{6}{12}$. There was some pallor of both optic discs, especially of the left.

CASE 5.—A married woman, whose present age is thirty-seven years, was seen by me in 1883, and she underwent Weir-Mitchell treatment with my consent on account of loss of power in her legs with transitory loss of feeling in the left arm, which had appeared to be of hysterical character. I lost sight of her and did not see her again for thirteen years. Her condition was then as follows. She could not stand, the lower limbs being in a state of rigid contracture. Her speech was hesitating and slurring and her manner vacant. She was unable to retain the urine night or day, this condition having followed a period of inability to empty the bladder except after great delay. On testing the vision it was found that she could only read Jaeger No. 6 with the right eye, whilst with the left she could not see No. 14. Ophthalmoscopic examination showed both discs (especially the left) greatly atrophied, even the nasal side being grey. There were nystagmiform movements in each eye. At the same time she could carry a glass to her lips with either hand very fairly.

CASE 6.—A single woman aged nineteen years, at Christmas, 1892, had an attack of facial paralysis which lasted a month. On recovering from influenza in February, 1893, she found some loss of control over her legs in walking; she staggered and stumbled. In about six months she had recovered the power in her legs except that she could not walk far. Her complaint had been called hysterical paralysis. When seen by me she had weakness of the right leg which had existed for eight months, with numbness in some of her fingers and the sole of one foot. She had intention tremor. The knee-jerks were well-marked, but there was no ankle clonus and no nystagmus. Vision with the right eye was $\frac{6}{12}$ and with the left $\frac{6}{9}$. The opinion given was that she was in an early stage of insular sclerosis. A year and a half later the tremor of the right hand was reported to be diminished, but the right leg dragged more. She had recently on one occasion lost all power suddenly in the right leg and to a great extent in the left. This was accompanied by a feeling of "pins and needles." A few days ago I heard that she was more helpless than ever.

I could easily multiply such cases were there time. It will be noted that there is only an imperfect resemblance of symptoms in these cases, but that is what one must be prepared to expect in this disease. The islets of interstitial myelitis which eventually become sclerosed are variously scattered in individual cases, producing therefore disorders of function referable to different parts of the frame. Considering, indeed, the morbid anatomy of the disease it is quite remarkable how much general resemblance may be found in the cases. In several the "intention tremor"—i.e., the tremulousness of the arm when a voluntary movement is undertaken—is marked; in others this is absent. Nystagmiform movements of the eyes occur in several. A history of diplopia is very common, whilst incontinence of urine is of great frequency. I look upon these symptoms as pointing to organic disease of the central nervous system. There are two others upon which, in my experience, great stress should be laid as indicative of organic disease. One is impairment of vision, with more or less atrophy of optic discs. The other is the history in the case of recovered power in a limb where this had been more or less lost, with recurrence on one or more occasions of similar paresis after longer or shorter intervals in the same or some other limb. The fact that in the course of insular sclerosis there are apt to be periods varying in length of almost or even complete subsidence of symptoms, though mentioned by Charcot and some succeeding writers, is not yet, I think, sufficiently remembered and taken into account. These intervals of exemption are sometimes long. In a lecture given here last year I showed a patient in whom there had been an interval of eleven years between her attacks. When sixteen years old she had attacks of powerlessness in the right arm, so that she used to drop things. These attacks recurred during three months and then altogether ceased. At twenty-seven years of age she had a sensation of pins and needles in the left foot and her leg dragged. When shown here she presented a typical picture of insular sclerosis.

CASE 7.—In 1877 a girl aged twenty years was brought to me with great loss of power in her legs, especially the left. A short time previously the right had been most affected. She complained also of numbness of the left hand. She was typically hysterical in manner and her moral character I was told had changed. She had marked "intention tremor,"

impaired articulation, and ankle clonus, on the strength of which symptoms I expressed the opinion that she was suffering from organic disease, probably insular sclerosis. A few months later I heard that she was quite well. Two and a half years after my examination her medical man, to whom I applied for information as to the sequel, wrote me as follows: "When last saw Miss — she was very well. I cannot help thinking that her symptoms are due to that wonderful simulator—hysteria." I heard nothing more of her till 1891 (fourteen years after her visit to me), when I was called into the country to see her. She had been bed-ridden for two years and presented all the unmistakable characteristics of advanced insular sclerosis.¹

CASE 8.—A woman aged forty years lost all power in the left leg at the age of thirty-three years. After six months she recovered and was able to walk well. She remained well for four years, when the right leg began to go as the left had gone in her former attack. Three years later the left leg again lost power quite suddenly and when I saw her both legs were useless. Her case had been diagnosed, I was told, as hysteria, and she had been hypnotised for many months previous to consulting me. I found inability to write, with great incoördination of the hands, marked atrophy of the right optic disc, nystagmus, and exaggerated knee-jerks. She was evidently suffering from insular sclerosis. A month later she died from cardiac failure, probably due to invasion of the bulb by the disease.²

CASE 9.—A girl sixteen years of age suffered from partial loss of power in her legs and failure of coördination in them. Her condition was diagnosed as hysterical, and this appeared to be confirmed by her complete recovery in two or three months. She remained apparently well for more than five years, during which time she was in the habit of taking a large amount of exercise, walking, riding, and hunting. Then she complained one day of some difficulty in walking and three days afterwards became perfectly paralysed in the lower extremities. She lay powerless for from three to four weeks and then gradual improvement took place, and she regained strength enough to walk with support. A little later she suddenly again relapsed and became paralysed in the arms as well as the legs. I was told that the case had been pronounced to be one of hysteria and the Weir-Mitchell treatment recommended. Examination showed the existence of marked intention tremor in each arm, especially in the left, excessive knee-jerks, and slight ankle clonus. The right optic disc was atrophic. She was evidently suffering from insular sclerosis. A year later I learned that the disease had greatly progressed; there was great contracture in the legs, incontinence of urine and fæces, still further impairment of sight, with loss of memory.³

I can hardly lay too much stress upon the fact that intermissions of the kind shown in these cases are very common, although they are not constant, in the course of insular sclerosis. It is evident that the intervals of apparent recovery are peculiarly liable to give rise to the opinion that the loss of power has been hysterical. Here let me for a moment try to estimate the value of various symptoms as pointing, on the one hand, to organic disease and, on the other hand, to a hysterical condition. Intention tremor, if well marked, appears to hold a most important place in the diagnosis of insular sclerosis; it is true that in the hysterical there is not unfrequently a clumsiness of movement of the hand when directed towards an object (arising probably from a loss of muscular sense), but this rarely assumes the character of a rhythmical tremor. I cannot call to mind (looking back over many years) any instance in which well-marked intention tremor was observed in a case which the sequel showed to be of purely functional character.

Nystagmus or nystagmiform movements must also be considered important evidence of organic disease. It is, of course, necessary to remember that these movements are liable to occur in some other diseases, in coarse disease of the cerebellum, and of the corpora quadrigemina, in Friedreich's ataxy, and in chronic alcoholism. The presence of these must be excluded. Nor must it be forgotten that nystagmus, besides occurring in miners, may sometimes be found as a temporary and solitary symptom incapable of explanation in the present state of our knowledge. But this is extremely rare.

Ankle clonus if strongly marked is a valuable symptom of organic disease of the antero-lateral column of the spinal

cord. But the phenomenon, usually in an imperfect form, may be of functional origin. It is very rare indeed, in my experience, for ankle clonus of well-pronounced character to exist in the absence of organic disease.

Of greater weight than any of these symptoms is atrophy, even though it be slight, of one or other optic disc. I have never seen this symptom in any case in which the sequel failed to confirm the organic character of the disease. Let me say here that a few years ago I showed that some degree of optic atrophy was present in the course of 43 out of a collection which I had made of 100 cases of insular sclerosis.⁴

Pallor of the disc will almost invariably be found associated with some visual defect. This may take the form of a central scotoma or of greater or less concentric narrowing of the visual field. In some cases the ophthalmoscope fails to detect change in the fundus oculi, although the size of the visual field or the acuteness of central vision is found by testing to be diminished.

In each of the two patients who have been before you there is very considerable contraction of the visual field. This concentric contraction cannot be ascertained by any means at our disposal to differ in character from that which occurs in some cases of hysteria, a circumstance which will be recognised as adding exceedingly to the very great difficulties which beset the differential diagnosis of insular sclerosis in an early stage. It may be asked why I do not lay great stress upon this condition of the visual field in my patient as a weighty argument in favour of her case being one of simple hysteria, as it was originally supposed to be. My reasons are these:—1. I have seen this concentric contraction of the visual field before in cases which were undoubtedly examples of insular sclerosis. 2. The concentric contraction is found almost as much marked in the first patient shown (about the diagnosis of whose case as one of insular sclerosis there can be no doubt) as in the second patient shown, who has presented hysterical symptoms. 3. This concentric contraction is associated with some non-symmetrical pallor of the optic discs. (I must warn you that a slight degree of pallor of the optic disc is very easily overlooked. It has to be searched for with care, but in order to avoid being unconsciously prejudiced I always examine the discs with the ophthalmoscope and come to a judgment as to their colour *before* inquiring into the visual acuteness or the extent of the visual fields.)

There is a symptom which is of very considerable value in the diagnosis of insular sclerosis and that is the state of the plantar reflex. It is a rule of almost universal application (as I have repeatedly urged for many years past) that the plantar reflex is either entirely absent or very feebly indeed expressed in almost all cases of hysterical paraplegia. If we exclude cases of gross structural disease of the spinal cord or brain, in the course of which the plantar reflex is not seldom lost, and also the not very infrequent instances of congenital absence of the phenomenon, we shall find, I think, that loss of plantar reflex points to a "functional" symptom. It may come and go in circumstances in which the presence of, at all events, any gross structural disease may be easily excluded. In patients with hysterical paraplegia the plantar reflex, entirely absent at the commencement of a course of Weir-Mitchell treatment, will be found to return as recovery takes place. In my experience the retention of the plantar reflex in a case of loss of power in the lower extremities of doubtful character affords a strong presumption that there is structural disease. The converse, however, does not apply. Although, if you observe closely, you will find that as a grand general rule cases of insular sclerosis are characterised by retention of the plantar reflex, you will now and again find one in which, at least for a while, the phenomenon is absent. It has been so in the case of the second patient shown. As I have shown you at the present time tickling the foot-sole produces retraction of the toes; but during a short period, when she was in the out-patient department, no such effect was produced. I believe this to have been a "functional" symptom occurring in the course of organic disease. It is very important to remember that this kind of complication—the occurrence of "functional" symptoms—is common in the course of insular sclerosis and must be allowed for. How greatly it increases the difficulties of diagnosis may readily be conceived.

Lastly, let me say that until such symptoms as nystagmus, diplopia, pallor of the optic disc, marked intention tremor, or

¹ Vide "On the Simulation of Hysteria by Organic Disease of the Nervous System," 1891. Since the publication of that work the patient, I am informed, has died with terrible bedsores and bladder trouble.
Op. cit. Op. cit.

⁴ Atrophy of the Optic Nerve as a Symptom of Chronic Disease of the Central Nervous System, Brit. Med. Jour., Oct. 7th, 1897.

incontinence of urine make their appearance in a case about which doubt has existed I do not think that we can as a rule safely pronounce a diagnosis of insular sclerosis. But in a case in the history of which paresis has occurred in one or more limbs, with spontaneous recovery, and repeated recurrence of the symptom in the same or another part, after longer or shorter intervals, together with a history of amblyopia, either temporary or persistent, my experience would lead me to diagnose insular sclerosis in the absence even of the symptoms first enumerated.

Lecture

ON

THE SPREAD OF PLAGUE.

Delivered before the Epidemiological Society on Dec 18th, 1896,

BY JAMES CANTLIE, M.B. ABERD.,

F.R.C.S. ENG.,

LECTURER ON APPLIED ANATOMY, CHARING CROSS HOSPITAL MEDICAL SCHOOL; LATE OF HONG-KONG.

GENTLEMEN,—The history of plague has been so often written that it is unnecessary for me to even sketch its devastations and distribution in pre-Christian, early Christian, mediæval, or more recent times. My remarks will be confined to an exposition of matters appertaining to the epidemicity of the disease as it has been met with during the latter half of this century, and more particularly to a description of the information gathered during the outbreak in China in 1894-6, and of the most recent evidence of its activity in the Bombay Presidency. The reasons for selecting the Hong-Kong epidemic as the basis of my dissertation are that plague was first studied there bacteriologically, and that many medical men, myself amongst the number, had ample opportunity of observing and recording the disease. Without entering into the discussion as to whether or not all epidemics styled "plague" in Biblical and mediæval literature were of the nature of the bubonic plague of recent times, there can be no doubt that since 1850 the name "plague" has been applied to a definite train of symptoms which are considered to constitute a specific disease. As we proceed it will be seen how during different outbreaks some one symptom attains a fatal pre-eminence, but not to the exclusion of others, which might at any time assume the death lead and serve to baptize the disease as "bubonic," "hæmorrhagic," "typhoidal," "pneumonic," and so forth.

During the latter half of the century the names bestowed on plague have been as follows:—1. In 1856 in Tripoli, it was known as "typhus with glandular swelling." When the disease reached the island of Chios in the same year it was called "petechial typhus analogous to that of Tripoli." 2. In Mesopotamia, where the disease was prevalent from 1856-85, and possibly up to the present day, the titles, "adynamic typhoid fever" and "intermittent fever with glandular swellings" were usual. 3. In Persia, where plague seems to be endemic since 1863, the term "hæmorrhagic fever" is used to designate a pestilence which differs from the diseases with which the Persians are familiar. 4. During the years 1877-79 the Russian province of Astrakan was visited by a disease which was, and is, regarded as plague, but which was variously described as: (a) intermittent fever with buboes; (b) croupous pneumonia with buboes; (c) typhus with glandular swellings proving fatal by pneumonia; and (d) a peculiar form of mumps. That all the above-mentioned outbreaks were actually plague, a specific disease caused by a specific bacillus, will never be known; but the presumptive and clinical evidence is decidedly in favour of their being one and the same disease. 5. In Hong-Kong, where a moiety of languages obtain, the epidemic was known as:—(a) the "plague" or "the bubonic plague" by the British; (b) "la plaga" by the Spaniards; (c) "de peste bubonica" by the Portuguese; (d) "la peste" by the French; (e) "la pestilenza" by the Italians; (f) "die peste" by the Germans; (g) "wan-yik" by the Cantonese, the term signifying an epidemic disease of high mortality; (h) "yang-tsu-chwarg" in Yunnan, which, being

interpreted, means bubonic disease; and (i) "li-tsu-cheng" in Pakhoi, where the disease has been endemic for many years. The name "black death" was never used, nor were any of the names by which it was known in Tripoli, Mesopotamia, or Persia, or Russia applied to it, although hæmorrhages, pneumonia, petechiæ, and typhoidal signs and symptoms were not wanting. Perhaps the most interesting name is that of the "rat plague," by which it is known in various parts of Asia, thereby affording additional proof, if such were needed, of the widespread infection of the rat during plague epidemics.

The name "plague," however, is not one which helps us to place the complaint in its proper scientific niche in the category of disease. The word conveys the idea of an unusual disease, attacking many persons and attended by a high mortality, but that gives it no scientific value any more than the "wan yik" of the Chinese. Were I to attempt to classify plague I would place it amongst the specific fevers and particularise it under the name of "polyadenitis" and individualise it still further as "malignant polyadenitis." It may be objected that adenitis is not always present, that many plague stricken patients die before the glands are even swollen and that therefore the name is defective; but it is needless to point out that in many diseases the most typical of symptoms are at times absent and yet the cases can be classed with their kind. To justify the prefix "poly" to the word "adenitis" it is necessary to remember that although one gland alone may be clinically apparent, most, if not all, the lymphatic glands are found to be enlarged at the post-mortem examinations. The most recent report in regard to this subject is interesting. "Thirty-three cases (22 per cent.) were received without a proper bubo. In most of these cases multiple adenitis was found, the general size of the glands being that of a lentil. In the latter stages of the disease other buboes formed in different localities and complicated the case; 90 per cent. of the cases showed swelling of the intestinal, bronchial, and mediastinal glands in different stages."¹

The term "bubonic" so frequently applied to the disease is not so appropriate as would at first sight appear. A bubo is essentially the swelling of a gland caused by the entrance of septic materials in the tract of lymphatics over which the gland presides. This cannot be said to obtain in plague, for the so-called bubo of plague can in no sense be regarded as a sympathetic swelling, but merely the outcome of a blood poison. If it is to be classed a bubo at all it must be distinctly understood to be an "idiopathic" bubo, a true "bubon d'emblée." One never speaks of the buboes of tertiary syphilis or of scrofulous buboes. The terms may be clinically correct, but they are not in common use; they have, however, as much right to be called bubonic as the glandular enlargements in plague. With these considerations before us I would venture to name the disease "Malignant Polyadenitis" in the hopes that attention may be drawn to the naming of the disease by more competent students than myself.

Plague or malignant polyadenitis we may define as an acute febrile disease of an intensely fatal nature, characterised by inflammation of the lymphatic glands, marked cerebral and vascular disturbances, and by the presence of a specific bacillus. It is only since 1894 that we have been able to set forth a definition with precision; it is only since then that we have acquired the knowledge of a definite bacillus by which the disease can be recognised scientifically when ordinary symptoms are in abeyance. In this definition no mention is made of hæmorrhage, pneumonia, petechiæ, or carbuncles.

At the present day plague is confined to Asia, but since 1850 it has made its appearance in Europe, Asia, and Africa. The western limit of plague during the latter half of the century is the Canary Islands, where it raged in 1852; while its eastern limit is the Island of Formosa, off the coast of China, where it is now prevalent. The southern limit is practically the Tropic of Cancer, but the northern range is indefinite. Since 1850 plague has never travelled further north than Astrakan, about 45° N.; but we have it on excellent and sustained authority that Moscow, Norway, and Sweden, and latitudes as far as 60° N., have within the present century been visited by plague. All limits are, therefore, fairly definite with the exception of the northerly limit. In other words, plague has been met with from 19° W. longitude to 121° E. longitude and between 40° N. latitude

¹ Report of Dr. M. Wilm, dated Hong-Kong, May 20th, 1896.