ENLARGEMENT OF THE BRONCHIAL LYMPHATIC GLANDS, WITH RELATION TO WHOOPING-COUGH.

By NOËL GUENEAU DE MUSSY, M.D.,
Honorary Physician to the Hôtel Dieu, Paris.

I READ, in the BRITISH MEDICAL JOURNAL of January 25th, that the Pathological Society of London did me the honour of discussing my opinion on the cause of spasmodic symptoms and of the peculiar character of the cough in whooping-cough. From the objections which were brought forward, I infer that my statements were not correctly understood; and therefore, with due deference to Dr. Barlow, I believe that the case by this eminent physician, in which the vagus nerve was found almost crushed by enlarged bronchial lymphatic glands without spasmodic cough during life, does not afford any evidence against my theory.

I stated that the compression and irritation of the vagus nerve produced by the enlarged tracheo-bronchial lymphatic glands were the cause of the spasmodic cough observed in this disease, and considered as characteristic. The following are the facts and arguments which led me to form this opinion. 1. In all the cases of whooping-cough observed by me, since my attention has been called to this point, I ascertained during life the clinical signs which I described as belonging to tracheo-bronchial adenopathy. In all the *post mortem* examinations made to my knowledge in the Children's Hospital in Paris, this enlargement was found when sought for. Dr. G. Simon, physician at the *Enfant Jesus* Hospital, told me, some time since, that he never saw it fail, and that he was convinced of the accuracy of my theory. The same glandular enlargement was also constantly observed by Dr. Archambault; and the reason for which my learned friend hesitates to adopt my opinion, is that he has found the same enlargement in several other diseases: an objection which is quite similar to that of Dr. Barlow. I will answer both by-and-by.

I should request, before modifying an opinion sustained by so many clinical and necroscopic observations, that positive facts of whooping-cough well characterised, in which this glandular enlargement was not found after death, should be opposed to me. I cannot be satisfied with the somewhat vague assertion that this adenopathy is not as constant as I have said.

The pneumogastric nerve is an assemblage of nervous cords, which have many different destinations; I never asserted that all compression of this nerve, whatever may be the compressed point or whatever the degree of compression may be, was always attended by spasmodic cough. I have seen a great many examples of the contrary; and I have said this openly. But, on the other hand, is it not granted by all pathologists that the enlargement of the tracheo-bronchial lymphatic glands is in some cases attended by a cough so like whooping-cough, that I have seen the physicians who have most experience in diseases of children hesitate when called on to give a diagnosis?

It is also in accordance with observations that in other diseases habitually complicated by tracheo-bronchial adenopathy, such as measles and consumption, the cough takes sometimes a spasmodic character, which renders it very like that of whooping-cough. Patients have often said to me: "I cough as if I had the whooping-cough"; and in these cases I have found by auscultation and percussion the signs of enlargement of the bronchial glands.

From these facts, however, I never pretended to infer that compression of any part of the pneumogastric nerve must produce a cough like that of whooping-cough. In many cases one can observe, in accordance with this adenopathy, fits of coughing without the wheezing inspiration and without vomiting; and nothing proves that the irritation which occasioned this cough did not proceed from congested bronchial tubes by a reflex action rather than from altered lymphatic glands. I have even met with considerable enlargement of these glands without any cough. Is this strange? Is not a similar divergence in the expressions of the same lesion to be observed in the greater number of organic alterations? All that can be concluded is, that compression or irritation of the pneumogastric nerve may provoke a cough like whooping-cough under certain determined circumstances; that is to say, when the compression acts on certain points of the nervous cluster, when it acts in a certain degree, when it produces a certain kind of stimulus, which may depend on the nature of the morbid process. There is nothing in these restrictions, in this necessary intervention of certain determined conditions, which is inconsistent with the data furnished by pathology and by physiology. Because certain tumours in the skull produce epileptic

convulsions, will one conclude that every tumour connected with the encephalon must necessarily give rise to epilepsy? May not these tumours be developed slowly and insidiously, to a certain degree, without causing any serious disturbance? And in other cases, may they not produce alteration of mobility and sensibility or other functional anomalies before the explosion of eclamptic fits?

In physiological experiments, we see that artificial excitement of the nerves may produce different phenomena according to the degree or mode of excitement. Pricking, pinching, stretching, burning, will not always act in the same way. A certain degree of pressure will provoke an increase of the nervous action; a more energetic pressure might produce an anomalous action; and if this pressure be still exaggerated, the nervous action may be interrupted or destroyed. Moreover, as I already pointed out, the peculiar kind of nervous excitement, the morbid process from which it is derived, may influence the result.

To come back to the enlargement of the bronchial lymphatic glands, is it not clear that the incitation provoked by a chronic process will not be the same as that which succeeds an acute congestion, which expresses a violent morbid activity, a pathological course of rapid evolution? My theory is not therefore counterbalanced by examples of bronchial adenopathy without cough like whooping-cough; but it would be overthrown by one single case of well characterised whooping-cough without any enlargement of the bronchial lymphatic glands ascertained by *post mortem* examination or investigations during life. I wait for that example, which up to this moment has escaped my own and my friends' attention.

In the *post mortem* examinations which I witnessed, the pneumogastric nerve, and principally its recurrent branch, were surrounded, tightly enclosed, by enlarged lymphatic glands; and I am inclined to suspect, without being able to affirm it, that irritation of the inferior laryngeal branch has the main share in the production of cough like whooping-cough.

I believe I have answered Dr. Barlow's objections. I will briefly record the reasons which appear to me to sustain my theory.

1. There is a close resemblance between the fits of cough in some cases of bronchial adenopathy and the fits of whooping-cough.

2. The persistence of whooping-cough, during months and years, as quoted by all pathologists and observed by myself, is easily to be understood if this spasmodic cough be consecutive to the enlargement of the bronchial glands; but it would be difficult to explain if it is to be considered as the continuation of the primary disease. Whooping-cough, according to many physicians, and I consider this statement as correct, has a great affinity with eruptive fevers, and consequently would be incompatible with chronicity. Nothing, on the other hand, is more common than to see the enlargement of lymphatic glands outlive the irritation which provoked it, and subsist by itself as a distinct disease under the influence of constitutional or external conditions.

3. Admitting my theory, one can easily account for this circumstance, that all irritation of the respiratory organs, occurring after the apparent cessation of whooping-cough, may bring back seemingly new attacks of it, by adding a fresh congestion to that which had not thoroughly disappeared, or to a congestive disposition left by the whooping-cough in the glandular tissue. Everyone knows that a cold, or the bronchitis connected with measles, may provoke this return of fits of whooping-cough in a patient recently cured.

4. The appearance of the spasmodic so-called characteristic cough only in the second or even in the third week of the disease, is easily to be understood if it succeed an enlargement of the bronchial lymphatic glands, which is evolved more or less slowly, and only produces irritating action on the inferior laryngeal or on other parts of the vagus nerve when it has acquired a certain degree of development.

5. It is yet to be understood that this characteristic cough may be wanting in the case of persons who, living in the midst of whooping-cough patients, and not having previously themselves been affected with that disease, present a cough which persists during several weeks—a sort of mitigated whooping-cough, pointed out by many physicians and observed by myself—when the glandular enlargement was little developed.

6. There are other symptoms connected with whooping-cough which can be attributed to the same morbid condition, and amongst them vomiting, which may be traced to an irritation of the pneumogastric nerve. According to my own observation, vomiting is more frequently provoked by adenopathy of the left than of the right side. This prevalence of vomiting in the enlargement of the left lymphatic glands may be explained by the greater share which the left pneumogastric nerve has in the innervation and consequently in the motricity of the stomach. I observed some cases of unrestrained vomiting, of which one lasted several years, the cause of which I could trace to an enlargement of the left lymphatic tracheo-bronchial glands, and which ceased

with the physical signs of this adenopathy under the influence of proper treatment.

7. The compression of the laryngeal nerve by enlarged glands explains the cases of aphonia, generally transitory, but which I have seen to persist more than four years after an attack of whooping-cough in the case of a lady, who exhibited all the signs of an enlargement of the left bronchial glands, and I had made the diagnosis of paralysis of the left vocal cord before it was ascertained by laryngoscopic examination.

I will conclude by relating a case which seems to me strong evidence in favour of the theory of which I undertake to be the champion. A physician presented to me one of his children affected, he said, with whooping-cough recurring for the third time in the space of one year. I immediately suggested a doubt of its being a true whooping-cough. The child was attacked for the first time in a country residence on the Seine; the place was very damp. At the end of four months, the cough had lost nothing of its violence and frequency. The child was sent to the bracing air of St. Germain; and after a few weeks the cough had completely disappeared. One month after his cure, he returned to his country place, and soon he began again to cough and to vomit. Having tried in vain a great many modes of treatment, his father decided on sending him back to St. Germain, where he was cured for the second time as rapidly as the first. After some months spent in this wholesome locality, the young fellow went to Rouen to a house built on piles on the bank of the river. There again, under the influence of damp (which is known to be favourable to glandular affections), the child had again all the symptoms of whooping-cough; and after these symptoms had continued for several months, the father brought back the patient to Paris, that he might be examined by me. I perceived a dull sound in the region corresponding to the bronchial glands; I found at the same time that, at the apex of the chest, the inspiratory murmur was rough, weak, acute, followed by a protracted blowing expiration, particularly near the spine. I sent the boy to a place where he could enjoy dry and pure air; I prescribed applications of tincture of iodine in the upper part of the thorax near the median line. He was ordered to take alternatively Bourboule water and syrup of bark with iodide of potassium; and to have exercise and good food. In a very short time, the child was thoroughly and definitely cured.

It is very probable, not to say more, to the persistence of bronchial adenopathy that must be attributed those relapses of whooping-cough, not less than the whooping-cough lasting an unusual time. If such be the case, those false whooping-coughs must not be contagious. Trusting in the accuracy of my views on this point, I allowed a child of my own family affected with one of those protracted whooping-coughs, lasting over six months, to remain with her newborn sister, for whom the disease would have been very probably fatal had it been contagious. However, I do not pretend to represent my conduct in this case, which was determined by particular circumstances, as a rule to be followed. It must be remembered that, if contagious diseases rarely return in a short space of time, this relapse is not absolutely impossible; it is sometimes observed in eruptive fever, and I could not affirm that in whooping-cough this exception may never occur.

ON SOME POINTS CONNECTED WITH THE DIAGNOSIS AND TREATMENT OF SCABIES.

By ROBERT LIVEING, M.D., F.R.C.P.,
Lecturer on Diseases of the Skin to the Middlesex Hospital.

OF all the diseases of the skin, scabies is the one most frequently overlooked in *private practice*. Amongst the poor, we always expect to meet with it, but it is otherwise when we have to deal with the upper classes, and much more conclusive evidence of its nature is required than would be readily accepted in the case of a pauper or hospital patient. The medical man not expecting to meet with it, so to speak, off his guard; moreover, even if he suspect scabies, he is naturally disinclined to tell a lady, for example, that she has the "itch", and consequently he too frequently gives her, if I may use the expression, the benefit of the doubt, and treats as simple eczema what really is scabies. The complete absence of any history, or, indeed, any likelihood of contagion, deters him from forming a right diagnosis. The social position of his patient is his stumbling-block. I refer, of course, only to those cases where the diagnostic signs of the disease are not well marked.

In order to avoid mistakes, it is well to know the circumstances under which the disease is generally contracted. Every medical man knows that it is most frequently introduced into families by one of the servants, and in any suspected case he always very properly examines all the servants; but if he fail to find any scabies amongst them, he is

generally unable to account for its appearance. Now, I wish to point out a fact which I have noted for a long time past, and that is, that every autumn I have an unusual accession of patients suffering from scabies, and that these patients have usually been travelling on the Continent. I am now quite satisfied that the disease is not unfrequently caught in this way. I am not able to offer any information in detail as to how it is contracted abroad, but of the fact I am quite sure.

There are certain mistakes often made with regard to the *diagnosis* and *treatment* of scabies, which I find repeated with great regularity, and which I propose to point out. With regard to the diagnosis, errors often occur under the following circumstances. 1. A person, we will suppose, has suffered from time to time from attacks of eczema of the hands or elsewhere, and his medical adviser knows the fact; this person contracts scabies; what can be more natural than that his medical attendant should overlook it? The patient himself believes that he has, perhaps, a more obstinate attack of eczema than usual, but nothing more, and he is at first not surprised that he does not get well under the usual treatment. 2. In children, scabies in an early stage is often masked by a copious eruption of urticaria, and attention is naturally drawn to the more striking features of the eruption, the cause being overlooked; this mistake may be made by anyone, even the most careful, but it is generally soon corrected. 3. It is not very uncommon to meet with well-marked cases of scabies in which the hands and wrists are free from eruption; and, if the medical man be not aware of this, he is apt to be misled by it. I attribute this occasional freedom of the hands from eruption to the present very common use of more or less medicated soaps. In nearly all the instances of the kind that I have met with, I have been able to trace the cause to this source. In the case of hospital patients, the same results have been produced by certain occupations. In all doubtful cases of scabies in males, the *lower part of the abdomen, buttocks, and penis* should be examined; the appearance on the skin of the penis is very characteristic. In women, where a thorough examination is more difficult, we should especially look out for eruption about the *mammæ* and *axillæ*. In young children, the hands sometimes escape for a time, while the feet and buttocks are early attacked. 4. A very common error occurs in the following way. A patient suffering from an eruption consults a medical man, who believes it to be the itch, and orders accordingly the sulphur ointment of the *Pharmacopœia* to be well rubbed in; the patient, wishing to get rid of his trouble as fast as possible, carries out the treatment very vigorously; he is probably much better after the first and second application, but he soon begins to get, as he thinks, worse; the eruption extends and becomes more copious, and the more he applies the ointment the more he suffers; after a time, he returns to the medical man, who finds him covered with an irritable eczematous eruption; and, as he now fails to find anything distinctive of itch, he is apt to think that he has made a mistake. But the fact is that he has probably made no mistake, except that of prescribing a very strong ointment, which his patient has used too freely, and thus, while he has cured the scabies, he has produced a great amount of artificial eczema by the process of cure.

With regard to the *treatment* of scabies, errors sometimes occur. The one which is by far the most common, I have already indicated above, namely, that of using a sulphur ointment too strong, and of continuing its use too long. Of all remedies, not one is so effective as sulphur ointment properly applied. An ointment half the strength of that of the *British Pharmacopœia* is quite strong enough, and the best time to use it is at night, when it should be rubbed all over the body, except the head, but especially on the hands, buttocks, and lower part of the abdomen, and then the underclothing used during the previous day, namely, socks, gloves, drawers, and jersey should be worn during the night; this thoroughly disinfects the clothes, and at the same time keeps the ointment well applied to the skin. In the morning, a warm bath may be taken, and no treatment followed during the day. For three nights the process should be repeated, but never longer; subsequently a little ointment should be well rubbed on the hands, wrists, and buttocks for a few nights. All treatment should then be discontinued for at least a week, when, if necessary, it may be repeated for one or two nights, or a milder ointment might be used. It is sometimes difficult to say whether a case of scabies is cured or not; under these circumstances, it is very convenient to use an ointment which does not irritate or annoy the patient by its disagreeable smell, and which at the same time will complete the cure. A most excellent ointment of this kind is made with balsam of Peru (3j ad 5j). The styrax ointment is also thoroughly effective, but less agreeable.

With regard to sulphur baths, I would say that they are not nearly as effective as sulphur ointments. I lately ordered sulphur baths (as being more agreeable than ointment) for a pupil of my own who was suffering from scabies; he took six or seven, and then came to me much better,