THE LETTSOMIAN LECTURES ON DISEASES OF THE NOSE AND THROAT IN RELATION TO GENERAL MEDICINE.

Delivered before the Medical Society of London,
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LECTURE III.

ANEURYSM.

IN aneurysm of the aorta the laryngoscope is oftentimes of inestimable service in enabling the practitioner to make an early diagnosis, and consequently to allow of the institution of prompt treatment. It may be laid down as an axiom that given the left vocal cord is immobile in the cadaveric position, pressure of an aneurysm upon the recurrent laryngeal nerve is the first thing to be thought of, and it is only after an aneurysm has been excluded that other causes for the paralysis of the laryngeal muscles need be considered. This is more especially the case in males between the ages of 30 and 60. It must be remembered that, in accordance with Semon's law, "there is proclivity of the abductor fibres of the recurrent nerve to become affected sooner than the adductor fibres, or even exclusively in cases of undoubted central or peripheral injury, or diseases of the roots or trunk of the pneumogastric, spinal accessory, or recurrent nerves." Consequently the first effect of pressure on the recurrent nerve is to cause abductor paralysis on the affected side. Now, unilateral abductor paralysis presents such slight symptoms that in the absence of a laryngoscopic examination it is generally overlooked; still numerous cases have been recorded in which this condition has been observed as a symptom of thoracic aneurysm. When, however, the adductor fibres become implicated, and the cord passes into the cadaveric position, the effect on the voice is so marked that the patient feels that something is amiss with him, and consequently seeks advice.

Attempts have been made to distinguish aneurysms from other intrathoracic tumours by the mode of onset of the laryngeal paralysis. Schadowaldt¹ maintains that paralysis of the recurrent due to a mediastinal tumour develops gradually. Hoarseness sets in, but again passes off, and a paresis can be demonstrated only after a considerable time. In aneurysm he says the paralysis of the vocal cord is often the first symptom. Rosenberg,² however, denies that recurrent paralysis is present at first in aneurysms, whilst it only develops gradually in mediastinal tumours. At the beginning, even in aneurysms, an irritation of the recurrent may set in, which is manifested in laryngeal spasm. There is, of course, no general rule as to paralysis of the vocal cord preceding the heart symptoms, as Rosenberg³ showed a patient at the Berlin Laryngological Society in whom the heart symptoms preceded the fixation of the cord by from three to four years.

In looking over the notes of 16 private cases of aneurysm of which I have full particulars, I find that they were all males, the youngest 29, and the eldest 61 years of age, the average age being almost exactly 47. Of these 16 cases, in 1 case there was bilateral paralysis of the abductors, the left vocal cord was in the cadaveric position in 8, in five there was impaired movement (loss of abduction) of the left vocal cord, and in 2 the laryngoscopic appearances were normal. The right vocal cord was only affected in the case of bilateral paralysis of the abductors.

The proportion of cases in which the left vocal cord was partly or completely paralysed is, of course, much greater in my practice than in ordinary general practice, inasmuch as several of the patients consulted me on account of hoarseness, and had no suspicion that they were suffering from any serious affection; still, this only emphasises the importance of a laryngoscopic examination in all cases of hoarseness; and, as I have said before, a loss of mobility of the left vocal cord in a middle-aged male, especially if the cord is in the cadaveric position, should at once arouse the suspicion of an intrathoracic aneurysm.

Tansk's⁴ observations on 41 cases of aneurysm, mostly of the arch of the aorta, seen in the clinic at Pest, confirms what I have just stated. Hoarseness was observed in 22 cases and paralysis of the recurrent nerves in 19, usually on the left side, and bilateral paralysis was said to be very rare. The reason why the right vocal cord is so seldom affected depends upon anatomical considerations. The right recurrent nerve winds round the subclavian artery, and is, therefore, situated at a considerable distance from the arch of the aorta. Should, however, the sac of the aneurysm involve the innominate artery the right recurrent nerve may be implicated; or, as in an extremely interesting case communicated by Dr. Scanes Spicer⁵ to the Laryngological Society, the aneurysmal tumour had displaced the lower part of the trachea backwards and to the right in such a way that the convexity of the deflected trachea pressed on the right recurrent and pneumogastric nerves, causing paralysis of the right vocal cord.

Lastly, as Sir George Johnson⁶ suggested, centripetal irritation of the trunk of the left vagus may act on the nervous centre, and through it upon the nerve supply to the laryngeal muscles on the right side.

Before quitting the subject of aneurysm I should like to draw attention to the importance of observing the movements of the larynx externally in cases of dyspnoea. Whenever the obstruction is seated at the glottis it will be seen that the larynx moves up and down with the movements of respiration, and the activity of these movements are in proportion to the urgency of the dyspnoea. The term "respiratory excursions" has been applied to these movements of the larynx. If, however, the obstruction is seated in the trachea these excursions do not take place. In two of my cases I diagnosed during life the existence of direct pressure of an aneurysm upon the trachea in consequence of the absence of respiratory excursions, and at the necropsy my diagnosis was verified. One of these cases is of particular interest, inasmuch as it affords an example of bilateral stenosis of the air passage due to aneurysm.⁷ In addition to the direct pressure of the aneurysm upon the trachea, there was also laryngeal obstruction due to paralysis of the crico-arytenoidei postici, and consequent adduction of the vocal cords. In cases of direct pressure upon the trachea the question of the utility of tracheotomy has to be carefully considered. In a case of double stenosis such as I have just mentioned, I should be prepared to advise it, as it is impossible to gauge how much of the difficulty of breathing is due to the upper obstruction and how much to the lower. Where, however, we have to deal only with the result of direct pressure upon the trachea, as occurred in my other case, I do not think that tracheotomy would be of any use. As soon as there is evidence of sufficient pressure upon the trachea to cause absence of respiratory excursions of the larynx, the patient is in a position of imminent peril. In some of these cases it is possible to recognise the direct pressure of an aneurysm upon the trachea by means of the laryngoscope. The bulging forward of the posterior wall can be seen, and with a good light and a tolerant patient pulsation may even be distinguished. Dr. Whipple⁸ has put on record a case in which during life pressure upon the trachea just above the bifurcation was seen. In this case it was almost entirely due to the laryngoscope that the diagnosis of aneurysm was established.

DISEASES OF THE DIGESTIVE SYSTEM.

The possibility of chronic gastric catarrh being kept up by the irritation produced by swallowing fetid secretion from the nose and naso-pharynx should be borne in mind by the physician, who finds that his patient does not readily respond to the usual treatment. Whether as the result of the improvement of the general health, or from the cessation of the local cause of irritation, I have noted that symptoms of dyspepsia have disappeared after the nose and accessory sinuses have received attention. F. B. Türk⁹ has made a careful bacteriological examination of the micro-organisms present in cases of chronic naso-pharyngitis and gastritis in the same subject, and he has found that they presented identical morphological and physiological appearances. Four cases are given in which treatment of the naso-pharynx cured the stomach also.

That the stomach may be involved secondarily to the upper air passages is pretty generally agreed, but the converse is

not so easy to prove; that is to say, that affections of the upper air passages may occur as a result of stomach derangements.

Various theories may be propounded to explain the connection between affections of the upper air passages and diseases of the stomach. We may appeal to the theory of reflexes, and say with M. Gross,¹⁰ that "every affection of the stomach is reflected back on the other organs, and, inversely, every disorder of the organs reacts upon the stomach."

Or we may attribute to the ubiquitous bacillus the rôle of disturbing the functions of remote organs. I have already quoted Türck to show how the stomach may be affected by diseased conditions of the nose and naso-pharynx through bacteria.

Laryngismus stridulus due to over-distension of the stomach, or to the ingestion of unwholesome food has been long recognised, and I cannot help thinking that the virtue of emetics—notably ipecacuanha wine—in these cases is largely dependent on the fact that the spasm of the glottis is relieved as soon as the stomach is emptied of the contents which had caused reflex irritation.

Ariza¹¹ (Madrid) cites a case (*Virchow's Annalen*) of aphonia as a result of indigestion which was relieved by an emetic. He has for a long time been of opinion that the diseased stomach can give rise to reflex appearances in the larynx. He designates these conditions by the name of "gastric laryngismus," and divides them into three classes. Lörri¹² states that diseases of the larynx can cause affections of the stomach, and *vice versa*.

"Stomach cough" is a term often employed by the laity, and, like many another popular expression, it contains an element of truth. My friend Dr. Lauder Brunton in his interesting Lettsomian Lectures on Disorders of Digestion discussed this subject. He pointed out that "it is just at the pharynx, at the place where the respiratory and digestive tracts cross one another, that irritation is most likely to give rise to both coughing and vomiting."¹³ He cites a pertinent case from his own practice. "A gentleman suffered from cough, which gave him a good deal of trouble; the back of his pharynx was congested, and I ordered him a gargle. For some time it was not a bit better, and then for some reason or another somebody else gave him several blue pills, and the cough disappeared." In speaking of the treatment of granular pharyngitis in my book on *Diseases of the Nose and Throat*, p. 181, I say that "it is most important that attention should be paid to the general health of the patient. If there be any symptoms of indigestion these should be seen to."

Further experience has only confirmed what I have therein stated, and I am convinced that the state of the pharynx is much influenced by the condition of the stomach and liver, and that, even though there be some trouble in the pharynx, it is not sound practice to adopt local treatment until the state of the digestive system has been inquired into.

DISEASES OF THE LIVER.

In connection with hepatic diseases, I have only to remark that very severe epistaxis is not uncommonly an early symptom of cirrhosis of the liver, the bleeding occurring from dilated veins at the posterior part of the nose. The late Dr. Harkin,¹⁴ of Belfast, laid especial stress on the connection between nose bleeding and liver disease; he regarded epistaxis as a sign of a blood dyscrasia, itself a secondary result of a disordered liver. In a middle-aged person the occurrence of epistaxis is almost as suggestive of cirrhosis of the liver as are piles.

Cahn,¹⁵ of Strassburg, mentions a case in which typical attacks of paroxysmal rhinitis were caused by an affection of the biliary passages.

Hæmorrhages from, and ecchymoses in, the mucous membrane of the pharynx and larynx may be recognised in some cases of cirrhosis and cancer of the liver, also in acute yellow atrophy. A recent development of throat specialism is the doctrine that a varicose condition of the veins at the base of the tongue is one of the objective causes for many subjective throat symptoms of the nature of globus hystericus, or, as it is designated by the believers in this condition, "faucial," "pharyngeal," and "laryngeal tenesmus." A lengthy discussion which took place in the columns of the *Lancet* in the early part of last year has been the means of relegating lingual varix to its proper position.

The opinions expressed in a leading article in the *Lancet* (1896, vol. i, p. 859) on the subject are in entire concordance with my own views, and with those, I believe, of the great majority of laryngologists. That an enlargement of the veins at the back of the tongue does occasionally exist I am quite ready to admit, and I will go so far as to say that in exceptional cases the enlarged veins may be called varicose, but that this condition is "an etiological factor in many obscure pharyngeal and laryngeal symptoms," does not agree with my own observations. When I have seen engorgement of the veins in the pharynx and at the base of the tongue, it has usually been associated with a state of general plethora in people past middle life, and I have found that with attention to diet, limiting the amount of alcohol taken, and the administration of saline aperients, the patients have speedily improved, and have not required any local treatment. In fact, I regard this condition as closely allied to the passive congestion of the rectal mucous membrane in liver disease, which so frequently leads to the formation of piles. Hence, I have mentioned the subject of lingual varices under the head of liver affections. I am sure that we shall all agree with Dr. McBride¹⁶ that "if we are to cauterise every visible venous radicle which appears in front of the epiglottis, we shall put our patients to much needless inconvenience, and perhaps to some very unnecessary expense."

BRIGHT'S DISEASE.

Epistaxis is a frequent symptom of chronic interstitial nephritis, and is occasionally met with in the other forms of Bright's disease. It may be quite an early sign of granular kidney; the urine should therefore be examined in cases of abundant or frequent epistaxis. The bleeding is dependent upon the altered blood state, changes in the vessels of the Schneiderian mucous membrane, and upon the cardiac hypertrophy and increased arterial tension. In itself it is seldom an important symptom, yet it may be the direct cause of death from excessive loss of blood; usually it seems rather to relieve the patient, especially if it occurs, as is frequently the case, in patients suffering from chronic interstitial nephritis. Its chief importance in Bright's disease, however, is from a prognostic point of view; it may be the precursor of a uræmic attack, or the next vessel to give way may be one seated in a vital part of the body, as for instance the brain; hence the occurrence of epistaxis in Bright's disease should lead the physician to take suitable measures to lower arterial tension, and to ward off as far as possible the danger which threatens his patient.

A moderate amount of bleeding is, as I have said before, a relief to the patient in most cases; should it become too profuse, it must be arrested in the usual manner. If the patient has not been on a milk diet, the occurrence of epistaxis should suggest the advisability of ordering it.

The effect of Bright's disease as a predisposing cause of œdema of the larynx is very differently estimated by various authorities. Morell Mackenzie¹⁷ examined 200 cases of Bright's disease in the London Hospital, and did not find a single example of œdema of the larynx; and George Johnson, who had special opportunities of investigating diseases both of the larynx and of the kidneys, stated that he did not remember to have seen a case of œdema of the larynx as a direct result of Bright's disease. On the other hand, Peltesohn,¹⁸ in the *post-mortem* records of the Königliche Charité for the years 1873-78 (inclusive) found 210 cases of œdema of the larynx, and in 25 of these cases there was disease of the kidneys.

The exact connection between Bright's disease and œdema of the larynx is still under discussion. The probable explanation is that Bright's disease determined the onset of œdema in cases in which, under ordinary circumstances, the local irritation would have been too slight to have caused it. Œdema of the larynx in connection with Bright's disease may occur late in the course of the disease, coming on gradually, or it may form the first symptom, there having been no previous manifestation to give rise to even a suspicion of the existence of disease of the kidneys. The œdema may come on so rapidly and to such an extent as to threaten life: tracheotomy should be performed early in these cases, but if possible subcutaneous injections of pilocarpin should be first tried.

LOCOMOTOR ATAXY.

Nasal conditions associated with tabes are rare; "slow quiet destruction of the septum nasi and hard palate" has been recorded by Barrs,¹⁹ and trophic ulceration of the ala nasi has also been noted.²⁰ That there is hyperæsthesia of the nasal mucous membrane is shown by the fact that laryngeal crises can at times be elicited by irritating the nasal fossæ. In the pharynx both the sensory and the motor nerves may be affected. All varieties of sensorial disturbance may occur, namely, anæsthesia, hyperæsthesia, and paræsthesia. On the motor side there may be paralysis, or spasm with contraction.

Pharyngeal troubles are usually met with in association with laryngeal symptoms. The mucous membrane of the larynx, like that covering the pharynx, may be the seat of anæsthesia, hyperæsthesia, or paræsthesia. On the motor side three kinds of affection are seen in the larynx as a result of tabes: 1. Spasm of the adductors. 2. Paralysis of the adductors. 3. Inco-ordination of the laryngeal muscles.

The term "laryngeal crisis" has been applied to those sudden attacks of dyspnoea in tabid patients, due either to spasm of the adductors or paralysis of the adductors; or what, perhaps, most frequently occurs, there is a mixed condition—that is to say, in addition to the spasm of the adductors, there is some loss of power, or even paralysis of the adductor muscles. According to Semon and Burger, the nocturnal occurrence of the crises in tabes is to be attributed to paralysis rather than to spasm.

Dr. Semon explains the onset of the crises by the hypothesis of an increased latent irritability of the adductor centres. A peripheral irritation, passing along the centripetal fibres of the superior laryngeal nerve to these centres, instead of giving rise, as under ordinary circumstances, to a simple attack of cough, starts off spasmodic cough, spasm of the glottis, and general convulsions, in proportion to the increased irritability of the centres in question. As I have already mentioned, there is in some cases of tabes hyperæsthesia of the pharyngeal and laryngeal mucous membrane, and slight irritation of the sensory area may cause, either directly or indirectly, spastic contraction of the glottis closers. This is shown by the fact that crises can at times be elicited by causing the patient to drink a glass of water, or by touching the larynx with a sound. The good effect in these cases of spraying the pharynx and larynx with cocaine is another proof.

Paralysis of one or both vocal cords is by no means an uncommon initial symptom of tabes, and may precede other evidences by some years. The existence, therefore, of laryngeal paralysis, and especially of abductor paralysis, without a definite cause, should give rise to a suspicion of tabes.

As a rule laryngeal crises do not occur until the tabid symptoms are well established, but they may represent the earliest symptoms of the disease. The attacks come on quite suddenly, and consist of fits of coughing, resembling whooping-cough. Dyspnoea accompanies the attacks, and in exceptional cases the spasm is so prolonged that the patient becomes cyanosed, and death has occurred under these circumstances. The crises are occasionally attended by vertigo, profuse perspirations, and lightning pains in the extremities. They are sometimes followed by convulsions and loss of consciousness. During a laryngeal crisis the vocal cords are in the median line; in the intervals the larynx may be found quite normal, but usually there is more or less impairment of abduction.

In the second variety of tabid laryngeal affection, which is by far the most common form, there exists a paresis or paralysis of the vocal cords more or less permanent in nature. Out of 71 cases of tabid patients suffering from laryngeal paralysis collected by Burger, in 43 cases there was either unilateral or bilateral paralysis of the adductors. In 8 of the cases there was unilateral abductor paralysis, five times on the left side, twice on the right, and in one case the side affected was not stated.

The remaining laryngeal affection of tabes is a true ataxy of the vocal cords, and it is, perhaps, one of the earliest laryngeal signs of tabes. In some cases the patient suddenly and unexpectedly loses his voice, or at least the power of distinct articulation, the voice becoming thick, dull, and discordant. On phonation the cords are seen to approximate

suddenly, then remain still in a semi-adducted position, and again approximate in the median line. The cords, after having been thus violently brought together, separate during abduction into the most extreme inspiratory position.

During regular and deep respiration irregular movements of the vocal cords have been seen, that is, the vocal cords executed two or three movements of abduction or adduction instead of one.

SYRINGOMYELIA.

The condition of the larynx in this disease has received very little attention in this country. Dr. Gowers²¹ mentions the fact that paralysis of one vocal cord has occurred, but says nothing more on the subject. Cartaz²² has, however, carefully examined 17 cases of syringomyelia, and states that in nearly one-half there was either a sensory or a motor modification.

In 4 cases there was abolition of reflexes, in 7 paræsthesia or anæsthesia, in 5 paralysis of one vocal cord, in 3 paralysis of the posterior crico-arytenoid muscle, once with most distinct atrophy of the vocal cord and once with paralysis of the recurrent.

According to Cartaz, sensory affections are more common than motor; they occur, however, independently of each other, corresponding generally to the side most affected. In some cases anæsthesia of the palate is complete when the syringomyelic symptoms are rather unilateral.

Weintraud²³ has reported two cases of syringomyelia with isolated unilateral abductor paralysis. This is of especial clinical interest as a precursor of complete paralysis of the vocal cord, because in general it runs its course without giving rise to any symptom. In one of the cases there was also paralysis of the trapezius.

Laryngeal crises, such as occur in tabes, have not been observed.

PARALYSIS AGITANS.

Observations on the condition of the larynx in paralysis agitans have been made by Fr. Müller²⁴ and A. Rosenberg.²⁵ The former describes the speech of a patient, aged 72, as being tremulous, and interrupted by intervals of silence. Charcot²⁶ compares the articulation of a person with paralysis agitans to that of a bad rider trying to talk when mounted on a high-trotting horse.

Müller observed that the passage of the vocal cords from the phonatory into the respiratory position was interrupted by two or three spasmodic movements of incomplete adduction. On agitation or prolonged speaking there were convulsive movements in the larynx during respiration. In the case described by A. Rosenberg, there was a difficulty in emitting a prolonged sound, and, above all, in maintaining the sound at its initial pitch, the voice always tending to fall. Laryngoscopically the cords were seen to approach promptly, but they did not maintain this position long. At another time the cords did not appear to obey the will immediately; there was a relatively long interval between the command and the commencement of the phonatory adduction. A narrow, elliptical chink was left between the cords, which increased or diminished in a rhythmic fashion corresponding with the movements of the head and upper extremity.

LABIO-GLOSSO-LARYNGEAL PARALYSIS.

Loss of the pharyngeal and laryngeal reflexes may be an early symptom. Kussmaul reports two cases in which this symptom was present some months before any paralytic affection appeared. Owing to the loss of the laryngeal reflex, foreign bodies may enter the larynx and cause attacks of suffocation, or give rise to broncho-pneumonia. The loss of reflex action is due to motor changes, as there is no loss of sensibility in the affected parts.

Löri²⁷ has only once met with anæsthesia of the pharynx, and never with anæsthesia of the larynx in bulbar paralysis. Laryngeal symptoms do not usually appear early in the course of the disease, nor are they usually very marked; in exceptional cases they may be entirely absent. According to Dr. Gowers,²⁸ though paresis of the laryngeal muscles is frequently met with, "laryngeal palsy rarely becomes complete, and it is still rarer for the power of abduction to be especially lost, common as abductor palsy is in some other forms of central degeneration."

A fair number of cases of abductor paralysis are, however, to

be found in the various laryngological journals; sometimes both sides are affected, but more commonly the paralysis is unilateral. Dr. Permewan,²⁹ for instance, has had the opportunity of watching the onset of abductor paralysis becoming absolutely complete and the supervention of adductor paralysis. Dr. Suckling³⁰ has also recorded a case of bilateral paralysis of the abductors, and Dr. Semon³¹ has put on record a case in which there was complete paralysis of the left abductor and paresis of the right abductor.

In a patient brought to me some years ago by Dr. Andrew, the only abnormal laryngeal condition I discovered was paralysis of the arytenoideus. Dr. Watson Williams³² records a case of thyro-arytenoid paralysis. So that, as might have been expected, paralysis is not confined to any particular muscle or group of muscles. Laryngeal manifestations may be the sole clinical expression of the extension to the bulb of spinal lesions. Laryngeal crises, which are so common in tabes, are hardly ever met with in bulbar paralysis.

EPILEPSY.

Dr. Ten Siethoff³³ has reported two cases of reflex epilepsy of nasal origin cured by intranasal treatment. The second case was accompanied by an olfactory aura. Similar cases have also been reported by Dr. Crossfield and Mr. Barclay J. Baron.³⁴

Lichtwitz³⁵ has seen epileptiform convulsions attended with loss of consciousness resulting from irrigation of the right sphenoidal sinus, and, in a boy aged 10, crises resembling *petit mal* were cured after the removal of pus from the sphenoidal sinuses.

Kjellman³⁶ (Stockholm) has collected 15 cases of epileptiform convulsions which ceased after the cure of the following pathological conditions of the nasal cavities: polypi, foreign bodies, and swelling of the mucous membrane of the turbinated bones.

The cases to which I have directed your attention are reported by observers in different countries, and they all agree in describing cases of epilepsy as originating from various nasal lesions, and that cessation of the epileptic attacks has followed upon cure of the disease of the nose. It is consequently the bounden duty of the medical man called in to treat a case of epilepsy to make a thorough examination of the nose and accessory cavities. The tonsils may also be the exciting cause of epileptiform crises, as shown by a case recorded by M. M. Boulay³⁷ of Paris.

In Dr. Siethoff's second case it is stated that the attacks were always preceded by an olfactory aura. It must be remembered, however, that an olfactory aura does not by any means necessarily imply that the nose has anything to do with the onset of the disease. According to Dr. Gowers, when the auras are due to organic brain disease, the uncinate gyrus has been sometimes involved. Olfactory sensations are usually of an unpleasant character. During the epileptic attack in the stage of tonic spasm the glottis has been found completely closed as in other cases of glottic spasm. Anaesthesia of the pharynx and larynx may be met with for as long as two hours after the attack.³⁸

HYSTERIA.

The neuromimetic conditions affecting the upper air passages are so numerous that I can only briefly describe some of the most important. It has been stated that a regular attack of hysteria may be produced by the irritation of certain parts of the nasal mucous membrane, the so-called hysterogenic zones, and that after the application of the galvanocautery to these areas the attacks have ceased to occur. Though I have been examining the interior of noses for the last twenty years and have constantly used the probe, I have never succeeded in starting off an attack of hysteria. Hemianosmia has been met with in connection with hysterical hemianæsthesia. Sensory neuroses of the pharynx are common in hysterical patients. Anaesthesia, hyperæsthesia, and paresthesia are all met with. It is most important to bear in mind that there may be some underlying condition, or reflex cause for these phenomena, and they should only be regarded as of hysterical origin after a careful and systematic examination has been carried out with a negative result. The motor neuroses of the pharynx may be due to spasm or paralysis. The so-called globus hystericus is nothing more or less than spasm of the pharyngeal muscles.

Hysterical paralysis of the muscles of the pharynx may, by causing dysphagia, give rise to the suspicion of malignant disease, especially if the patient is middle-aged. The diagnosis is readily effected by means of the œsophageal bougie, but it is important to use a full-sized instrument, as this often passes much more readily than a smaller one.

Anæsthesia of the laryngeal mucous membrane is an occasional manifestation of the hysterical condition. In some cases there is marked hyperæsthesia. Paræsthesia, in the form of burning, scratching, tickling, and the sensation of pricking in the larynx, are frequently complained of. Of the motor anomalies, paralysis of the adductors of the cords is by far the most common of the laryngeal neuroses due to hysteria. It constitutes the well-known hysterical or functional aphonia. A marked characteristic of this affection is the suddenness of its onset and the equal suddenness with which it may disappear. On laryngoscopic examination it will be seen that on attempted phonation in some cases the cords fail to approach the median line, in others the cords nearly meet; and again in others, though the cords meet in the middle line, no sound is produced.

In some hysterical patients, instead of the adductors being paralysed, they are liable to spasm, causing attacks exactly resembling laryngismus stridulus in children. The prognosis is usually good; in a young lady under my care, however, the spasm was so protracted that tracheotomy had to be performed to prevent death from suffocation.

A curious condition, to which the term inspiratory spasm, or perverted action of the vocal cords, has been applied, is occasionally seen in hysterical persons. In this affection the voice remains normal, but on attempts at inspiration the vocal cords, instead of separating, approximate in a convulsive manner. Sometimes they come in contact, and cause grave interference with respiration; at other times they remain in the cadaveric position, giving rise to inspiratory stridor. Another form of spasm is the "barking cough of puberty." A characteristic feature of these motor disturbances of the larynx is the curious way in which they may replace one another; for instance, at one time a patient may suffer from aphonia, or perverted action of the vocal cords, and this may be succeeded by an attack of spasm or a barking cough.

The question of the existence of abductor paralysis of hysterical origin is one of the greatest interest. Dr. Gowers³⁹ admits of its possibility and raises no difficulty. He writes: "Paralysis of abduction also occurs in hysteria, although rarely; it is always bilateral." And further on: "It is probable that many cases of so-called hysterical spasm of the glottis have been really abductor palsy." Hysterical adductor paralysis fits in quite well with our knowledge of a similar affection of other voluntary muscles, but hysterical paralysis of muscles which from the hour of birth to the last moment of life are incessantly at work is quite a different matter. Cases of so-called hysterical abductor paralysis are recorded, but I think that they are capable of another explanation.

In the differential diagnosis of hysteria from other affections⁴⁰ it is important to remember that "laryngeal paralysis due to hysteria is double; unilateral paralysis is always of organic origin."⁴¹

NEURASTHENIA AND MELANCHOLIA.

The subject of the various reflex nasal neuroses has received much attention of late years, and there has been a tendency, I think, to exaggerate the effect of the various intranasal lesions.

As I frequently examine the noses of patients—no matter what their complaint—I have come across numerous instances of deflected septa, nasal crests, and spurs in patients in whom there is no symptom of any nasal or reflex nasal affection. On the other hand, there is no doubt that these same conditions in neurotic or neurasthenic patients would produce symptoms of a reflex character curable by local treatment in conjunction with suitable general treatment. Some patients become quite hypochondriacal as to the state of the nose, and are constantly craving for an application of some kind or the other to be made to it.

It unfortunately happens occasionally that the very condition for which intranasal treatment is undertaken becomes aggravated. The case of a man 26 years of age suffering from depression is recorded.⁴² As there was a moderate amount of

hypertrophic rhinitis the cautery and chromic acid were employed for its reduction. This was effected, but the depression instead of lessening became increased, possibly on account of the nerve terminal being included in the cicatrix produced by the cauterisations. Rethi, of Vienna, has cured these neuroses by extirpating the cicatricial tissue which had formed as a result of the treatment.

I have recently had under my care a lady, 40 years of age, who, on account of paroxysmal sneezing, in the language of her general practitioner, "suffered many things in the way of removal of bone, cautery, etc." She certainly lost the sneezing, but since it disappeared she has suffered from flatulent dyspepsia, acidity, intestinal catarrh, and constipation, accompanied by neuralgia and various sensations referred to the pelvic viscera. She has lost flesh, is terribly depressed, and is a typical example of neurasthenia. She dates all her present symptoms from the time she ceased to sneeze, and attributes them to the shock of the numerous and severe operative procedures carried out in her nose. Her medical man takes the same view, and I am disposed to agree with him.

Dr. Hamilton Potter⁴³ has also observed a certain number of cases in which surgical interference in the nasal cavities has given rise to the symptoms of neurasthenia. On the other hand, there are numerous observations in which the cure of the nasal malady has led to a cessation of the neurasthenic symptoms. A remarkable case of melancholia, cured by intranasal operation, is reported by Dr. Bosworth.⁴⁴

HEADACHE.

Headache is so common a symptom that unless it is very severe or persistent I am afraid that it is apt to be treated with scant ceremony. It cannot be too often, or too energetically insisted on, that to treat a symptom without arriving at the cause thereof is quite contrary to the spirit of scientific medicine, and that the physician who orders antipyrin, phenacetin, or some of the other recently introduced derivatives from coal tar for the relief of headache, without discovering the cause, is placing himself on a level with the quack, who professes to cure every disease with his nostrum. Prominent among the causes of headache is disease of the nose. In fact there is hardly any nasal affection but has headache for a symptom. Hence a careful examination of the nose and accessory cavities should be carried out before headache is regarded as being of a neurasthenic or neuralgic origin. Chief among the nasal causes of headache may be mentioned hypertrophy of the turbinates giving rise to nasal stenosis; deflection of the septum may also have a similar effect, and, as above stated, almost any nasal affection. Headache may be the only symptom indicative of suppuration in one of the sinuses.

Kuhn⁴⁵ of Würzburg reports three cases of syphilis of the naso-pharynx, the chief symptom of which was otalgia. This experience points to the necessity of a careful examination of the naso-pharynx in all cases of otalgia. Scheinmann⁴⁶ of Berlin has written an excellent paper on Habitual Headache as the chief symptom of various Nasal Affections. He sums up in the following sentences:

1. Habitual headache finds its explanation in many cases in affections of the nose.
2. In severe and threatening nasal diseases it is often for a long time the only prominent symptom.
3. This knowledge imposes on us the duty, in habitual headache of unknown origin, of looking out for a local cause in the nose.
4. The presence of a neurasthenic condition does not exclude a local point of departure for habitual headache.
5. The demonstration of the nasal origin of headache has for the most part a favourable influence on the prognosis, as nasal therapy gives good and permanent results.

MENINGITIS AND CEREBRAL ABSCESS.

The close proximity of the nasal passages to the base of the brain would naturally lead us to suspect that inflammation of the membranes of the brain and cerebral abscess would result from intranasal lesions; and experience has fully confirmed this idea. Stoerk⁴⁷ for instance, has reported six cases of purulent meningitis due to nasal affections: in two cases the starting point was syphilitic disease of the nose, in the re-

maining four it was caused by acute suppuration of the nose and accessory sinuses. A series of cases of a similar character was reported in the BRITISH MEDICAL JOURNAL.⁴⁸ In a case of Bosworth's¹⁹ suppuration started in the ethmoid cells and spread to the sphenoidal sinus, death taking place from cerebral abscess.

Mr. Spencer Watson, in his book on *Diseases of the Nose* (second edition, p. 302) quotes many examples of the connection between intranasal disease and meningitis. Great caution must be exercised in the removal of necrosed portions of bone situated above the middle meatus. No force should be employed, and the close proximity of the brain must be borne in mind. The use of the galvano-cautery in the nose, and especially in the naso-pharynx, has been followed by meningitis, as also the operation for the removal of adenoid vegetations. New growths, especially those of a malignant nature, may by extension invade the cranial cavity and set up meningitis. One of the dangers of plugging the nostril for epistaxis is the possibility of thereby causing meningitis. I have seen this happen. An important point in regard to the occurrence of acute meningitis as a result of intranasal lesions is that the intracranial symptoms often come on very insidiously, and the nasal disease may be overlooked, the meningitis being attributed to some other cause. I would therefore insist on the importance of a routine examination of the nose in all cases of suspected inflammatory mischief of the brain or its membranes.

Dreyfuss⁵⁰ of Strassburg, has discussed at length the whole subject of disease of the brain and its membranes as a result of nasal suppuration.⁵¹

CEREBRAL HÆMORRHAGE AND EPISTAXIS.

When called upon to advise in a case of nose bleeding in a person over 40 years of age, I always think of the remarks made by Sir Prescott Hewett in a presidential address given at the Clinical Society in 1873: "Severe epistaxis spontaneously occurring after the middle period of life—what apparently could be of so little importance clinically? How little thought, commonly, would be bestowed on nose bleeding under such circumstances, and yet it is oft-times the little cloud no bigger than a man's hand." I have already pointed out that epistaxis in middle life may be an early symptom of cirrhosis of the liver. I now wish to direct attention to those cases in which it precedes a cerebral hæmorrhage. In these cases it is frequently a symptom also of the granular kidney, the nasal hæmorrhage and the cerebral hæmorrhage being a common result of degenerate vessels and a hypertrophied left ventricle. In some of these cases, moreover, there is what Sir William Gull not inappropriately called renal epistaxis—bleeding from the kidneys.

If, then, a person after the middle period of life, in whom there is any sign of arterial degeneration, and especially any evidences of a granular kidney, consults you on account of epistaxis, there is need of great caution in the treatment to be adopted. I know of one case in which measures, unfortunately only too effectual, were taken to stop a habitual epistaxis, and in which hæmorrhage into the brain proved fatal some months later. Of course there are cases of persistent and repeated hæmorrhages from the nose which must be checked at all risk in order to save life from direct loss of blood; and there is another kind of case in which patients are fretted and annoyed by constantly recurring small hæmorrhages, preventing them going about; here, again, local treatment is necessary. If measures be taken to stop the epistaxis, as by the application of the galvano-cautery to the bleeding point, the patient should be kept under observation, the diet should be carefully arranged, the amount of butcher's meat diminished, and alcohol almost, if not entirely, prohibited. Great care should be taken to keep the bowels freely moved, and I have found the old-fashioned combination of blue pill and a saline in the morning most effectual in preventing portal congestion and diminishing arterial tension. Acting on these lines, I have not hesitated to take measures to prevent the recurrence of epistaxis when I considered it desirable.

Time will not permit me to do more than mention that, in connection with cerebral hæmorrhage, different forms of laryngeal paralysis and anæsthesia are met with, varying according to the site of the lesion.

CONCLUDING REMARKS.

I have purposely refrained from saying anything about diphtheria, except when it occurs as a complication of other diseases, because the subject is too wide to be treated in an adequate manner in the time I could devote to it. Moreover, it is somewhat outside the limits I laid down for my own guidance when I commenced writing these lectures. For similar reasons I have not discussed the manifestations of tubercle, syphilis, and malignant disease in the nose and throat, as these are well described in the various textbooks on the subject. The plan I proposed to myself was to group together the various affections of the upper air passages as they may occur in connection with general or local diseases, and also to point out the diseases of remote organs which may arise as a result of affections of the upper respiratory tract. A secondary object I had constantly before me was to accentuate the importance of a systematic examination of the nose, naso-pharynx, pharynx, and larynx.

I am quite conscious that I have omitted many points of interest, but the very abundance of material has rendered the task of selection a difficult one. If, however, I have stimulated any of my hearers to pay more attention to the diseases of the upper respiratory tract and to the use of the laryngoscope, I shall feel that I have in some measure accomplished the task I undertook.

In conclusion, I should like to express my appreciation of the honour the Council did me in requesting me to deliver the Lettsomian Lectures, and I have to thank you, gentlemen, for your courteous attention.

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REMARKS ON CHRONIC LYMPHADENOMA, WITH ILLUSTRATIVE CASES.

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THE following cases constitute a definite and by no means uncommon type, presenting some marked differences from the characters usually associated with lymphadenoma or Hodgkin's disease. In the first place it is stated that lymphadenoma usually proves fatal in two or three years; by Osler the period is extended to three or four years; whereas in the first case related below the disease was known to have existed for ten years.

It is also commonly asserted that the glands, at first distinct and movable, soon become adherent to each other and to the surrounding structures, forming conglomerate masses. This statement is certainly true of lymphadenoma

originating in the mediastinal and retroperitoneal glands, and in some of the softer forms in the neck. But, in my opinion, it will be found that in the majority of cases where the disease affects the cervical glands, the most notable feature is their extreme mobility; and the facility with which they can be shelled out renders extensive operations easy of performance and rapid of execution. This mobility persists for long periods. I have been in the habit of teaching that this character constitutes an important diagnostic sign, differentiating the disease under consideration from cases of chronic tuberculous glands which have not softened. The capsules of such tuberculous glands are always thickened and adherent to each other and to the surrounding structures. Further, Case I shows that for many years lymphadenoma may remain limited to a particular region, spreading only by contiguity from gland to gland, or from one set to another set, as from the neck to the axilla; and without affecting the spleen or liver, or giving rise to any perceptible alteration of the blood, or to cachexia.

So striking are the differences between some of the cases cited below and the acuter cases of lymphadenoma that a question arises whether they should not be placed in an entirely different category as a form of sarcoma affecting a particular group of glands and spreading locally.

Billroth is the chief authority for placing such cases in a separate group, to which he gives the name of malignant lymphoma. By other writers the term lymphosarcoma is used, both for the more chronic and also for acute cases of lymphadenoma of internal parts. With Billroth's views I was at one time rather inclined to concur, but, after watching these and other cases, and on comparing the minute structure of the glands from both the acute and chronic cases of lymphadenoma, I came to the conclusion that there was no single feature by which the two groups could be differentiated. Cases also occurred occupying an intermediate position, of which the following is an example: A fireman was admitted to the London Hospital with chronically enlarged cervical glands, which were removed, and the case was classified as lymphosarcoma. Some time afterwards he came under my observation, having developed the disease in the tonsils, with nodules of lymphadenomatous tissue in the soft palate, and studding the posterior wall of the pharynx.

It is possible that when the cause of lymphadenoma is definitely known we may be able to subdivide the cases to which this name is now applied, and it may here be mentioned that P. Delbet claims to have found, in a case of lymphadenoma, bacilli in the blood of the spleen. A dog injected with cultivations was stated to have developed generalised lymphadenoma, and the bacillus was again demonstrated in its blood.¹

With regard to the microscopic characters of the chronic cases of lymphadenoma quoted below and the more acute forms with which the name is usually identified, I do not find any appreciable difference. Nor do I find that the distinction between the hard and soft varieties, founded on the relative amount of connective tissue, can as a rule be substantiated.

Some slight differences exist indiscriminately in the character of the cells. In some instances the cellular elements are entirely composed of small young lymph cells; while in others a certain proportion of ripe or mature lymph cells (in which the nucleus is surrounded by a rim of protoplasm) is intermingled with the first named. The larger multinucleated cells, not infrequently described as existing in all cases of lymphadenoma, are more frequently absent than present; they may exist in the acute cases, and also in the chronic cases sometimes described as lymphosarcoma.

In earlier days doubtless leukaemia lymphatica was confounded with Hodgkin's disease. The former, the reader need hardly be reminded, with its acute soft enlargement of many and separate groups of lymphatic glands, its cachexia, its anaemia, its rapidly fatal issue, together with, in many instances, the absence of enlargement of the spleen, presents all the characters usually associated with lymphadenoma, from which, in fact, it can only be differentiated by the early and marked leucocytosis.

TREATMENT.

Cases I and II appear to show that in chronic cases of lymphadenoma occupying accessible positions the timely and