ON THE DIFFERENTIAL DIAGNOSIS OF CHRONIC INFLAMMATIONS OF THE LARYNX.

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ALTHOUGH the removal of growths from the larynx, and the restoration of the voice in cases of functional aphonia by faradisation of the vocal cords, are, perhaps, the most striking results which the invention of the laryngoscope has brought about, the accurate diagnosis of chronic affections is really the most important annexation which that instrument has accomplished. New formations of the larynx, in the circumscribed sense of the word, are necessarily rare, and their treatment, *per vias naturales*, must of necessity remain in the hands of the few. Functional aphonia also may often be successfully treated by general measures; but the prospects of thousands of patients depend on whether a chronic disease of the larynx be simple or benign, whether a thickening be catarrhal or scrofulous, whether an ulcer be syphilitic or cancerous. With the aid of the laryngeal mirror alone, and often when other guides are altogether wanting, the practitioner may be able to promise his patient a speedy and complete recovery; or he may be obliged to inform him that a loss of vocal function will necessarily result from the disease; or he may even be forced to acknowledge that medical art cannot arrest the fatal malady. Any well-educated practitioner who can give a few weeks' study to diseases of the larynx, as seen with the laryngoscope, can easily acquire sufficient dexterity to form a reliable prognosis. Of course treatment may be of great service in some of the affections referred to, and the accurate application of remedies may be effected after a little practice; but the reputation of a professional man so often depends on prognosis, that, for that purpose alone, every practitioner engaged in the general treatment of disease should learn to use the laryngoscope.

The affections which have to be considered are: simple chronic inflammation, laryngeal phthisis, syphilis, and cancer.

In dealing with these affections the following features will be taken into consideration:—

First. The part of the larynx most liable to each kind of the disease.

Secondly. The organic character of the disease. Under this head will be considered—(a) the kind of tumefaction; (b) the coloration; (c) the character of the ulceration (when present); (d) the amount of displacement; and (e) the condition of the contiguous parts.

Thirdly. The functional impairment—i. e., alteration of voice, presence of cough, embarrassment of respiration, and difficulty of swallowing.

Simple Chronic Inflammation.

1st. The vocal cords are most frequently affected, next the ventricular bands, then the epiglottis, and occasionally, but rarely, the arytenoid cartilages and inter-arytenoid fold. The posterior or cartilaginous portions of the vocal cords are rather more often attacked with simple inflammation than the anterior portions.

2nd. (a) The amount of tumefaction depends on the precise seat of the inflammation. As regards the vocal cords, there is generally nothing more than a little irregularity of the surface. The ventricular bands, being more lax in tissue, are more likely to be swollen. The epiglottis is generally but slightly tumefied, though there is often considerable capillary engorgement. (b) The condition being one of simple hyperæmia, the colour of the mucous membrane is more or less bright-red, according to the activity of the process. (c) The ulceration is generally very slight, and partakes rather of the character of an erosion. When the vocal cords are thus affected, the ulcers appear as small white specks. This peculiarity is due to the fact that the mucous surface is destroyed, and the white fibrous structure of the cord is exposed. (d) There is no displacement. (e)

The pharynx is frequently congested and relaxed, and there is often some elongation of the uvula.

3rd. There is generally hoarseness and fatigue of the voice. There is seldom cough; but when present it is of an irritative character. The respiration is never embarrassed, nor is there often dysphagia. When this last symptom occurs, it generally indicates that the inter-arytenoid fold is inflamed.

Laryngeal Phthisis.

1st. The ary-epiglottic folds are, above all parts, the most liable to scrofulous deposits. The epiglottis stands next in order of frequency. The posterior extremity of the ventricular bands and the vocal cords are also not unfrequently diseased.

2nd. (a) The tumefaction is generally of a diffused character; that is to say, there is no distinct line of demarcation. When the ary-epiglottic folds are affected, a swelling first takes place around the cartilage of Wrisberg and capitulum Santorini. (Fig. 1.) As this tumefaction increases, the projection of the cartilages is lost sight of, and a pyriform

FIG. 1.

FIG. 2.

[For the sake of comparison, the disease is represented in the woodcuts as unilateral; it more often happens, however, that both sides are more or less affected.]

swelling is produced. (Fig. 2.) The epiglottis, when attacked, is invariably considerably thickened, and, in an advanced stage, has a turban-like appearance. (Fig. 3.)

FIG. 3.

This woodcut is very characteristic of an advanced case of laryngeal phthisis, in which the interior of the larynx is entirely hidden by the thickened valve, and nothing is seen but a portion of the pyriform swellings. The ventricular bands are irregularly swollen, and often merge into the ary-epiglottic folds. The vocal cords when thickened have a rugged, fleshy appearance. (b) The characteristic of the colour of laryngeal phthisis is the extreme paleness of the mucous membrane of all the parts, except when the disease affects the vocal cords, and in that case these structures are purplish-red. (c) Ulceration in this disease is one of the later phenomena, and is almost invariably preceded by thickening. The ulcers are generally small and comparatively superficial. When the glandulæ are affected, a very characteristic worm-eaten appearance is produced. (d) The contiguous parts are not generally implicated, except that there is often some ulceration of the trachea; and it will be understood that in nearly all cases, sooner or later, the lungs become diseased, if they have not been primarily affected.

3rd. The voice is generally hoarse in the early stage, aphonic in advanced disease; but cases occasionally occur where the epiglottis is alone affected, in which there is little or no alteration in the voice. Cough, accompanied with a slight amount of expectoration, is one of the most frequent and troublesome symptoms. The respiration is sometimes seriously embarrassed. Dysphagia is a most distressing characteristic of laryngeal phthisis in all instances in which the epiglottis is attacked. In such cases fluid food frequently passes into the larynx, and not only gives rise to convulsive paroxysms of cough, but it is also often ejected through the nostrils.

Syphilis.

The so-called *secondary* phenomena of syphilis are essentially exanthematous in character, and tend to spontaneous

subsidence; they need not, therefore, be considered in this article.

In *tertiary syphilitic disease*.—

1st. The epiglottis is the most frequent seat. Next in order of frequency the vocal cords and cavity of the larynx are attacked, and more rarely the mucous membrane covering the arytenoid cartilages.

2nd. (a) There is seldom much tumefaction in the early stage; but when present, it is generally considerable, and prone to take on an oedematous character. Considerable ulceration may, however, take place without any previous swelling. (b) There is almost always active hyperæmia of the mucous membrane. The epiglottis often loses its buff cartilaginous colour, and its normal configuration, and even assumes the appearance of a fleshy tumour. (c) Not only is ulceration the most characteristic feature of tertiary syphilis in the larynx, but the ulceration is itself very distinctive. It is rapid, deep, and extensive; it not only destroys the mucous and submucous tissues, but often attacks the muscles and perichondrium. The ulcers are generally covered with mucus, and thus have a yellowish appearance; but when this coating is removed, the surface is seen to be more or less red in colour. There is not, as a rule, any elevation of the edges, nor any increased vascularity of the margin of the ulcer. (d) Displacement is a frequent *sequel* of syphilitic inflammation, and is invariably the result of cicatrization. (e) There is occasionally ulceration of the walls of the pharynx, but generally the pharyngeal ulceration has occurred at an earlier period of the disease, and has undergone the healing process.

3rd. The voice is very often impaired. There is frequently difficulty in respiration, but seldom any cough; when the epiglottis is ulcerated dysphagia is a very prominent symptom, but after the ulceration is healed, even though the valve has been almost entirely destroyed, the power of swallowing is perfectly restored.

Cancer of the Larynx.

This disease is extremely uncommon, as compared with either the simple or the specific affections already described.

1st. When present as a primary disease, it occurs in one of two forms—either as an epithelial neoplasm projecting into the cavity of the larynx, or as a rodent ulcer attacking the arytenoid cartilages, especially their posterior surface, the hyoid fossa, or the epiglottis. The neoplasms are altogether different from chronic inflammations, and do not require elucidation in this article.

2nd. (a) In the ulcerative cases there is generally but little tumefaction, except when accidental oedema occurs. (b, c) The ulcers are small, sharply circumscribed, and, though exhibiting little disposition to spread, rarely undergo a healing process. They are of an ashy grey, or greenish colour, but when attacking the cartilages, the base of the ulcer is almost black from caries of the subjacent parts. There is but scanty secretion of mucus. The edges have an angry-red colour, and are generally much thickened. (d) Displacement is a very common and a rather early symptom of malignant ulceration of the larynx, owing to disease of the adjacent parts, and to glandular enlargements. (e) Even though cancer in the larynx be primary, the pharynx and other contiguous parts are frequently similarly affected.

3rd. As the ulcerative form of the disease generally attacks the framework of the larynx, the vocal function is seldom impaired, except in the later stages. The same observation explains the absence of cough. The respiration is only affected when considerable tumefaction has taken place. The very reasons which account for the voice being spared explain the early embarrassment of deglutition.

In analysing the foregoing remarks, it will be seen that the functional signs are uncertain, but that the organic changes as reflected in the laryngeal mirror may be implicitly relied upon. In *simple chronic inflammation* the appearances are superficial and general. In *phthisis* pale solid pyriform swelling of the ary-epiglottic folds are typical, whilst turban-like tumefaction of the epiglottis is not less characteristic. The other varieties herein referred to are less common and less characteristic; but it may be accepted as an axiom, that in *phthisis* thickening invariably precedes ulceration. In *syphilis* extensive rapid ulceration is the distinctive manifestation, and the epiglottis is its most common seat. Here ulceration most frequently occurs

without any previous thickening, but subsequent narrowing of the laryngeal canal and displacement are not uncommon. In *cancer* the framework of the larynx is most commonly attacked, and the character of the disease is its slow intractable ulceration, and the disposition of the contiguous parts to become affected.

December, 1871.

CASE OF ELEPHANTIASIS OF THE SCROTUM.

SUCCESSFUL OPERATION.

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THE case of operation which is published under the above heading in the number of THE LANCET dated the 14th October, 1871, recorded by a colonial medical officer of the West Indies, being so opposed to what we are in the habit of seeing in the East Indies, where every care is taken to preserve the organs of generation, I am induced to publish the particulars of a case lately operated upon at Dum Dum, near Calcutta.

A native of Lower Bengal named Rupah, a shoemaker by trade, aged about forty years, states that he has suffered for four years from enlargement of the scrotum. At first the growth was very gradual, but latterly it has been rapid, the increase being accompanied by exacerbations of fever. The tumour appears to be about 20 lb. in weight, and extends below the knees. The penis is also involved, and drawn down by the distended integument, so that nothing of it but the prepuce can be seen, lying about the upper third of the central line of the tumour. This man came under observation in October last, being on a visit to one of my hospital servants, who brought the case to my notice. He appears in good health, does not suffer from fatty heart or enlargement of the spleen, either of which is common in cases of the kind. He walks bowed, but does not complain very much of the inconvenience of such an enormous mass to carry.

On the morning of the 4th November, the man was placed on the table for operation, Dr. Richard Stevens, of the 11th Regiment, N.I., kindly giving the chloroform. I was assisted by Drs. Eustace and Wilson, of the 107th Regiment, and to the advice of these gentlemen and Dr. Stevens may be greatly attributed the success of the operation. Having borrowed the ligature used at the Medical College Hospital, Calcutta, in such cases—which resembles a skipping rope traversing a brass ring—it was applied over the tumour, well up against the perineum and over the pubes, and given into the charge of two assistants, one on either side of the patient; traction was made as it was found necessary. A strong steel director having been passed under the prepuce as far as it would go, it was slit up by a long knife, and the incision extended up to the centre of the pubes. The penis was carefully dissected out and drawn upwards. The next incision was from over the centre of the left spermatic cord, down nearly to the bottom of the tumour, and the testicle with the cord dissected up to the ring. The right testicle was raised in the same manner, and both, with the penis, laid upon the abdomen. The three incisions were now connected by a transverse incision across the pubes, and the operation was concluded by a single sweep of the catlin removing the entire mass from the perineum. The arteries were rapidly tied, and hæmorrhage checked, the testicles placed on the wound in the perineum to granulate, the penis was rolled up separately in lint dipped in oil and carbolic acid, 1 to 20; the testicles and perineum being covered with lint well soaked in the acid and oil, and the whole supported by a T bandage and pad.

As the hæmorrhage is very great in these cases, it being in fact, the only danger of the operation, the tumour was raised for a couple of hours before the operation to drain it of blood, as recommended and invariably practised at the Medical College, Calcutta. Some six or eight large arteries were tied in this case, but generally it is necessary to ligature very many more. Dr. Fayrer, whose experience is very great in these cases, in his "Clinical Surgery of