APHONIA AND HOARSENESS.*

BY

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I PROPOSE to make some observations on aphonia and hoarseness arising acutely. All of us are familiar with the sudden aphonia in a child or adult who has contracted a common cold associated with laryngitis; or with the croupy hoarseness, sometimes manifested instead, which generally yields to simple remedies. Now and again, however, especially in certain epidemics of so-called influenza, we come across cases not so simple in type which are associated with considerable oedema of the fauces and pharynx. In some of these cases oedema spreads to the arytenoids, which become so swollen as to resemble almost a pair of nasal polypi; the symptoms may become alarming and the aphonia may be associated with definite dyspnoea. The condition may be severe enough to necessitate laryngotomy or tracheotomy, though, as a rule, it yields rapidly to local scarification with a laryngeal knife. Should, however, the patient's condition then be too severe to permit of the necessary manipulation, laryngotomy must be performed at once. It is dangerous to impose on the heart, already toxic from the general infection, the strain of a battle against laryngeal obstruction, once this is producing a rising pulse, recession, and duskiness. At this point, furthermore, one might mention the possibility of an unsuspected diphtherial infection and urge that, however desperate the case may seem, tracheotomy may be performed just in time to save life. A few years ago I was asked by a medical friend to come at once and see a lad who was desperately ill with some respiratory obstruction so extreme that my friend did not think I would suggest doing anything. I found a lad of about 8 years of age, voiceless, livid, gasping, with marked recession of chest and neck, a feeble rapid pulse, and obviously in the last stages of laryngeal obstruction. Immediate tracheotomy at once changed the picture, and on investigation several of his school-mates were found to be carriers of diphtherial infection.

Simple Acute Aphonia.

Simple acute aphonia may persist when other signs and symptoms have passed off. The patient is generally a female aged 15 to 35; her cords are pearly white, perhaps slightly coated with mucus, but they do not approximate well; otherwise the patient is quite fit. I always hesitate to call a condition hysterical or neurotic on one examination, but if the patient, as often happens, can be made to say "E" quite well when the tongue is held out and the laryngeal mirror applied to the palate, or can be made to sing the vowels, the presumption is that the case is one of hysterical aphonia. It is necessary, however, to have repeated examinations until the patient has recovered, though as the patient has literally forgotten how to talk, this may take some time. Encouragement, suggestion, valerian, and faradism generally relieve the symptoms.

The aphonia, however, may not pass off so satisfactorily, and careful re-examination after two or three weeks is then essential. In this type of case the cords remain red or pink, slightly roughened or even granular, or the reddening may be unilateral without definite ulceration or swelling. The diagnosis of such cases presents perplexing problems, as the following will show:

A man of late middle age had what his doctor thought was an influenzal attack followed by hoarseness and loss of voice. On examination I found definite injection of the right vocal cord, with a little on the left; there was no loss of movement and no ulceration. I prescribed rest to the voice and steaming, but when I saw the patient again a week or ten days later the picture had changed. The right cord was now covered with pinkish granulations, the left was practically clear, but movements were still unimpaired. In the absence of chest signs I was still of opinion that the condition was post-influenzal, and probably of streptococcal origin. It was, however, thought expedient to obtain a further opinion, so we sent him to a leading laryngologist, who thought that the condition was either tubercle or early carcinoma,

and advised punching out a portion of the cord for pathological examination. This operation the patient refused, and as he has since been perfectly well I believe that the original diagnosis was probably correct.

Streptococcal Laryngitis.

Other cases, however, do not end so happily. There are some with the same sort of history, but on examination a little shallow irregularity is noticed in the posterior half of either cord, perhaps very limited in extent and looking like a mouse nibble. The rest of the larynx may be slightly congested or the epiglottis may be very pale; there may be no arytenoid swelling, and movements may appear good. Alternatively the irregularity may take the form of a small definite ulceration with marked surrounding inflammation. Perhaps in the first variety careful examination of the chest will reveal pulmonary lesions, and a swab from the larynx itself show the presence of tubercle bacilli. In the second variety one may find only streptococci, though again pulmonary crepitations may be present. Even in the absence of tubercle bacilli one cannot say definitely that the case is not one of tuberculosis, though there are undoubtedly cases of streptococcal laryngitis with ulceration and even streptococcal pulmonary lesions, which simulate tubercle, especially among children. In any case treatment should follow a definite course: absolute silence must be enjoined, septic foci, such as carious teeth, septic tonsils and adenoids, removed, infected nasal sinuses cleansed, and if the swab shows chiefly streptococci, a polyvalent anti-streptococcal serum administered.

In a discussion on the question of oral sepsis in relation to lung conditions at the Royal Society of Medicine in January, 1928, I attempted to show by means of a series of cases the great improvement that might be brought about by removal of naso-oral sepsis, especially in children with pulmonary symptoms. One frequently meets cases of repeated attacks of laryngitis in children and adults in which the cause would seem to lie in a tonsil or sinus from which pus flows into the pharynx and so to the larynx when the patient assumes the recumbent posture at night, and which clear up when the cause is removed. In advanced cases of laryngeal tuberculosis the outlook is desperate, but in one patient in whom the laryngeal condition was much worse than the pulmonary, tracheotomy, by insuring complete vocal rest, effected a cure.

Foreign Body in the Larynx.

So far I have dealt with aphonia and hoarseness apparently arising acutely, and gradually merging into chronic or intermittent forms. Before passing to the really chronic type I would, however, note that in sudden acute aphonia or raucous hoarseness the possibility of a foreign body must not be overlooked.

Many years ago, when I was doing a house appointment, a patient was admitted with a history of aphonia, which followed a violent spasm of coughing, brought on by swallowing a single tooth with a small plate and hook. Examination by indirect laryngoscopy showed the tooth balanced by its hook between the vocal cords, the hook being stuck on the upper surface of the left cord. This was in 1902, and as direct laryngoscopy was then unknown at the hospital an attempt was made to remove the tooth with a pair of laryngeal forceps. As this procedure only caused violent coughing, the patient was sent to the operating theatre for thyrotomy, but administration of the anaesthetic provoked a paroxysm of coughing and expulsion of the tooth.

About four years ago an 11-months infant was brought to me with a history of recurring raucous bronchitis with croupy cough. In the momentary view I was able to obtain by means of indirect laryngoscopy I saw something bright; I suggested a foreign body, and the desirability of administering an anaesthetic. Direct laryngoscopy through Irwin Moore's bronchoscope revealed a safety-pin caught in the right sinus pyriformis alongside the glottis. As the history was of four months' duration there is no doubt that the foreign body had been sucked in, and remained there during that long period.

Excessive Use of Voice.

Excessive use of the voice, common in newspaper boys, badly trained elocutionists, parsons, singers, etc., may manifest itself in permanently thickened congested vocal cords. One is often asked to tide over a difficult period—for example, Easter week—a parson whose voice is failing

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through excessive use or faulty production. It is only fair to warn the patient that further speaking may result in permanent damage to his voice; but if, as generally happens, he decides to carry on, then the best treatment one can suggest is that before speaking the patient should spray the throat with a 1 or 2 per cent. cocaine spray, following this, immediately he has finished, by steaming with menthol or friar's balsam. He may be given a sedative lozenge containing menthol, carbolic, and a little cocaine to suck intermittently, a medicine of strychnine and phosphoric acid to take internally, and advised to swallow a raw egg just before he is to use his voice. When the stress is over one orders complete vocal rest, attends to the condition of the nose, throat, and teeth, and gives advice on the subject of voice production.

The formation of singer's nodules is often accompanied by rapid failure of the patient's voice, or after a while its complete disappearance. These little nodules, whose site is at the junction of the middle and anterior thirds of the vocal cords, are best treated by rest, assisted if possible by cauterization with a pointed electro-cautery—not an easy manœuvre, but in most cases effective. In addition, of course, examination and treatment of conditions in the nose, nasopharynx, and tonsils may be required. These growths tend to disappear spontaneously, and should not be over-treated, though any septic causes should be removed. In adults I have found cauterization a satisfactory procedure.

Papillomata of the Larynx.

Another fairly common cause of aphonia in children and in adults below middle age are papillomata.

A boy of about 6 was brought to me because he could never talk above a low whisper. His condition had several times been diagnosed as laryngitis. On listening to his breathing I heard at every expiration a click, as though something were being driven against the glottis, and this suggested the diagnosis of papilloma. This diagnosis was confirmed by laryngoscopy, which revealed a stalked papilloma attached to the left vocal cord near the anterior commissure.

Only this year a boy aged 3 was sent to me on account of aphonia with some dyspnoea. During examination under an anaesthetic his condition became so bad that tracheotomy had to be performed, and on direct laryngoscopy a broad sessile papilloma was seen covering almost the whole of the glottis and attached to the right vocal cord. This papilloma was picked off piecemeal, the tracheotomy tube being left in for some weeks and then removed. After a few months the growth recurred and the same procedure had to be adopted again, but this time the tube was left in for several months. We are now trying to see what will happen if the tracheotomy wound is allowed to close.

Such cases may take years to get well, but it is quite certain that in children they must not be treated by laryngo-fissure, as this operation may be followed by permanent stricture of the glottis. Intralaryngeal methods and rest by tracheotomy are the treatment. In older patients one may meet a condition of multiple papillomata. In still older patients with recurring papillomata one fears the onset of malignant changes. These occurred in a patient who, after having papillomata removed at intervals of years from the true cords, had to have total laryngectomy performed.

Cancer of the Larynx.

Another variety of aphonia is illustrated in the type of patient, usually middle-aged or older, who complains of increasing hoarseness, probably suffers no pain, and attributes his symptoms to a cold. Examination of the neck reveals no growth or other abnormality, but there is often present advanced oral sepsis. In such cases careful laryngeal examination, if possible after oral sepsis has been treated, is vital, because commonly the cause of the hoarseness is a malignant growth involving a vocal cord or a superior ventricular band or spreading to these structures from the sinus pyriformis. Generally speaking, however, in the latter case there is accompanying pain on swallowing. At the present time I have under my care two cases of the type just described; with symptoms dating back six

and nine months respectively. They both present almost inoperable carcinomatous ulceration involving the entire half of the larynx and reaching to the epiglottis.

Intrinsic carcinoma of the larynx, if caught early, is a curable condition.

A retired naval officer was sent to me in 1923 for slight aphonia, of which he had only complained a week or two. Examination showed a growth about the size of a pin's head attached to the under surface of the right vocal cord, the cord itself being freely movable. A portion of the growth punched off for examination proved to be typical carcinoma. I removed the right vocal cord and a small portion of the anterior end of the left cord with their surrounding tissues by window resection of the right ala of the thyroid cartilage, and rapid recovery with formation of scar tissue occurred. After about fifteen months a small pin's head nodule appeared on the middle third of the left cord, and this proved again to be a carcinoma. I performed a similar operation, removing, however, the arytenoid cartilage as well as the whole of the left cord, and uninterrupted recovery occurred. I believe the patient is still perfectly well.

Only early operation prevented this case from running the same course as the two previous ones. I have seen a case of urgent hoarseness with dyspnoea treated for five months as laryngitis, in which the growth had made such rapid strides that the glottis was nearly occluded. One may say that any case of hoarseness or aphonia which does not yield to ordinary measures in a month requires careful laryngeal examination. A cord invaded by a carcinomatous ulcer or growth is not necessarily immobile. If the cord is fixed and immobile we know that the growth is very deep; if it is mobile the growth is early, and operation holds out a prospect of cure. We are on the threshold of further developments in the treatment of this form of cancer. Rose and Harmer have shown many successful cases of intralaryngeal carcinoma treated solely by radium, and I know one patient with extrinsic carcinoma of the larynx who, three or four years ago, seemed doomed to die, but after radium treatment remained alive and well until quite recently.

A patient who consulted me some years ago illustrates a form of chronic hoarseness which may be called parasyphilitic.

He gave a definite history of syphilitic infection, for which he had been treated. His glottis was distorted, and portions of the cords had been destroyed, hypertrophied nodules from the one appearing more or less to fit into the gaps from the other. There was general pharyngeal congestion and hypertrophy of the superior ventricular bands; movements were good. No treatment seemed to be availing, and on account of his occupation the patient could not keep silent. As I regarded the condition as pre-cancerous I took the opinion of a clinical meeting, at which I was advised by some to leave the case alone, and by others to be prepared to operate. I favoured the former view, and have left the case alone. As far as I know the man is still in vigorous health, but I am convinced that he should be kept under observation, as malignant changes are likely to take place.

Another patient with the same symptoms presented himself the other day. There was complete fixation and swelling of the right side of the larynx, though without definite ulceration. The patient's condition was good; there were no enlarged lymphatic glands in the neck, and the Wassermann reaction was positive. The condition is one of syphilitic perichondritis of the thyroid, and the patient is now undergoing anti-syphilitic treatment. At the same time he will be carefully watched, as the combination of malignancy with syphilis is not uncommon.

Laryngeal Paralysis.

Finally, one may consider cases in which laryngeal paralysis results in aphonia or hoarseness. Bilateral paralysis is uncommon, and generally is the result of some severe nervous affection, such as bulbar palsy. Paralysis of one cord, due to intrathoracic growth, aneurysm, or pressure on the recurrent laryngeal nerve from thyroid and oesophageal growths, is often accompanied by no more than weakness of voice. If laryngeal sensation is present the lesion is probably below the larynx. On the other hand, if anaesthesia is present, the possibility of an intracranial lesion or pressure on the vagus nerve must be considered. When a patient suffers from aphonia or weak voice after operation on the thyroid the possibility of trauma must not be overlooked.