A HISTORY OF SEVEN CASES
IN WHICH A
MORBID GROWTH WAS REMOVED
FROM
ONE OF THE VOCAL CORDS
BY THE AID OF THE LARYNGOSCOPE.

BY
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CASES of morbid growths within the larynx are amongst those for whose exact diagnosis and successful treatment the use of the laryngoscope is essential. It will be seen from the narrative of the following cases which have come under my care during the last four years, that in more than one instance the patient had been subjected to a long and fruitless course of medicinal treatment before the true nature of the disease was ascertained by the use of the mirror.

The instrument which I have employed for the removal of growths from the larynx is a wire *écraseur*. Dr. Thomas J. Walker, of Peterborough, was the first in this country to remove a growth from the larynx by a wire loop (see 'Lancet,' November 9th, 1861). This instrument, which was made for him by Messrs. Weiss, consisted of "a

silver canula, much resembling Gooch's double canula, but longer, and curved at one end almost at right angles." A piece of thin iron wire was passed through the tube and returned so as to leave a loop, which thus formed a simple but very effective *écraseur*. With this instrument Dr. Walker removed from the larynx of a boy, aged fourteen, a polypoid growth which was threatening suffocation.

Messrs. Weiss subsequently made an improved *écraseur* of steel for Sir Duncan Gibb, which he has employed successfully in several cases.

The instrument which I have used is a modification of Sir Duncan Gibb's. Several minor alterations have been made, but the chief improvement which, at my request, was made by Messrs. Weiss, is that of a hook fixed on the upper surface, over which the forefinger of the operator passes. Thus, the forefinger antagonising the thumb passed through the ring at the end of the instrument, the operator has a firm hold of the *écraseur*, and with the aid of the mirror, which is held in the left hand, he can readily direct the wire loop towards the morbid growth.

The *écraseur* has this advantage over any form of laryngeal forceps, that, unlike them, it very rarely tears the mucous membrane or seizes any other object than the growth to be removed. It is a perfectly safe and harmless instrument.

The secret of success in these cases, consists in bringing the wire loop exactly opposite the wart at the time when the touch of the instrument excites the contraction of the glottis, by which the tumour is driven into the snare and then caught by the sudden retraction of the wire. I have always found that any portions of morbid growths that are torn off have been tightly held by the wire, which, partially cutting them through and embedding itself in their substance, thus brings them away. I have no reason to suppose that any particles have fallen into the trachea. If, however, this were to happen they would probably be expectorated as speedily as small masses of mucus are expelled.

Let me for a moment direct the attention of the Society to a simple and efficacious light condenser, which has been

made at my suggestion by Messrs. Meyer and Melzer, of Great Portland Street. It consists of a pair of iron spring forceps which may readily be fastened on to the chimney of almost any form of lamp. Into this, in front of the flame, is fixed a plano-convex lens, and, behind, a copper reflector silvered. The instrument can readily be taken to pieces, and the lens, with its holder, may be packed in a case of convenient size for the pocket.

The following narrative of cases is given in the order in which they occurred.

CASE 1.—J. W—, æt. 49, a cabinet maker, was sent to me in March, 1864, by Dr. Tyler Smith. His voice was extremely husky and feeble; about twenty years ago he caught cold by sleeping in a damp bed: he became hoarse and has continued so ever since. For about ten years he was almost constantly under medical treatment; he had been repeatedly blistered and once salivated; he had taken much cod-liver oil, and he summed up his opinion of the effect of all this medication by saying that “it had injured his general health and had not improved his voice,” which in fact had steadily become more feeble and husky. He had never suffered from dyspnœa, and there was no stridor during a forced inspiration. On examination I found a wart, nearly as large as a mulberry, attached to the anterior part of the right cord and occupying a large portion of the glottis. The symptoms were thus explained and the failure of former medical treatment was accounted for.

This was the first case of warty growth that had come under my own care. I was then comparatively unpractised in the application of instruments to the larynx, and I made many unsuccessful attempts to remove this growth, sometimes with the forceps, at other times with the *écraseur*. All my success was with the *écraseur*. On one occasion, during a sitting of about ten minutes, I succeeded in catching the wart three times out of five, and each time I removed a piece of considerable size. On another occasion I had removed a small portion with the wire, and after the patient left my

house he expectorated a small piece which probably had been loosened by the wire and then driven off and expelled during the effort of coughing. At length I succeeded in removing nearly the whole of the growth, but there still remains a nodular projection on each cord near its anterior end, and there is a general want of smoothness and polish over the surface of both cords. These appearances explain the fact that his voice, although stronger and clearer than it was, is still feeble and husky.

CASE 2.—Mr. H—, æt. 50, engaged as a lay agent for the Pastoral Aid Society, consulted me first in October, 1863, on account of hoarseness, which was much increased by continuous speaking even for a few minutes. The feebleness of voice had existed for more than a year, and he accounted for it by his habit of addressing crowds in the open air. When I first examined his larynx I saw only an injected state of the mucous membrane, but after repeated examinations I plainly saw a red and apparently a very vascular tumour between the two cords just at their insertion. During inspiration this tumour disappeared below the glottis, but during vocalisation it was driven upwards between the cords and prevented their close apposition. The feebleness of voice was now explained. I repeatedly applied a solution of iodine on a bent brush, and, although I sometimes fancied that the tumour had somewhat diminished, I at length arrived at the conclusion that no good had been done by its application. I then determined to attempt the removal of the tumour by the *écraseur*; and on the 27th June, 1865, after an attempt to catch the tumour, there was an escape of blood from the throat; altogether about an ounce of blood was expectorated, and in the midst of it a shreddy piece of membrane, which I have preserved as a microscopic specimen. Now, on examination of the larynx, I found that the tumour had entirely disappeared, and in place of it there was only a slightly uneven projection near the anterior extremity of the right vocal cord, where the tumour had been attached. I infer that the tumour had been a vascular cyst containing fluid—

that the cyst had been ruptured by the grasp of the wire loop, and that the membrane which was expectorated had formed a portion of the cyst-wall. The voice, for a few days after the removal of the tumour, did not appear to be much improved, but gradually it became stronger and clearer. I occasionally touched the spot where the tumour had been attached with a solution of nitrate of silver; the nodular unevenness quite disappeared. He was soon able to resume his speaking and reading aloud, and when I last saw him, in December, 1866, he told me that his voice continued good.

CASE 3.—J. G. C—, æt. 59, a manager of large estates in Ireland, consulted me in May, 1865, on account of hoarseness, which he said had come on rather suddenly without any symptoms of cold in October of the previous year. He was blistered without benefit. In the middle of December he consulted Dr. Smyly, of Dublin, who told him that he had a wart on his right vocal cord. In March, 1865, he saw Dr. Stokes and Dr. Smyly together. He came to me on the 19th May, 1865, and, without giving me his history, begged me to look at his throat and tell him the cause of his hoarseness. I at once saw a wart about the size of a pea, but of a somewhat conical form, on the right vocal cord near its posterior or arytenoid end.

I made many attempts to catch the wart with the *écraseur*, which were entirely unsuccessful, until I discovered that in consequence of the unusual length of the patient's neck, he being a very tall man, it was necessary to have the bend of the *écraseur* much deeper than usual. This being done, on the 18th June I pulled off a piece of considerable size, and the voice became clearer immediately. On the 20th June a smaller piece was removed with a yet further improvement of the voice. After this some granular particles came away on the wire, and the cord was left with only a slightly conical smooth projection where the wart was attached. When he left me on the 26th June, he said his voice was then as strong and clear as it had ever been. I saw this gentleman on the 5th July, 1867. I then observed a somewhat

granular thickening of that part of the cord where the wart had grown. His voice was, as he said, "not so much hoarse as gruff and reedy, and differing as much from what it formerly was as a note on a bassoon differs from the same note on an organ-pipe." He said that as his voice was sufficiently good for any use that he had to make of it, whether in reading or in speaking aloud, he did not care to submit to any further treatment. He had only called on his way through London, as I had requested him to do, to report progress.

CASE 4.—J. L.—, æt. 26, an assistant in the establishment of Messrs. Bell and Co., the chemists, in Oxford Street, consulted me first in the summer of 1864, on account of hoarseness, from which he had suffered for many years; in fact he could not remember that his voice had ever been clear and natural. He had seen many doctors, and had taken much medicine, including cod-liver oil, on account of a supposed tendency to phthisis, but his voice had remained husky and feeble. He had no cough, and there were no signs of disease within the chest, but, on examination with the laryngoscope, I at once saw a wart about the size of a small pea, near the anterior insertion of the right vocal cord. This wart explained the hoarseness. After several attempts I removed a small piece of the growth by the wire, and the voice was somewhat stronger. I made no further attempt to remove the growth until the following summer. In the mean time I had had considerable practice in manipulating the throat, and had improved the *écraseur*. At length, on the 23rd June, I caught the wart with the wire and removed it entire, leaving the vocal cord with only a slight unevenness on its surface, which disappeared in a short time. Immediately after the removal of the wart, the voice became strong and clear, so that he could sing as he had never been able to do before. The patient has since married, and taken a business at Darlington. I wrote lately to inquire about his voice. In his reply, which is dated May 18th, 1867, he says, "In answer to your inquiry, I am

happy to say that my voice remains clear and strong, and if I were a singer I could pitch either a high or a low note with perfect ease."

CASE 5.—Mr. J. W—, æt. 68, a surgeon, was sent to me by his friend Mr. Barnard Holt, in February, 1867. He had been hoarse for nine months, and for the past six months his voice had been so feeble as seriously to interfere with the discharge of his professional duties, and he had been quite unable to go into society. On laryngoscopic examination I immediately saw a wart about the size of a pea, but of a somewhat conical form, on the right vocal cord, near its anterior extremity. During inspiration the wart fell below the glottis, but during vocalisation it was driven by the expiratory current between the cords, so as to keep them apart, and thus to render the voice very feeble and husky. He had a troublesome cough, which apparently was mainly caused by a very long and congested uvula. I advised him to have the end of the uvula cut off; this was done by Mr. Holt, and was attended with the double advantage of relieving his cough, and greatly facilitating the laryngoscopic examination.

After various attempts to catch the wart, I succeeded, about the middle of March, in pulling off three small granules from its apex, Mr. French, of Great Marlborough Street, being present on the occasion. A few days afterwards I found that the wart had shrunk more than could be accounted for by the small pieces I had pulled off; and the voice was decidedly stronger.

On three successive occasions, at intervals of three or four days, I made an unsuccessful attempt to catch the wart; on each occasion I touched it with a brush dipped in a solution of nitrate of silver, $\mathfrak{Dj}$ to $\mathfrak{3j}$, and on each occasion it was evident that the wart was dwindling away, until on the 11th April I found it had entirely disappeared, leaving only a very slight smooth thickening of the cord where the wart had been attached. He now said that his voice was nearly as strong and as clear as it had ever been. One of the

greatest inconveniences experienced when the wart was present was that, in consequence of the windage caused by the partially open state of the glottis in speaking, the air escaped so rapidly from the chest that he was out of breath before he could finish a sentence. This source of distress has now entirely passed away, and he can read and speak with comfort. More recently he tells me that he has taken the chair at a club dinner, involving much after-dinner speaking; and that he has made a speech at a public dinner entirely to his satisfaction.

I have heard lately that his voice continues strong and clear.

[Mr. White, the subject of this case, attended the meeting of the Society when this paper was read, and, addressing the Society in a clear voice, gave an account of his malady and his recovery.]

CASE 6.—W. A—, æt. 8, was an out-patient of King's College Hospital, when I was asked to examine him to ascertain the cause of hoarseness which had existed from his infancy. After several unsuccessful attempts to get a view of his larynx, attempts which were rendered very difficult by the small size and the irritability of his throat, I at length saw plainly a warty growth attached to the anterior extremity of the right vocal cord. The growth was of a somewhat elongated shape, and occupied about one third of the opening of the glottis. His father stated that, when a baby, the child could not cry like other children, and that his breathing was difficult, and attended with noise. He was told that these symptoms would pass away as the child grew. At three years of age he was worse, his breathing being more noisy and difficult, and he was admitted into an hospital where tracheotomy was contemplated but not performed. After a time he left the hospital, apparently somewhat improved. After a few weeks he again became worse, and was taken to another hospital where a blister was applied to the neck, the child crying the whole time that it

was on. The blister was kept open for three weeks by an irritating ointment. Then he had strong emetics, iodine was applied to the neck, and he took "pailsful of cod-liver oil."

Another surgeon who saw him, finding that his tonsils were large, had them cut. Meanwhile, as he grew older, his breathing had become less noisy and difficult, but the voice remained a mere whisper.

In May, 1867, I removed nearly the whole of the growth, and his voice has since been greatly improved. A portion of the growth, however, still remains, and this gives his voice a somewhat reedy character. I hope ere long to complete the cure of this case, but there are several impediments in the way. The remaining portion of the growth is so small that it can with difficulty be caught by the wire, and it will probably have to be destroyed by caustic. Then the boy lives at a distance, and his voice has been so much improved, that he and his father are somewhat indifferent as to any further treatment. His father writing to me lately says, "I am glad to say his voice is much better and stronger, and should it get no stronger, I don't think it would be any denial to him in getting his living."

CASE 7.—A gentleman, æt. 48, came to me on the 8th October, 1867, and requested me to examine his larynx before he told me his history. I found that he had a wart about the size of a pea, and of a red colour, on the right vocal cord at the junction of the anterior and middle third of the cord. The wart projected against the opposite cord when he vocalised, so that there was considerable windage, and his voice was husky. He then told me that he had had an uncomfortable feeling in his throat on and off for twenty years, but his voice had been clear and strong until May, 1866, when, as he said, "while he was uttering a loud 'No' in the House of Commons his voice suddenly cracked." A little blood came into his mouth; for several days he was very hoarse, and since that time his voice has been constantly more or less feeble and husky. In May, 1862,

Dr. Bence Jones had taken him to Professor Czermak, who was then staying in London. Czermak discovered what he called a "small polypus," and made a sketch, which the patient showed me, representing the growth in the same situation and of nearly the same size as I now saw it. An interesting question now arose, namely, why a growth upon the vocal cord which had existed for years had rendered him hoarse only since the so-called "cracking" of the voice in the House of Commons eighteen months ago? The most probable explanation appears to be this: up to that time the growth was so placed that when the glottis closed in vocalising the wart was *below* the opposed surfaces, and so the voice was unaffected, but while he was uttering the loud "No" on the occasion in question, the strong expiratory current of air drove the wart upwards between the cords, thus making a sudden gap in the glottis, and instantly changing the sound of his voice. At the same time the growth was stretched and partially torn, as shown by the appearance of blood in the mouth, and henceforth it was so elongated and moveable, that during vocalisation it was always interposed between the cords. The voice, therefore, from that time had been more or less thick and feeble.

This gentleman had been examined, shortly before I saw him, by another laryngoscopist, but no attempt had been made to remove the growth. I told him that sooner or later, I could not say how soon, the tumour might probably be removed by the wire instrument, and he agreed that I should make the attempt. On the 11th October I made several unsuccessful attempts, but as his throat was large, and he was very steady, I felt that sooner or later I should succeed. On the 12th October, I twice caught the growth and pulled off two small pieces. On the 13th, I removed a large piece, which I at first believed to be the entire growth, but I afterwards found that a rounded nodule was left. I made no further attempt until the 4th November, when I caught the wart twice, and each time a piece came away in the wire. Still there was a nodule left about the size of a No. 4 shot. Again the patient went into the country, and I had no

opportunity to repeat the operation until the 1st January, 1868. On that day I made an unsuccessful attempt to catch the wart; but on the following day, after three or four misses, I caught the growth at its junction with the cord, and removed it entire, leaving upon the cord only a slightly uneven surface where the tumour had been attached. Immediately the strength and clearness of his voice were increased. On the 6th January he called to report himself all right. His voice was loud, clear, and ringing. No trace of the growth was to be seen. The portion of the cord from which the growth had been detached appeared somewhat bulging, but its surface was quite smooth.

I had a note from this gentleman, dated March 20th, 1868, in which he says "I am happy to say that my voice is all that I could wish. You may put me down as a perfect cure."

It will be seen then that, in four cases out of the seven, the cure has been complete, and the voice has been restored to its original strength and clearness. In two other cases the restoration of voice has been nearly complete, while in one case, although the morbid growth has been almost entirely removed, there is still considerable feebleness and huskiness of voice in consequence, mainly, of a general roughness of the vocal cords, which prevents their close apposition.

In all the seven cases the morbid growth sprung from the true vocal cord on the *right* side.

In five cases out of the seven, the morbid growths have been preserved and may be inspected by the Society. In case 2, only a portion of the membranous wall of the cyst has been preserved as a microscopic specimen. In case 5, the small portion of the warty growth which was removed by the wire was accidentally destroyed after its removal; the remainder of the growth was destroyed *in situ* by the application of caustic.

On microscopic examination, all the warty growths appear to consist almost entirely of modified epithelial cells.

The drawings were made for me by Dr. Westmacott, from rough sketches by myself. (See Plate III.)

REFERENCE TO PLATE III.

- Fig. 1.—Case I, J. W—.
- „ 2.—Case II, Mr. F—.
- „ 3.—Case III, Mr. J. G. C—.
- Fig. 4.—Case IV, Mr. J. L—.
- „ 5.—Case V, Mr. J. W—.
- „ 6.—Case VI, W. A—.
- Fig. 7.—Case VII, “ A gentleman.”