SOCIETIES' PROCEEDINGS

ROYAL SOCIETY OF MEDICINE—SECTION OF LARYNGOLOGY

November 4th, 1921.

President—Sir WILLIAM MILLIGAN, M.D.

Microscopic Specimens from Three Cases of Bleeding Polypus (Discrete Angeioma) of the Nasal Mucous Membrane —THOMAS GUTHRIE, F.R.C.S.—Woman, aged 32. Obstruction of left nostril, one year and eight months; frequent profuse bleeding during last twelve months. The growth the size of a small bean was attached by a narrow pedicle to the mucosa of the outer wall near its junction with the skin of the vestibule. Growth removed and base cauterised; no recurrence.

Woman, aged 45. Obstruction of left nostril and frequent bleeding for nine months; growth the size of a large pea attached by a narrow pedicle to the anterior end of the left inferior turbinal; removed and base cauterised; no recurrence three months later.

Woman, aged 30. Repeated attacks of bleeding from right nostril during past eight or ten months: growth the size of a large bean attached by a narrow pedicle on the septal side of the right middle turbinal. Hanging down between the middle turbinal and the septum, it reached the upper border of the inferior turbinal. It was bright red in colour and had a slightly irregular and granular surface. It bled freely when touched.

Microscopically each growth resembled one or other of the varieties of "bleeding polypus of the septum." Clinically, also, the cases were characteristic of this condition, with the exception of the points of origin of the growths.

The PRESIDENT thought the third case was most suspicious of sarcoma.

Mr F. A. ROSE was doubtful of the third specimen, which arose from the middle turbinate, and he advocated further investigation.

Mr GUTHRIE replied that the third specimen was of the cavernous angeioma type and it had enormous blood spaces. He did not cauterise its base, and a month later he removed a recurring growth which he cauterised. The middle turbinal was not infiltrated.

Laryngo-fissure for Early Epithelioma of the Right Vocal Cord—E. D. D. DAVIS, F.R.C.S.—Male, aged 46, was shown to the Section on 6th May 1921. Both vocal cords were then red and injected, but there was a small pachydermatous excrescence on the superior surface and edge of the right vocal cord. A piece removed for section was insufficient for diagnosis. Epithelioma was then strongly suspected, but doubted by some observers. Six weeks later

https://doi.org/10.1017/S0022215100023021 Published online by Cambridge University Press

the condition of the cord had slightly progressed, so a laryngo-fissure was performed, and the right vocal cord was excised. The bulk of the growth was below the vocal cord and was not visible by laryngoscopy. The thyroid ala was not removed.

Epithelioma of the Left Vocal Cord removed by Thyrotomy nearly a Year ago—Sir JAMES DUNDAS-GRANT, M.D.—Female, aged 52, seen in September 1920, with hoarseness of two years' duration, and with some increasing respiratory difficulty. There was a white "cauliflower" growth on the posterior half of the left vocal cord, which was almost immobile. A portion removed for examination was reported on as epithelioma.

Thyrotomy on 11th November 1920: convalescence was disturbed by a severe attack of bronchitis; she made a slow recovery. She was not seen again until 5th July 1921, when the tracheotomy tube was removed.

There is considerable inflammatory swelling of the left half of the larynx, though this has recently subsided to a considerable extent. There is an irregular thickening of the right vocal cord, the nature of which is doubtful.

Two Specimens of Advanced Intrinsic Epithelioma of Larynx obtained by Complete Laryngectomy—E. D. D. DAVIS, F.R.C.S.—1. From male, aged 64, with urgent dyspnœa. The larynx showed an advanced epithelioma of the left vocal cord, necessitating tracheotomy. Later, complete laryngectomy was performed; the patient made an uninterrupted recovery and is present at the Meeting.

2. From a similar case, but the patient died of mediastinitis three days after the laryngectomy. The sepsis is believed to have arisen from the tracheotomy wound made sixteen days before operation. Tracheotomy added to the difficulty in both operations.

The PRESIDENT said that in Mr Davis's case of laryngo-fissure the sentence "the thyroid ala was not removed" was very important. It raised the question whether, in such cases, the ala should be removed or left alone. In connection with the two specimens of advanced intrinsic epithelioma of larynx, complete laryngectomy was performed for disease confined to the left vocal cord. With regard to sepsis having arisen from the tracheotomy performed sixteen days prior to operation, he asked if the trachea was stitched to the skin of the neck, or simply a tracheotomy tube inserted? Concerning Sir James Dundas-Grant's case of epithelioma of the left vocal cord, the question was, what was the condition of the right cord? Was it also malignant? He had a male patient whose left vocal cord he removed six years ago, and who had remained well until a few months ago, when the right cord presented a white, tessellated, pachydermatous appearance, with a little œdema, almost identical with that seen in this case, and it was difficult to decide whether it was early malignancy or pachydermia; also as to whether it was advisable to remove the second cord. If malignant, he would have some diffidence in removing it from a man aged 70, as in many cases the disease advanced very slowly.

Dr W. HILL commented on the extreme rarity of primary endo-laryngeal epithelioma in females; he had never seen a case in his own practice.

https://doi.org/10.1017/S0022215100023021 Published online by Cambridge University Press

Sir ST CLAIR THOMSON said that when a good projecting portion of growth could not be removed for microscopic examination, it was better to wait and watch the case, forming the diagnosis on the clinical development. The difficulty of viewing the subglottic area by the indirect method would not have been got rid of by the direct method, and he considered a better view was obtained by the former method—by working the mirror sideways. He regretted he had not commenced to remove the thyroid ala earlier in his career. He first did so in 1907, because it was involved by the disease. He commenced to remove it systematically in 1917, and in the subsequent five years he had done so in fifteen cases. Fourteen of these were still alive and free from recurrence. He recommended removal of the ala because it gave more space for the removal of the growth, and it was easier to deal with subglottic extension. It also left a fleshy inner surface to the larynx, and hence quicker healing. He had operated upon patients of 70 and 75, and they were well five years afterwards. He thought there was a little stenosis in Sir James Dundas-Grant's case which might have been avoided if the ala had been removed.

Mr F. A. ROSE said he had removed the thyroid ala ever since Dr Lack recommended it, and he saw no disadvantage in doing so. His experience had been favourable. Generally speaking he was opposed to removing a piece of growth for diagnosis.

Dr W. S. SYME disagreed with Sir St Clair Thomson's faint praise of the direct method: he used it extensively and in most cases found it gave a better view than the indirect. In such a case as that now being discussed, he did not doubt that suspension laryngoscopy would give a complete view even of the anterior part of the subglottic portion. He did not like to hear the removal of a piece for examination condemned. Twice he had opened the larynx for what was regarded as malignant growth, but which proved to be tubercular.

Dr JOBSON HORNE agreed with Mr Rose as to the unreliability of diagnosis by endo-laryngeal removal of a piece of growth. Laryngoscopic examination should be cultivated, in association with other clinical evidence.

Mr WRIGHT said that two years ago he saw a man, aged 60, with a pedunculated growth on his right vocal cord. It looked innocent and he removed it endo-laryngeally, and it was microscopically reported to be a fibroma. Recently a larger pedunculated growth had recurred, and he favoured removal by thyro-fissure, but after consultation with colleagues he again removed it endo-laryngeally, and it proved to be an epithelioma.

Dr IRWIN MOORE referred to the advantage of being able to examine the under surface of the vocal cords in cases of malignant growth, and he said he would show at a later meeting an endo-laryngeal mirror which he had designed on the principle of Michels' post-nasal mirror. It could be passed down an endoscopic tube and the subglottic area viewed.

Mr TILLEY, referring to the treatment of recurrence, advised the new X-ray treatment as advocated by Dr Morton, directed in equal amounts on all parts of the growth. Dr Morton applied the rays to a patient with extensive malignant growth of the larynx which had recurred, when it was a question whether a complete laryngectomy or a palliative tracheotomy should be done. Three months after the X-ray treatment the man appeared without any laryngeal trouble. He recently subjected another patient, aged 71, with a growth below the anterior commissure, to the same treatment. The growth was becoming smaller and the voice much clearer.

Mr E. D. D. DAVIS (in reply) said that in his case of laryngo-fissure the thyroid ala was not removed because there was no apparent necessity to remove it. The advisability of removing pieces of growth for section should be decided in each individual case, and if sufficient tissue could be obtained, this should be done in doubtful cases. In both laryngectomy cases the trachea was very adherent to surrounding structures in the region

https://doi.org/10.1017/S0022215100023021 Published online by Cambridge University Press

of the tracheotomy wounds, and considerable difficulty was experienced in separating the trachea from the œsophagus. He divided the trachea through the lower edge of the tracheotomy opening, and sloped the incision upwards and backwards. The trachea was then firmly sutured to the skin. In the second case the tracheotomy wound was not quite healed, and he thought this source of sepsis accounted for the subsequent mediastinitis. Dr Morton had treated for him by X-rays a case of recurrence after laryngo-fissure without success.

Sir JAMES DUNDAS-GRANT (in reply) said that he would have liked more opinions as to the condition of the remaining cord in his case; the disease had not extended. In answer to Dr Hill, only three of his laryngo-fissure cases had been females, and all recovered.

Model showing the Mode in which the Sacculus Ventricularis Laryngis might be inverted by the Negative Pressure caused by Coughing—S. G. SHATTOCK, F.R.C.S.—Laryngologists must recognise, with anatomists, a laryngeal ventricle and a sacculus. The sacculus has a well-defined oval mouth limited to the external part of the roof of the ventricle; it is distinguished again by the layer of mucous glands in connection with its interior. The researches of Dr Irwin Moore show that there are but three *authenticated* examples of eversion of the sacculus. In Uckermann's case the everted structure, which projected between the ventricular band and vocal cord, was cut away during life, and the abundance of glands with which it was furnished proved that it could have been nothing other than the sacculus. Sir Morell Mackenzie's case is in the Museum at Golden Square, Moxon's is in Guy's Hospital. Mackenzie had cut a window in the thyroid ala on the side on which the eversion was more pronounced (for it was bilateral), and demonstrated the absence of a sacculus from the normal position. Through the courtesy of Mr Davies-Colley, Dr Irwin Moore and I were able to make a further examination of Moxon's specimen. On cutting a window in the thyroid ala no sacculus was found in the proper situation, and the projecting structure in the larynx could be readily returned into position by means of a probe. These two cases have, for the most part, been either ignored or discredited by Continental and American authors, or explained away as examples of the more common condition named "prolapse of the ventricle," which apparently consists of a protrusion of the floor of the ventricle into the air-way, as a result of inflammatory œdema or chronic thickening; and it is to the credit of Dr Irwin Moore that he is reinstating Mackenzie's and Moxon's observations to their right position in laryngological literature.

It is not easy to see, at first, how eversion can be brought about. The view which I venture to submit is that it results from the *negative pressure* set up by violent coughing. The effective closure of the glottis which precedes coughing, takes place at the site of the true cords: any approximation of the ventricular bands can be only a concomitant, seeing that the latter are unprovided with muscle. When

https://doi.org/10.1017/S0022215100023021 Published online by Cambridge University Press

the glottis is suddenly opened in coughing, the blast of liberated air rushes past the ventricle and orifice of the sacculus; and, if often repeated, the negative pressure so induced may lead first to some degree of loosening of the attachments of the sacculus, and then to its complete eversion. There may be another factor. The need of occasionally "clearing the throat," whilst speaking, is probably due to the descent of mucus from the sacculus and its engagement in the glottis, which impairs the proper vibration of the cords; a slight respiratory effort dislodges the secretion and restores the voice. The act of forcible coughing might thus, should an unusual amount of stringy mucus project from the sacculus, be followed by a drag which would tend to empty the latter and loosen its connections.

The little model which I exhibit is constructed of a length of rubber tubing of the size of the trachea; near the top an oval slit has been cut horizontally into its side, and over this is fixed a short piece of the blind end of a thin rubber finger-cot. Each time the tube is blown through, the cot collapses, being drawn inwards by the *negative* pressure so produced. If the distal end of the tube is closed, so as to make the pressure *positive*, the cot is distended so as to rupture, or is blown away from the oval rim over which it is fixed.

The following note upon the closure of the glottis has been kindly furnished to me by my colleague, Mr W. G. Howarth:—"If the larynx is examined by the direct method, it will be seen that when coughing or any other spasm occurs, the ventricular bands close over the true cords so as to conceal the latter from view. If, however, the bands are pressed upon with a probe, they can be readily displaced; the vocal cords are then disclosed in firm apposition."

Dr JOBSON HORNE said when laryngologists referred to the ventricle they included the saccule, "the greater includes the less," and by "prolapse of the ventricle" they obviously meant prolapse of the sacculus. It was common knowledge that the ventricle could not prolapse. A section through the larynx showed that the walls of the ventricle were so tightly attached that their prolapse or eversion was physically impossible. It was only the saccule which prolapsed.

Sir JAMES DUNDAS-GRANT believed that the ventricular bands did come together, and he had observed this in an elderly woman told to "bear down" when the larynx was examined. Dr Smurthwaite also had observed this in "vicarious" action of the ventricular bands in soldiers who had nerve troubles, and apparent inaction of the adductors of the vocal cords. He suggested certain muscular fibres which came into action to bring this about, probably in the thyro-ary-epiglottic muscles.

PROFESSOR SHATTOCK (in reply) said the distinction between the ventricle and the sacculus was one recognised by anatomists. On the argument that the ventricle included the sacculus, as the greater included the less, the vermiform appendix might find itself without a name, since it could be viewed as part of the cæcum. To Sir James Dundas-Grant he replied that the approximation of the ventricular bands so hid the parts beneath that nothing could be inferred as to the rôle the cords played in the closure of the glottis.

https://doi.org/10.1017/S0022215100023021 Published online by Cambridge University Press

Section of Laryngology

Accessory Thyroid growing in the Œsophageal Lumen—H. LAWSON WHALE, F.R.C.S.—Female, aged 58, seen September 1921, with history of an impacted fish-bone in the gullet. Examination with Brüning's tube revealed no bone, but a swelling on the dorsal aspect of the lumen, at the level of the second dorsal intervertebral disc. The excrescence was moriform, attached by a broad pedicle, roughly spherical, and the size of a small cherry. It was easily removed.

Dr Sanguinetti pronounced the tissue to be purely thyroid. Professor Shattock confirms this, and remarks that "although such aberrant formations have been encountered higher up in the pharynx, their occurrence in the œsophagus does not appear to have been as yet recorded."

Paralysis of the Left Recurrent Laryngeal Nerve due to Pressure of Mediastinal Glands—Sir JAMES DUNDAS-GRANT.—Female, aged 49, first seen 20th September, with hoarseness of two years' duration following influenza. The left vocal cord found fixed in the cadaveric position; no tracheal tugging. X-rays showed old fibrosis of both apices, many mediastinal glands, but no evidence of thoracic aneurysm.

The PRESIDENT showed an illustration of a similar condition, in which paralysis of the left recurrent nerve was due to the pressure of mediastinal glands.

Former Paralysis of Left Recurrent Nerve; Tracheal Tugging; Suspected Aneurysm—Sir JAMES DUNDAS-GRANT.—Male, aged 43; X-rays in October, 1919, showed "general enlargement of aortic shadow; some encroachment into the posterior mediastinum either from a general dilatation or aneurysm involving whole of thoracic arch." Wassermann positive.

On 11th January 1921 the left vocal cord was in the cadaveric position. On 1st October the vocal cords moved normally: some amount of tracheal tugging. Patient has been continuously taking iodide of potassium.

Dr W. HILL said there could be no doubt about the aneurysm, which was of considerable size.

Dr DAN M'KENZIE referred to a similar case in which the vocal cord paralysis cleared up and the shadow of the enlarged mediastinal glands disappeared after antisyphilitic treatment.

Dr P. WATSON-WILLIAMS pointed out the possibility of temporary paralysis in aneurysm. He referred to a patient who had sometimes complete paralysis when he took exercise, but when resting only abductor paralysis.

Sir JAMES DUNDAS-GRANT (in reply) remarked that the temporary paralysis might be due to a peri-neuritis, or to an inflammatory condition, not merely from pressure of the aneurysm. Discussions on paralysis of the vocal cord in mitral stenosis in a number of cases suggested a peri-neuritis of the nerve. He would report on the case later.

https://doi.org/10.1017/S0022215100023021 Published online by Cambridge University Press