Laryngectomy : exhibited May 25, 1892.

Contributors

Solis-Cohen, Jacob da Silva, 1838-1927.
Royal College of Surgeons of England

Publication/Creation

Philadelphia : Philadelphia County Medical Society, [1892]

Persistent URL

https://wellcomecollection.org/works/wxrgdfrr

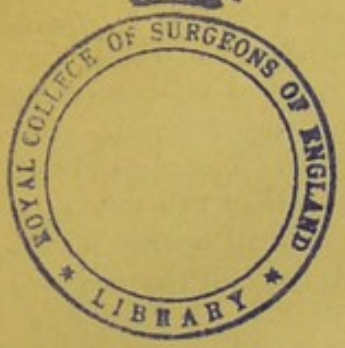
Provider

Royal College of Surgeons

License and attribution

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

[Reprinted from the Transactions of the Philadelphia County Medical Society.]



LARYNGECTOMY.

[Exhibited May 25, 1892.]

DR. J. SOLIS-COHEN exhibited a patient from whom the larynx and upper ring of the trachea had been removed for malignant growth projecting externally, and made the following remarks:

Nineteen years ago this patient, a teamster, then twenty-five years of age, found that he was having some hoarseness of voice, which soon became associated with dyspnœa. This dyspnœa increased in the course of three years to such an extent that he was hardly able to breathe. He then came under the care of Dr. Lefferts, of New York, who found a large papilloma in the larynx, which growth he removed piecemeal by intra-laryngeal procedures. Dr. Lefferts reported the case in 1876, in the *New York Medical Record*, and I pass around a copy of that journal showing a picture of the growth at that time. For ten years the man remained in continuous comfort. Then recurrence of his former troubles ensued, and he had more or less difficulty for several years, and underwent various treatments. About a year or so ago he began to be much worse, and in January, he applied for relief at the dispensary of the Jefferson Medical College. At that time he was suffering with great dyspnœa, a good deal of pain, cough, difficulty of expectoration, and difficulty in swallowing. The picture of his larynx was almost exactly a reproduction of the picture that I have passed around, and which was taken in 1876—that is, sixteen years ago, with this exception; that the growth, which occupied a large portion of the left side of the larynx, almost occluding it, was white instead of red, and had not that characteristic papillomatous appearance. The growth had penetrated the larynx exteriorly and projected externally in a mass larger than an almond.

The history of this case led me to believe it to be a redevelopment of papilloma *in situ*, and not a recurrence. The dyspnœa was very great, and I made an appointment to perform tracheotomy promptly; but being suddenly attacked with influenza, Dr. W. S. Forbes performed the operation for me at his own clinic, and inserted a tube. This precautionary tracheotomy was performed because I did not consider it safe to attempt a removal of the growth with forceps until we had provided a safety-valve below by means of the tube. Three or four weeks later I attempted to remove the growth by intra-laryngeal procedures. It was easy to catch hold of it with large forceps, and I removed a very curious-looking structure more than an inch in length and one-third of an inch in width, which looked much like a piece of codfish-skin. After examining it I came to the conclusion that the forceps had grasped the tumor, but, unable to remove it, had peeled off the thickened epithelium.

This was given to a microscopist to examine, and was subsequently reported to be a sarcoma. Finding that we could not remove the growth with forceps, we took the patient before the class where, with the assistance of Dr. Forbes, I excised the external growth and then split the larynx and removed every portion of the internal growth, afterward scraping the parts thoroughly. The masses removed were subsequently reported to be sarcoma. The case did well for four weeks, when recurrence took place, and in less than two weeks the growth became almost as large as at the time of the original operation. It grew more and more rapidly, and again protruded through the necrosed thyroid cartilages.

After explaining to the patient the dangers connected with a radical procedure for extirpation, and after consultation with the surgical members of the Faculty, I decided to excise the larynx. This operation was performed on Friday, April 1st, with the assistance of Dr. W. W. Keen, and of Dr. O. Horwitz, chief of the surgical clinic.

The day before the operation I had the opportunity, through the courtesy of Dr. Forbes, to perform the operation on an uninjected subject. Dr. Forbes at that time made a suggestion which was carried out in the operation, and the excellent result of which you will see presently. This suggestion was, that after the larynx was removed the anterior portion of the trachea should be split longitudinally for two or three rings, and that the lips so formed should be stitched to the skin anteriorly, so as to present forward and keep the trachea in a favorable position.

There was a good deal of difficulty in the operation owing to the cicatricial tissues and other changes of structure and relations of parts which had resulted from the previous operations. I was, therefore, unable to tie the laryngeal arteries before the extirpation, as I had proposed to do, but Drs. Keen and Horwitz looked after the bleeding while I went ahead with the excision. The incision was made everywhere through healthy structure. The diseased skin and enclosed morbid mass were circumscribed by elliptical incisions in sound skin joining a vertical incision from the hyoid bone above and region of the tracheal canula below; and then a transverse incision was made at the level of the hyoid bone so as to make a T-shaped incision and two lateral flaps. The incision was carried down to the periosteum, and the soft parts were then separated with Allis's dry dissector, which answered admirably. During this time anæsthesia was carried on by chloroform through the tube by means of a funnel and an India-rubber tube. When the larynx had been separated from the soft tissues, and I could get my fingers around it, I removed the ordinary canula and inserted a tampon canula, to prevent, as much as possible, any entrance of blood into the air-passages. For this purpose I used the von Trendelenburg canula but not the Trendelenburg system. Trendelenburg uses a rubber bag inflated with air. Air- or water-bags are very often opened by puncture during the operation. An hour or two before the operation I moistened a piece of ordinary surgical sponge and secured it around the canula, and over this tied a bulbous India-rubber tube. I have here the canula undisturbed; and although fifty-six days have elapsed since it was prepared, you see that the tampon is still perfect, and sufficiently pliable for immediate use.

The patient's head was lowered as soon as this canula was introduced, and anæsthesia was subsequently kept up through the tampon canula, which leaked

a little despite all efforts to prevent it. The epiglottis being healthy, I made an incision through the hyo-epiglottic membrane and cut the epiglottis square off. The larynx was then tilted forward. Knowing that there has been difficulty in nourishing patients after this operation, I determined to save the entire œsophagus, if possible, instead of severing it at the level of the cricoid cartilage, and by careful manipulation I was able to strip the œsophagus and the mucous membrane from the tips of the arytenoid cartilages and larynx down to the base of the first ring of the trachea without perforating it.

The larynx, with the first ring of the trachea attached to it, was then severed from the trachea, and the trachea was stitched to the skin in two flaps formed by the sides of the original tracheotomy incision, which had embraced the second and third rings. The soft parts were then brought loosely together with sutures, without any dressing in the pharynx; and a small, soft rubber stomach-tube was inserted into the stomach through an opening left in the upper portion of the dressing. This was inserted, thinking that there might be a necessity to use it for introducing nourishment; but it was found unnecessary, and it did some harm. An hour had been occupied in the whole procedure—anæsthetization, operation, and dressing. The patient was then put to bed. He was carefully watched. I stayed with him for sixteen hours; and during that time I instructed a number of young men connected with the throat and surgical clinics of the hospital how to take charge of the case. Two members of these staffs were with him constantly for eighty hours. Twice during that time the man would have died had not skilled hands been present to remove mucus from the tracheal tube. It is to the close attention of these young men for the first eighty hours, and to the admirable service of our chief surgical resident, Dr. Hager, that this man chiefly owes his life, for the attention after such an operation is far more important in a clinical point of view than the operation itself, all-important as it is. There was a good deal of oozing alongside of the œsophageal tube. On the third night this tube became detached and we did not re-introduce it. Enemata were used for four or five days, and then we gradually began to give food by the mouth. At each attempt at swallowing, a piece of gauze was applied above the tracheal wound and the parts were pressed close together while the patient swallowed. There was a little trickling for a few days, but this ceased. It was interesting to watch the œsophagus during swallowing, before the external wound contracted. It was easy to see that the œsophagus opened when the man took water. There has been some doubt whether there is a mechanical distention of the mouth of the œsophagus in glutition, or whether there is some such action of the œsophagus itself. In this case it certainly did open to receive the water. The man has made an uninterrupted recovery. There has been no attempt made to use a voice-tube, and for two reasons. In the first place, I know of no one in this city competent to make one, and in the second place, I do not wish to put anything into the wound that would irritate it until there remains no doubt in regard to the question of recurrence.

You will notice in examining this patient that there is now no connection between the trachea and the nose. I wish here to call attention to an important physiological point. Of late years a number of German surgeons—Aschenbach and others—and notably MacDonald, of London, and Bosworth, of New York, have been making experiments in reference to the physiology of nasal

respiration by the use of tubes, etc. They assert that the air of respiration becomes fully saturated with moisture in the nose, and that consequently, being saturated when it enters the lung, it can receive no moisture from the lung. Therefore, they say, physiologists are wrong in stating that moisture is exhaled from the lung. In this case there is no connection whatever between nose and lung; and if you take a mirror and hold it over the tracheal opening you will see that it becomes covered with moisture. In this case the lungs do exhale moisture. Of course, here the conditions are different from the normal. I only wish to call attention to this point, as it seems to show that the older physiologists were right. There is still a small fistula above, which I think will close without difficulty, but it has no connection whatever with the trachea.

From the history of this case, I took it for granted at first that it was a papilloma recurring upon the seat of a former growth; but when a portion of it was examined by a microscopist it was pronounced sarcoma.

After extirpation of the larynx the growth was pronounced to be a cylindrical epithelioma, or a destructive adenoma or adeno-carcinoma invading the arytenoid and thyroid cartilages as well as the soft parts. You see it here in the specimen, nearly filling the cavity of the larynx, proceeding from the left side mainly but extending slightly to the right side and penetrating necrotic portions of both wings of the thyroid cartilage so as to present externally and involve the cutaneous surface likewise. Whatever it may be, there is no doubt of its malignancy.

The question whether benign growths are ever transformed into malignant ones, is important. It is the generally received opinion that benign growths are sometimes, by further irritation, converted into malignant tumors. A collective investigation into the subject by Semon, of London, has shown the fallacy of this opinion so far as it refers to laryngeal neoplasms. Certainly there was in this case no conversion of a papilloma into a malignant growth. The malignant growth became developed many years later upon the site from which a benign growth had been removed.

There is one clinical point that has been a revelation to me; and that is the freedom from pain, freedom from cough, and freedom from dysphagia. Should there be no recurrence in this case we have every reason to be satisfied with the result. Should recurrence ensue, the patient will have been relieved from suffering for some time.

A number of years ago, when I investigated this subject, I was opposed to the operation in the main, as I am still. This is an exceptional case; and it is only in exceptional cases that laryngectomy should be performed. At that time Dr. Czerny, of Heidelberg, wrote to me that if I could only see some of his patients and witness how free from pain they were, I would believe that the operation was a justifiable one. This case verifies his remark. The patient is now happy; whereas for many months before the operation he had been miserable.

The man is wearing a single rectangular-like tube with as little paraphernalia about it as possible.

DISCUSSION.

DR. RALPH W. SEISS: The only point to which I shall refer is in regard to what was said in reference to the conversion of a non-malignant into a malignant growth. I have seen at least two examples of papilloma transformed into malignant growths. One was an ordinary wart on the hand which was removed, and subsequently recurred and developed into a typical squamous epithelioma, demanding amputation of the forearm. A second case was one of papillomatous growth about the external auditory meatus, which, under irritating and prolonged treatment, became converted into a malignant epithelioma. In another case a small fibroma—so called—was, under irritation, transformed into a rapidly growing round-cell sarcoma. There have been a number of similar cases reported. I think that it is well known that these "heteroplastic foci" are particularly apt to become malignant under continued irritation.

DR. ERNEST LAPLACE: In regard to the explanation of the different findings made in different examinations of the same growth, I would say that different portions of the growth are sent to different microscopists. Although throughout the growth we have the same pathological cause, we do not have throughout the growth the same tissue. One portion may be cancerous epithelial tissue, while another portion may be cancerous fibrous tissue. We must accept the view that there is very little difference between round-celled sarcoma, rapidly proliferating, and epithelioma; as far as prognosis is concerned, only one is epithelial tissue and the other fibrous. Given such a growth, and granting that different portions are examined by different microscopists, it is not wonderful that there should be some apparent discordance in the report. It only proves that the growth was malignant from the first.