

EXCISION OF THE EPIGLOTTIS FOR LUPUS.

BY TALBOT R. CHAMBERS, M. D., JERSEY CITY, N. J.

Surgeon in charge Eye, Ear, Nose and Throat Depts. City and Christ Hospitals,
Jersey City, N. J.

The case here reported has four points of interest—the operation, the anesthetic, the diagnosis and its comparative rarity.

Lizzie Jansen, aet. 21, born in Sweden of good inheritance, a domestic, came to this country one year ago. On February 27th last she was sent to me by her mistress who, having small children in the family, feared to have Lizzie mingle with them, in case she might have tuberculosis. Her only symptoms were an infrequent cough and peculiar hoarse voice. Otherwise she was well and hearty. There was no history of syphilis, malaria nor rheumatism, except for some pains in shins, worse at night, and an amenorrhœa of four months' duration. Her loss of voice had a duration also of only four months. Any connection between the two does not appear.

Examination showed the rima glottidis partially obstructed by a bi-lobular tumor of the epiglottis, about the size of half an almond, which almost prevented vision of the cords. There were three punched-out holes on the lingual surface of the tumor. There was some swelling of the arytenoids and no involvement of the cervical glands. The chest was negative.

March 17th—No tubercle bacilli were found in the sputum nor in a section excised for the purpose of examination. The report was that this was of an endothelial type.

The treatment from February 27 to May 1 was the mixed treatment—Hydrarg. Bichlorid. 0.04 and Kali Iodide .30 t. i. d. During the last six weeks she took in addition 3.00 of Kali Iodide t. i. d. There being no appreciable change in the tumor, she was exposed to the X rays three times weekly for three weeks, still without any change in the tumor or symptoms.

June 6th.—Her condition, while not serious, was threatening, and she was very uncomfortable with a feeling of anxiety lest breathing might be suddenly stopped, and she welcomed operation for removal of the laryngeal obstruction.

She was anesthetized and the epiglottis with its tumor was excised. She was then put to bed. She had no disagreeable after effects. Precautions were taken, and for two days she was fed very care-

fully, but had not a single cough nor choking spell when swallowing food. One explanation of this seemed to be that she had, with the imperfectly closed rima, already learned how to swallow under the altered conditions. Today she is well nourished, strong and happy. The return of the tumor has become positive and she recognizes that her breathing is not as free as immediately after the operation. She has an occasional cough and low, hissing voice. It is to be noted that the menstrual flow has been reestablished after an absence of one year.

Operation.—It was decided not to do tracheotomy unless absolutely necessary, and it was found unnecessary, though we were prepared (and perhaps expectant) for it at any moment. We were afraid particularly of hemorrhage, but by swabbing the parts freely with Adrenalin from time to time, this danger was avoided.

With the kindly co-operation of Dr. Wolff Freudenthal, of New York, and of the hospital staff of Christ Hospital, the patient was anesthetized and several attempts were made to catch hold of the tumor, but these were all futile, though several of the most improved instruments were employed; some had teeth or sharp indentations. All failed. A so-called Brandigee adenoid forceps, having three cutting edges, was then successfully employed. With the first finger of the left hand as a guide, the cutting jaws of the forceps were engaged about the tumor and epiglottis. The anterior jaw was pushed well down toward the neck of the epiglottis. With one closure of the handles the epiglottis and its tumor were severed and Adrenalin was swabbed into the wound. There was quite some bleeding, which, however, was soon controlled.

On June 18th, with the patient in the chair in my office, after Cocain and Adrenalin had been freely applied, a small lump of tumor, about 8 cubic mm. in size, was bitten off with the same forceps, from the right epiglottis-tonsillar membrane. This was easily done while the patient was awake and thus confirmed the wisdom of Dr. Freudenthal's assertion at the previous operation—that on another similar occasion he would prefer to have the patient awake.

The Anesthetic.—The anesthetic was chloroform vaporized by oxygen gas. This was done by Dr. E. W. Harlan in an experienced manner. A rubber tube from a cylinder of compressed oxygen was connected with the bottom of a four ounce bottle containing chloroform. This bottle was suspended from the doctor's gown at a point just over his sternum, where it could be under constant supervision. From the top of this bottle a rubber tubing five feet long, carried the mixed vapor of chloroform and oxygen to a mask held over the

face of the patient at the beginning of the anesthesia. When the patient was thoroughly relaxed, the cone was removed and anesthesia continued with only the end of the rubber tubing held by the anesthetist. The tip of the tubing was generally held an inch or two from the mouth or nose of the patient, and anesthesia was uninterrupted. In case of heart failure the tubing may be disconnected instantaneously and oxygen substituted for the chloroform mixture, to be as quickly changed back when necessary. Many anxious moments are spared the operator by this ingenious device and as it has been employed by me in prolonged operations with great comfort, I take this opportunity to present it to the Section.

This form of anesthesia was introduced into this country by Dr. H. L. Northrup,¹ He reported for an anesthetic commission on 100 cases. They found that anesthesia was produced by this oxygen-chloroform mixture in from one to ten minutes, with an average of four and seven-tenths minutes. They claimed that one of the most prominent and satisfactory points attending its use was a rosy and healthful blush of lips and cheeks, and a bright red oxygenated state of the blood flowing from the wound. There was nausea and vomiting in about 30 per cent. of the cases. They stated that the pulse is occasionally slowed but it is full and strong; respiration not being affected. All these claims have been confirmed in my experience. Dr. T. D. Buchanan,² of New York, who has acted as special anesthetist for Flower Hospital, and after an experience of 1,200 successful cases, says: Dr. Northrup's C. and O. mixture is the ideal anesthetic; and it is of interest to note that he holds that a contracted pupil is the sign of complete anesthesia.

Diagnosis.—The diagnosis of the section taken from the tumor while *in situ* was endothelioma. Hence the possibility of cure by the X rays. This means of cure and the thorough exhibition of iodide failing, operation was called for. A section sent to Dr. A. O. J. Kelly, of Philadelphia, he reported upon as follows: "The specimen is unquestionably an example of hyperplastic tuberculosis; it presents not the slightest resemblance to endothelioma. I am entirely uninfluenced in my opinion by the failure to detect tubercle bacilli on two occasion and by the negative results of the use of the X rays, which I regard as of no differential diagnostic value—in this case at least. The failure to detect tubercle bacilli may very well have been due to relative fewness of the bacilli or to technical deficiencies, such for instance as the use of inappropriate fixing and hardening procedures and the like. I venture the assertion, however, that had a portion of the tissue been used under appropriate con-

ditions for inoculation purposes, the animals inoculated would in all probability have developed tuberculosis."

Having two contradictory diagnoses, I sent the specimen to Dr. Jonathan Wright, with the two reports of endothelioma and of hyperplastic tuberculosis. His report is as follows: "Examination of the slide submitted to me by Dr. Chambers would lead me to suppose that the growth is made up of low grade deposits with considerable hyperplasia of the endothelium of the lymph spaces. The deposit of small round cells in the neighborhood of the blood vessels, the areas of degeneration and occasional giant cells would point to a syphilitic or a tubercular origin. In consideration of the clinical history and of the facts as stated by Dr. Chambers, that the Iodide therapy has been thoroughly tried unsuccessfully, it would appear to me that in all probability the case was one of lupus. The three diagnoses of lupus, endothelioma and syphilis are of course to be considered. The absence of the tubercle bacillus and the inefficacy of the Iodide treatment would tend to rule out syphilis. There is not sufficient evidence in my mind to warrant the diagnosis of endothelioma as I understand the term, while the microscopic findings are not at all inconsistent with the diagnosis of lupus. Primary lupus of the epiglottis, while of course very rare, is not by any means unknown by experience, and I should be inclined to think that the most probable of the three diagnoses."

Rarity.—A careful search of the Index Catalogue of the Surgeon General's library fails to find record of but one case of excision of the epiglottis *per orem*. That one was reported by Dr. Miles³ as done by Dr. Mackenzie, of London. He used an instrument, which, from its description, was very like the tonsillotome which goes by the same name, only it had a wooden handle fixed at about 60°. The cutting blade was pushed forward by the thumb and forced through a metal ring. The patient was operated upon in a sitting position and awake. The tongue was firmly held by the operator and cocain was liberally applied. After the operation the patient was able to swallow solids, but liquids passed into the larynx. After the third day the patient was able to swallow as well as before the operation. Nine months after the operation the patient complained of the cough as still troublesome, but was otherwise greatly improved.

Mr. R. Lake¹³ has just reported a second case, "where a man, 30 years old, whose throat had been exposed to a very thick cloud of nitrous vapor. Treatment for his dyspagia failing, his epiglottis was removed with the galvano snare. He reports the stump as

quite healed and healthy, but the arytenoid regions as slightly swollen."

A number of cases have been reported where a portion of the epiglottis has been excised *per orem*.

Dr. C. C. Rice,⁴ after trying and giving up galvano-cautery, reports two cases in which he cut off one-eighth from the sides of the epiglottis where they rested on the pharynx. The epiglottis was reached by using a tongue-depressor alone. One of the cases bled rather freely, but was checked by the application of Silver Nitrate, 60 gr. to the ounce. The inflammation following in both cases was moderate and subsided in two weeks.

Dr. Thos Hubbard⁵ relates a case where a woman 35 years old, was, when first seen by him, suffering with a low-pitched voice which was rather coarse, and spoke with some effort. Examination revealed almost entire loss of the epiglottis, probably through tubercular ulceration. There was only a small stump a centimetre in breadth and half a centimetre in length.

Dr. Angelesco⁶ reported a rare case of primary epithelioma of the epiglottis, which in its general clinical aspects resembled the case reported tonight. Tracheotomy was done and the epiglottis removed through an external wound. M. Cornil remarked on this case that tumors of the larynx are accompanied by ganglionic involvement of the neck very tardily or late, while the reverse holds good for tumors of the oesophagus.

Dr. Wm. Porter⁷ has this to say: 1. A diseased and ulcerated epiglottis is itself often times an obstacle to deglutition. 2. In certain affections of the epiglottis, especially of a malignant nature, its destruction is inevitable and involvement of surrounding structures certain, if the process is not previously limited. 3. Removal of the epiglottis does not necessarily directly nor indirectly threaten either the life or the comfort of the patient.

Dr. Czerny⁸ tied the superior thyroid artery and vein in a woman 61 years old, gave narcosis through a tracheotomy tube, made a cross-cut 8 to 9 cm. long under the hyoid bone and through the muscles, and removed a carcinoma of the epiglottis together with the right arytenoid. He cauterized the edges of the wound and stitched up the external wound. He left the tracheotomy tube in.

There are on record many cases of loss of the epiglottis by disease, where deglutition is readily carried on, but the voice has a hissing sound and is rough, coarse and indistinct.

As regards the tumor presented tonight, it was necessary to remove it. Was it better removed through an external wound? Would

it have been done more thoroughly? Would that method have guaranteed no return? By no means. The removal through the mouth, simple as it finally was, could be more expertly done with more experience, is admitted. It has the advantage of the minimum of cutting and has no external wound to be dressed. Once done, that is all—until the return of the disease, which is almost certain in any event.

The diversity of opinion of the new growth both before and after removal, by men of unquestioned ability is an interesting feature. The appearance of the tumor in the laryngeal mirror was one that with no lesions elsewhere, seemed to fall into the syphilitic group, especially with the punched-out holes to be seen on its surface, and its insensitiveness. Again, its insensitive and rounded shape and the normal surroundings would fit lipoma. Though the arytenoids were somewhat infiltrated, there was wanting symptoms usually classed as tuberculosis. Whether it be lupus or hyperplastic tuberculosis makes considerable difference. If the tumor is lupus, the patient has the probability of years of life. If it is tuberculosis, there is the greatest probability of infection by other germs at any time, speedily cutting short life within a few weeks or months.

Dr. M. J. Brooks^o has emphasized the fact so well known, that phthisis is tuberculosis plus mixed infection by staphylococcus pyogenus aureus, streptococcus pyogenus., Frankel's diplococcus, Pfeiffer's bacillus or the tetragenus.

Pure tuberculosis consists typically of closed foci, and the disintegration and degeneration of the tubercle with the consequent setting free of the tubercle bacilli is likewise only the result of mixed infection.

In the case presented tonight the infiltration is limited to the parts above the larynx. Thus far there has been no mixed infection and consequently no sputum. So long as there fails to be any disintegration of the tuberculosis, so long will the surface be intact and examination of the sputum, no matter how carefully made, fail to find tubercle bacilli.

If the patient could go to the high plateaus of New Mexico and be placed under the highest sanitary and hygienic manner of living she might recover health, be the disease tuberculosis. It is doubtful if lupus would so yield.

Primary tuberculosis of the epiglottis is generally admitted. The primary tuberculosis of the larynx which I have seen or read about, are without exception active and rapidly progressive to ulceration. This is one reason why lupus fits the diagnosis of the case presented

tonight better than tuberculosis. As to lupus, Dr. Emil Mayer¹⁰ was the first to make the statement that primary lupus of the larynx was a fact. His is the best history of laryngeal lupus and his article has an abundant bibliography. Langie, he quotes as saying: "If secondary lupus is rare, primary lupus of the larynx belongs to the rarest of diseases." Mayer says it occurs in the young, usually about the age of puberty, more often in the female, and may have as predisposing causes, poverty, bad hygienic conditions and that tendency that has been termed scrofulous. He says that lupus is tuberculosis, but is a certain form due to unknown biological characteristics of the bacilli and that in the larynx it attacks the epiglottis by preference. Shurley's¹¹ comprehensive and readable account in his book is acknowledged. He states, as do other writers, that the lingual face of the epiglottis is usually first affected. Its duration is slow and may cover a number of years, and may terminate in pulmonary or meningeal tuberculosis, or epithelioma (acc. to Morrow). Burnett¹² speaks of contracting bands or membranes or a general matting together of the parts, rather than the development of hyperplastic elevations. Gottstein has made the statement, verified by others, that the infiltration is often absorbed, at least partially. One month after operation on my case I reported to Dr. Freudenthal that the tumor was reappearing. There was difficulty in obtaining a view of the cords, but tonight, after five months, these swellings have disappeared and are replaced by firm bands, and a distinct view of the cords is obtained between these bands. This is a second reason why I feel justified in applying to the growth the term lupus.

BIBLIOGRAPHY.

¹ *Hahnemannian Monthly*, Phila., '95.

² *N. A. J. of Homeopathy*, May, 1902.

³ *N. O. M. and S. J.*, ns. 15, p. 275.

⁴ *N. Y. M. J.*, lv. 92.

⁵ *N. Y. M. J.*, lxi. 432.

⁶ *Bull. Soc. Anat. de Par.*, '95, lxx.

⁷ *A. J. M. S.*, '79.

⁸ *Heidelberger Chirurg. Klin.*, Oct. 7, '98.

⁹ *Jour. Tuberculosis*, July, '02.

¹⁰ *N. Y. M. J.*, '98, p. 15.

¹¹ Shurley: "Diseases of Nose and Throat."

¹² Burnett: "System Diseases Ear, Nose and Throat."

¹³ *Jour. Laryngol.* Oct. '02.