CANCER OF THE LARYNX: LARYNGOFISSURE.

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The patient was a man, 57 years old, well-built, tall and stout. He had always been well, but during the last six years he had suffered from gastric trouble, for which he was treated in the Commune Hospital in 1902. During the last three weeks of his stay at the hospital, he began to grow hoarse; he was treated with local applications and inhalations, but the hoarseness increased in spite of the treatment, and as the voice had not grown better one month after his discharge from the hospital, the family physician directed him to my clinic.

May 22, 1902. The voice was very hoarse; there were no respiratory difficulties; no swollen glands were felt. Larynx, externally, was of natural appearance. Laryngoscopy showed left vocal chord diffusely swollen and almost immovable, its surface partly covered by a reddish ragged swollen mass. By forceps, almost the whole swollen mass was removed in several pieces, which were examined microscopically. The vocal chord assumed, in the course of a short time, a rather natural appearance; its movements became much freer, and the voice was then almost normal. The microscopic examination made by Dr. Carl Ries showed the basal cells of the surface-epithelium broken through into the underlying connective tissue in several places. Here were found epithelial cells, both isolated and in groups, without regular arrangement. A larger part of the growth consisted chiefly of large irregularly shaped cells. Diagnosis: Cancer.

November 3, 1902. Left vocal chord was now seen diffusely roughened and thickened, but still rather movable. Anteriorly was found a gray swelling as large as a hemp seed, growing out from the surface of the vocal chord, projecting down into the rima glottidis. It was removed by forceps, but recurred quickly. It was again removed, and again recurred.

Immediately after the diagnosis of cancer was fixed, I advised the patient to undergo an operation; but this was regularly put off; and only after considering a whole year did the patient consent. I undertook the operation on May 28th, 1903, at St. Joseph's Hospital, with the kind assistance of Professor Schmiegelow. Under chloroform narcosis, a linear incision was made in the middle line

from os hyoideum to the fourth tracheal cartilage. To get enough room, a double ligature was laid about the isthmus of the thyroid gland, after which it was cut through. Hahn's tampon was introduced. A few minutes later, the thyroid cartilage was split from below upward, which is to be preferred to splitting from above downward. The thyro-hyoid membrane was then split, and the fatty tissue before the epiglottis, which can be very confusing, was encountered. After the division of the thyroid cartilage, an adrenalin tampon was applied. A few minutes later, the two halves were widely separated and a large gauze tampon so placed that the secretions of the mouth were prevented from flowing down over the operative field.

We now clearly surveyed all the interior of the larynx. The swelling had spread much more than was to be supposed from laryngoscopy, a fact that is far from being a rarity. The whole left vocal chord and much of the adjoining mucous membrane, both under and over the vocal chord, was removed down to the cartilage; but, as the swelling had spread also over on the right vocal chord, I was forced to remove the anterior third of this. Canula and tampon were removed, the wound was sutured and covered by wet boracic acid gauze. The patient was placed in a bed, the foot of which was raised to prevent the secretions from flowing downward. He was placed on his back with a thin round pillow under the nape of his neck. Three hours after the operation there was rather copious bleeding, in spite of free application of Adrenalin (1-1000) during the operation. Fortunately I was not forced to tampon. No tumor was felt in the epigastrium.

May 29, 1903. The patient slept well all night. With a little difficulty, he could swallow oatmeal gruel in the morning. After the course of some days, the swallowing was quite free. The eighteenth day after the operation, he was discharged from the hospital. There had been no fever, nor any lung complications. The stitches were removed the fifth day. When he left the hospital, there remained at the level of the thyroid cartilage a granulating wound two centimeters long, communicating with the cavity of the larynx.

July 25, 1903. The two halves of the thyroid cartilage had grown together. The patient felt well, and the laryngoscopic image we now see, about three years after the operation, is the same as it was then, nine months after. On the left side of the larynx, the mucous membrane is seen flattened and smooth; and, in the place of the vocal chord, there is a whitish scar-like narrow

string, which still has some movement on account of the uninjured arytenoid cartilage. In the anterior commissure, a little scar-like diaphragm is seen, and the right vocal chord is freely movable, and of natural appearance. During phonation, it does not reach over the middle line, consequently the voice is dull-toned but distinct.

I dare not decide definitely that there is no recurrence. What speaks against it is that the laryngoscopic image has kept almost quite unchanged for fully two years, although the swelling was of a rather malignant nature from the beginning. It often recurred and at the same time it spread. Even if the growth has not yet recurred, three years are not long enough to enable one to speak of a radical cure. As a rule, five years are required. Cancer recurrence 10 or 15 years after the operation is reported. In the scar tissue where the conditions for nourishment are unfavorable, the cells can remain latent for years, and then suddenly begin to grow. Cancer is utterly whimsical. Sometimes it makes its appearance as a little knot that may be completely removed and yet recurrence comes quickly. As a contrast, a spreading cancer, where one cannot get everything at the operation, may change character to such a degree that from a very malignant growth, it becomes rather benign and a cure of several years comes to pass.

The patient was presented at the Oto-laryngological Union, Copenhagen, February 5th, 1906, and found free from recurrence.

Hay Fever Toxin and Antitoxin. C. PRAUSSNITZ, *Berliner klin. Wchschr.*, February 27, 1905.

Investigation has shown that the amount of pollen in the air is greater during the hay fever season and in sunny weather than at other times. The toxin is contained in the starch granules of the gramineae, in the pollen of the lily of the valley, aster, chrysanthemum, rag-weed and golden rod. It is an albuminous substance of great strength, so that physiological reactions can be obtained from 1-40,000 mg. It partially withstands a temperature of 120°C. The mixtures of toxin and antitoxin can be disassociated, and their reactions follow the laws of such mixtures in general.

YANKAUER.