

substance was forced out; an incision into this gave blood but no pus. The knife was introduced three times before the abscess was found; it was situated somewhat anteriorly to the wound; the abscess contained about 30 cc., of greenish-yellow foetid pus. Digital examination revealed a smooth cavity surrounded on all sides by soft tissue. The cavity was carefully filled by iodoform ether, and a drainage tube introduced about 1 cm. Around the drainage tube iodoform gauze was loosely packed. The operation was performed under the strictest antiseptic precautions, and all bleeding points were immediately secured.

After the evacuation of the pus, the pulse at once rose to 54, and four hours later it was 88 to the minute. When the patient emerged from the narcosis he stated that his headache had entirely disappeared, and it has not returned since.

The dressing was changed daily, and the drainage tube shortened on the 9th day. The whole progress of the case was extremely favorable, no headache, no fever, no hernia cerebri, and in less than six weeks the wound was completely cicatrized.

The patient has yet a slight purulent discharge from his right ear, but this is being treated with astringent and antiseptic measures. The granulations in the cavity of the tympanum have been removed with a sharp spoon, and the surface cauterized. Prof. Bergmann proposes to keep the patient in the hospital until his ear trouble has been perfectly cured.

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#### CANCER OF THE LARYNX.<sup>1</sup>

Cancer of the larynx is very ably reviewed by M. Baratoux in a series of articles in the *Progres Medical*. A historical sketch is prefixed containing references to all the important publications on the subject, from the early observations of pre-laryngoscopic days to the present time. As to the frequency of malignant disease of the larynx it cannot be considered great. Krishaber recorded 50 cases, Morell

<sup>1</sup>Cancer of Larynx. By M. J. BARATOUX. *Le Progres Medical*, May, June and July, 1888.

Mackenzie 53, and Ziemssen 70, while Fauvel could only collect 40 cases in his clinic, among 12,360 patients. Epithelioma is much the most frequent variety. Baratoux has been able to put together 239 cases of cancer, in which the diagnosis was clearly established. Of these 239 cases, 185 were epitheliomatous, which gives a ratio of 77 per cent. Only 3 of these cases were of the cylindrical type, the rest being of the squamous variety. Of the other forms of cancer encephaloid is much more frequent than scirrhus. Sarcoma occurred 12 times in 161 cases, or in about 7.5 per cent. Spindle-celled sarcoma is the most frequent.

As to the seat of cancer, in 167 cases the growth was situated within the laryngeal cavity, *intrinsic*, in 117, and on the epiglottis or parts around the upper orifice of the larynx, *extrinsic*, in 50. Of the 117 intrinsic cases the situation was: Ventricular bands 62, vocal cords 29, anterior commissure 8, subglottic region 8, posterior commissure 6, ventricles of Morgagni 4. Of the 50 extrinsic cases: Epiglottis 32, arytenoid region 9, ary-epiglottic folds 8, sinus pyriformis 1.

Men are much more frequently affected than women. In 46 cases of sarcoma, 40 were men, in 301 cases of cancer proper 265 were men.

M. Baratoux dwells at some length on the symptoms, laryngoscopic appearances and diagnosis of cancer of the larynx. It would be difficult, and would probably serve no useful purpose, to summarize his remarks, which however will well repay perusal in the original. As to duration, it varies with the nature of the tumor and the surgical interference. Sarcoma is slowest in its progress. Encephaloid is quickest and has most tendency to invade neighboring parts. Patients with encephaloid live on an average  $2\frac{1}{2}$  to 3 years (Fauvel, Lablinski); those with epithelioma hardly more than 4 years.

**TREATMENT.**—*Endolaryngeal Removal.* This method is not relied on. Recurrence is almost certain. It is rarely done except through an error of diagnosis, the operator thinking he has to deal with a simple papilloma. At best its use must be confined to cases of pedunculated sarcoma at the upper orifice of the larynx, or of cancer strictly limited to the epiglottis.

*Laryngotomy.* This operation consists in dividing the thyroid car-

tilage in the middle line, and separating the two halves, the cricoid cartilage and thyro-hyoid membrane being divided also if necessary. The growth is removed by knife, scissors or cautery. This operation may be termed *total* laryngotomy, in distinction from partial laryngotomy, which may be performed above the thyroid cartilage, *sub-hyoid*, or below the thyroid, *sub-thyroid*, and in the latter cases not only the crico-thyroid membrane but the cricoid cartilage and the trachea may be incised, *partial tracheo-laryngotomy*. From an analysis of 23 operations reported by von Bruns, and of several cases collected by himself, Baratoux forms an unfavorable opinion of the operation. It appears to have given good results in the hands of two or three operators only. It is just as much as he would do to recommend it in cases of well circumscribed sarcoma, and in cancers of limited extent, which do not involve the surrounding tissues.

*Extirpation of the Larynx.* The author gives a table of 167 cases of extirpation of the larynx for cancer, or supposed cancer. Of these, 112 were total extirpation, 30 were partial, a greater or less portion of the framework of the larynx being removed, and 25 were unilateral, exactly one half of the larynx being removed. Cases where only the epiglottis was left are counted as total extirpation. In point of date, the latest case in the list is one of Hahn's, of February, 1888.

*Total Extirpation.* There are 112 cases; of those 6 were done owing to an erroneous diagnosis of cancer, 5 proving, after extirpation, to be tubercular, and 1 syphilitic. This leaves 106 total extirpations for malignant disease, of which 7 were sarcoma. Of these 17 died in the first 8 days from accidents connected with the operation, a mortality of 16 per cent. Of these 17 cases, 6 were from collapse or exhaustion, 4 from traumatic hæmorrhage, 1 from pulmonary embolism. Twenty-five died of pulmonary affections, pneumonia, broncho-pneumonia and pleurisy. The third to the seventh day was the most fatal period, and out of the 25, 22 died in the first two weeks, or 20 per cent, which with 16 per cent who died of the immediate effects of the operation, gives 36 per cent deaths in the first two weeks. The pulmonary complications were chiefly attributable to the introduction of septic matter into the air passages. Fourteen other deaths occurred during

the following months from various causes, such as retarded pneumonia, difficulty in feeding, accidents with the cesophageal tube, asphyxia and septicæmia. Thus, while 36 per cent died in the first two weeks, 16 per cent died in the following months, mostly within the first four months. Of the remaining cases, 28 suffered from recurrence, or 26 per cent. Death occurred in these cases most frequently between the fourth and tenth month. There now remain 22 cases (20 cancer, 2 sarcoma), which are known to have survived without recurrence for various lengths of time. If, with the author, we take as cured those which have been watched for upwards of twelve months, we find 9 cases only, of which 2 were sarcoma, or 8.5 per cent cured by total extirpation. Of the 7 cases of sarcoma 2 were cured, or 28 per cent.

*Partial Extirpation.* There are 32 cases, of which 2 were for sarcoma. Of these 32 cases, 7 died in the first two weeks, or 22 per cent; 3 of collapse, 4 of pneumonia. Five died in the following months, or 15 per cent, making in all a mortality of 37.5 per cent. Six had recurrence, or 18.7 per cent. Of the remaining cases, 4 are known to have passed the 12th month, giving 12 per cent cured by partial extirpation.

*Unilateral Extirpation.* Twenty-five cases (22 cancer, 3 sarcoma); 3 cases died in the first two weeks, 1 of collapse, 2 of pneumonia, or 12 per cent, 4 died in the following month, or 16 per cent. Six had recurrence, or 24 per cent. Of the 12 remaining cases 5 survived 12 months or 20 per cent cured.

The following table shows the relative mortality of the various operations.

DIED IN FIRST 15 DAYS.			DIED IN THE FOLLOW- ING MONTHS.	DIED OF RECUR- RENCE.	CURED.
Total	Extirpation	36 per cent.	16 per cent.	26 per cent.	8.5 per cent.
Partial	Extirpation	22 "	15 "	18.7 "	12 "
Unilateral	Extirpation	12 "	16 "	24 "	20 "

Unilateral extirpation is therefore seen to give the best results.

The selection of the operation must, of course, depend on the nature and extent of the disease, but partial or unilateral extirpation not only

gives a lower mortality than total extirpation but enables the patient to dispense with the canula, and he can speak with a certain amount of voice. In some cases even the glottis is reproduced by the healthy vocal cord on one side, and cicatricial tissue on the other, whereby a very good voice is retained.

For palliative treatment of cancer of the larynx the author speaks highly of the effects of tincture of *Thuja occidentalis* internally and locally. It appears to avert the evolution of the cancer and combats effectually the odor. When tracheotomy is necessary it should be performed lower down. Crico-tracheotomy should never be performed; antiseptic precautions should be used in the operation; the canula should not have a perforation in the convex part, so that vegetations may not enter and obstruct the passage; the canula should be long so as to reach well below the growth. In 123 cases of tracheotomy collected by the author, 4 died immediately or 3.2 per cent, 20 died in the first 2 weeks or 16 per cent, 82 in the first year or 60 per cent, 17 lived from one to five years or 12.7 per cent. The results of total extirpation give an average inferior to tracheotomy, but survival after extirpation may reach a longer limit and the patient loses, for a time at least, the painful symptoms. Moreover the result of extirpation are becoming more satisfactory every day. A comparison of the cases of unilateral extirpation with those of tracheotomy is far from favorable to the latter. In fact 20 per cent were cured by the former operation, while only 12.7 per cent survived upwards of one year after tracheotomy.

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#### ELECTROLYSIS IN PROSTATIC ENLARGEMENT.<sup>1</sup>

In connection with the reduction of tumors by electrical currents, the studies of Dr. Leopold Casper are of interest. He aims at the reduction by electrolysis of the size of the prostate and hopes for a corresponding diminution in the evils which follow enlargement of that

<sup>1</sup>Radical Treatment of Hypertrophy of the Prostate and of Prostatic Tumours by Electrolysis. By Dr. LEOPOLD CASPER, *Berliner Klinische Wochenschrift*, vol. xxv, June 4 and 11, 1888.