disfigurement was a secondary matter. He admitted that Moure's lateral rhinotomy gave a wonderful view, but not so good as that from a combined Killian and Ferguson.

Mr WOODMAN (in reply) claimed that he had great regard for leaving the minimum of blemish after the operation, but it should always be remembered that in these operations the first claim was upon the life of the patient. If the subsequent suturing were done carefully, and followed by applications of X-rays and massage, good cosmetic results would ensue.

Scarcely any members had expressed agreement with him as to opening the frontal sinus; but if it were systematically opened, it would be found to be diseased in 90 per cent. of cases, though not with malignant growth—in two of his cases that sinus was full of growth. Many contained polypi and pus, and these were factors which probably preceded malignant disease. Such growth did not extend through the forehead, but downwards, and appeared at the inner angle of the orbit, where recurrence was frequently seen.

If malignant disease was to be successfully attacked, why not, in these cases, open and examine each one of the sinuses seriatim?

He had never irradiated before operation, but he could understand its advantage. He always applied X-rays afterwards. He did not think those who had tried intratracheal ether would go back to laryngotomy. Ether was of great advantage to the patient, was rapidly thrown off, it had no effect on the kidneys, and was not a protoplasmic poison; whereas after chloroform there was often acidosis.

A number of cases illustrating treatment of malignant growths of the accessory sinuses were shown at the Meeting by Mr Musgrave Woodman, Dr Douglas Harmer, Mr Bedford Russell, Dr Dan M'Kenzie, Mr T. H. Just, Mr Norman Patterson, Mr A. J. Hutchison, and Mr F. J. Cleminson.

ABSTRACTS

PHARYNX AND NASOPHARYNX.

Acute Necrosing Tonsillitis, Pharyngitis, and Laryngitis in Influenza. MAX MEYER (Wurtzburg). (*Archiv. für Laryngol.*, 1921, Band 34, Heft 1, p. 1.)

The cases described very fully in this paper are examples of what most of us regard as gangrenous pharyngitis. The general features are local inflammatory obstruction to respiration and the formation of false membrane, with intense general septic intoxication with heart failure. The chief bacteriological irritant is the streptococcus, which exercises its sway while the reactional power of the system is reduced by the influenzal poison. The presence of the false membrane generally leads to a diagnosis of diphtheria. Tracheotomy is often performed without avail. JAMES DUNDAS-GRANT.

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Pharynx and Nasopharynx

Unhealthy Tonsils and Cervical Adenitis. W. G. HOWARTH and S. R. GLOYNE. (*Lancet*, 1921, Vol. ii., p. 997.)

The authors give the results of a research undertaken with a view to inquiring into any possible relationship between enlarged palatine tonsils and cervical adenitis. Their results may be summarised as follows:—Five per cent. of unhealthy tonsils associated with enlarged cervical glands showed histological lesions of tuberculosis, and 2 per cent. contained tubercle bacilli. Positive results were not obtained by injecting large quantities of tonsillar tissue into guinea-pigs, possibly because (1) the bacilli were lost in centrifugation; (2) the lymphoid tissue had dealt with them effectively; or (3) the bacilli were of low virulence (? bovine). The chain of events in cervical adenitis with large tonsils is suggested to be (*a*) enlargement from chronic septic absorption, followed by (*b*) cervical adenitis due to toxæmia; and (*c*) implantation of tubercle bacilli on the already unhealthy tonsil, with (*d*) subsequent absorption of bacilli along the lymphatics from tonsil to glands. This being the case, removal of the tonsil as a therapeutic measure is obviously correct, and evidence tends to prove that proper enucleation results in disappearance of the enlarged glands. When breaking down in the glands occurs, aspiration with a suitable syringe is all that is required. MACLEOD YEARSLEY.

Pulmonary Abscess in Adults following Tonsillectomy under General Anæsthesia. LEWIS FISHER, M.D., and A. J. COHEN, M.D. (Philadelphia). (*Journ. Amer. Med. Assoc.*, Vol. lxxvii., No. 17, 22nd October 1921.)

Pulmonary complications, measured by the possibility of fatal issue, are of greater importance as post-operative sequelæ than hæmorrhage or otitis media. Lung complications are much more frequent than the literature records. Seventy-six cases, many of them fatal, have been reported by United States operators since 1912, when Richardson reported the first case; seventy-four of the seventy-six patients were operated upon under general anæsthesia, ether probably being used in all cases. The favourite site of the lesion was the right lung, either the middle or the lower lobe being involved.

(1) *Type of Anæsthesia.*—Almost all cases occurred under general anæsthesia. The anæsthesia *per se*, can not alone be the cause. otherwise it would occur often in prolonged general surgical operations, Two cases are reported by Porter following local anæsthesia, but he states they occurred in patients definitely tuberculous.

(2) *Aspiration of Blood, Mucus, or other Detritus.*—Several operators are quoted who insist that the mouth should be placed lower than the larynx in operating. The authors, however, do not regard aspiration as a frequent cause of lung abscess.

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(3) *Infective Emboli.*—The most frequent cause, excepting pneumonia, of *non-operative* cases of lung abscess, is infarction by infective emboli carried from distant parts of the body. Norris and Landis found that 61 per cent. of cases were due to emboli brought to the lungs through the circulation. Having regard to the close association between the lung and the pharynx as shown by Wood and others, and the septic condition of the operated tonsil, it would appear that the embolic hypothesis gives the most likely and probable explanation.

(4) *Faulty Technic, especially Undue Traumatism*, e.g., length of time consumed in the operation, unnecessary crushing and laceration of tissue and the improper position of the head favouring aspiration.

(5) *Use of Motor-driven Ether vaporising Apparatus.*—This is dismissed as probably unworthy of consideration.

(6) *Antecedent Causes, either Local or General.*—Chronic bronchitis, virulent infection in the operative field, such as Vincent's angina, peritonsillar abscess, or general debility, undoubtedly act as predisposing factors.

The authors refer to the thousands of cases of tonsillectomy under local anæsthesia without a single complication in the lung and this convinces them that the general anæsthetic either acting directly or indirectly is the determining factor in the causation of lung abscess following tonsillectomy. PERRY GOLDSMITH.

Gangosa. Dr ARROWSMITH. (*Laryngoscope*, Vol. xxxi., No. 11, p. 843.)

An ulcerative condition of the nose, palate, pharynx, and skin surfaces of the body, of unknown cause, destroying cartilage and bone, and causing much deformity. It occurs in Guam, the Ladrones, Caroline, Batanes, and Fiji Islands, Murray Island, Panama, British Guiana, Ceylon, Nevis, Dominica, and Equatorial Africa. There are no signs or symptoms of syphilis, and it is not leprosy, epithelioma, nor tuberculosis. The disease is painless, and progresses slowly over a period of from ten to thirty years, with periods of advance and quiescence. It is seldom fatal and most cases recover, though with great disfigurement. The author's case is the second undoubted instance occurring in a white man. It was diagnosed as syphilis in spite of negative Wassermann (blood and cerebro-spinal fluid), but antiluetic treatment was ineffective. All treatment was useless, and the destruction of bony tissue was enormous, and the odour very offensive. The histological structure in general suggests a low grade chronic granulomatous inflammation with some areas of acute exudative inflammation. ANDREW CAMPBELL.

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Larynx

The Mechanical Function of the Tonsil. Dr R. B. FAULKENER, Pittsburg, Pa., U.S.A. (*Archives Internat. de Laryngologie, etc.*, January 1922.)

The author considers that the principal function of the tonsil is mechanical, and he compares it to the cartilaginous skeleton of the larynx. It affords a mobile insertion for the muscles of the pharynx. Its position, tension, and dimensions can be modified and this modification is essential for the finer vocal variations. Many authorities are quoted to support the view that it is an organ essential for singers. After removal of the tonsils there is *always* [author's italics] a permanent loss in quality, charm, and all the finesse of song.

"The palatine tonsil has no known or proved physiological function; its protective function has not been proved. It has no power of absorption, it is not a menace to the body. It is an important organ from the mechanical and phonetic aspect."

E. WATSON-WILLIAMS.

LARYNX.

Atypical Thyrotomy for Tuberculoma mistaken for Neoplasm. Prof. JACQUES, Nancy. (*L'Oto-rhino-laryngologie Internationale*, December 1921.)

The patient was a man of 67, emaciated, complaining of hoarseness for a year, and of aphonia for a few weeks. Indirect laryngoscopy showed a greyish tumour, apparently ulcerated, below the cords. The appearances suggested malignant disease, despite a history of pleurisy three years previously. Thyrotomy was performed under local anæsthesia. The tumour was found to be cauliflower in type, about the size of a hazel-nut, and with an extensive base. The mucous membrane posteriorly was seen to be rugose, a fact not recognised at the time of examination, and this threw a doubt on the diagnosis. Nevertheless, the anterior part of the cords was resected along with a portion of the cartilage. The thyroid cartilage was sutured, leaving a small passage for the introduction of radium if necessary. Pathological examination, however, showed the growth to be tubercular in nature. The operation was followed by great benefit to respiration.

GAVIN YOUNG.

Cancer du Larynx: Importance d'une Classification. ST CLAIR THOMSON. (*Annales des Maladies de l'Oreille et du Larynx*, No. 2, Fév. 1922.)

Classifications in medicine are necessary, but they are necessary evils. Amongst useful classifications there is none which is more helpful than the one suggested by Isambert and Krishaber when

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they made the broad distinction between extrinsic and intrinsic cancer of the larynx.

The writer suggests the following groupings:—

A. Intrinsic cancer of the larynx.
B. Subglottic cancer of the larynx.
C. Extrinsic cancer of the larynx.

(The term "Mixed Cancer" may be used for cases of advanced disease, where the point of origin can no longer be determined.)

A. Intrinsic cancer is the most commonly met with. With rare exceptions it originates from a vocal cord, and from the anterior half.* As hoarseness is a constant and early symptom the disease should be diagnosed in good time. The disease advances very slowly; the glands are not invaded until a late stage. Operation by laryngo-fissure gives more lasting cures than can be claimed for cancer in any other internal region of the body. Recovery from operation is rapid, and statistics show 80 per cent. of permanent cures.

B. Subglottic cancer is the rarest form of laryngeal epithelioma. It begins just below the anterior half of the vocal cord. The symptoms at first are slight and even variable. Inspection and diagnosis are difficult. Partial or complete laryngectomy, with removal of the cricoid cartilage, may be required. The prognosis is not nearly so promising as in true intrinsic (chordal) cancer.

C. Extrinsic cancer originates along the upper margins or posterior surface of the larynx, *i.e.*, it may spring from the epiglottis, the ary-epiglottic folds, the arytenoids, the pharyngeal surface of the cricoid cartilage, or the sinus pyriformis. It is met with more commonly than Group B, but not so frequently as true intrinsic cancer. Symptoms, progress, diagnosis, and treatment will vary considerably according to which of these regions is the original seat of origin. In all of them the early symptoms may be so vague or negligible that the disease is often advanced before it comes under observation. The glands are infected early in the disease. Progress is rapid. Many cases are quite inoperable. Some can be saved by lateral pharyngotomy. Operation on the glands may be required. For most a more or less complete laryngectomy is necessary. The operation is difficult; trying to both surgeon and patient; it is not free from danger. The results—if all cases were published—would show many catastrophies connected with the operation, and many recurrences after it. Even in successful cases, the loss of a useful voice, and the social disability connected with breathing through the neck, is in marked contrast with the results obtained by laryngo-fissure when the disease is of the intrinsic class. ST CLAIR THOMSON.

* St Clair Thomson, "Intrinsic Cancer of Larynx: Usual Site of Origin," *British Medical Journal*, 25th June 1921.

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Larynx

Cancer of the Larynx. ST CLAIR THOMSON. (*The Laryngoscope*, July 1921.)

This article was written for the twenty-fifth anniversary number of the Journal in which it is published, and it is interesting from the historical picture it paints of this subject as it stood in the last quarter of last century, and as it stands now in the first quarter of the twentieth century. Morell Mackenzie wrote, only forty years ago, that "as far as the present state of our knowledge extends, the only possible termination of any case of cancer is death. . . . The usual duration of epithelioma of the larynx appears to be about eighteen months." John Nolan Mackenzie, of Baltimore, says: "When I look back through the years in which I have seen cancer of the larynx maltreated, and in which I have unconsciously maltreated it myself, I am simply appalled at the retrospection."

Then came the courageous efforts of the pioneers. Billroth of Vienna was the first to perform a complete laryngectomy. But of the first 25 cases of total extirpation performed by various surgeons, not a single patient was alive at the end of the first year after operation. The change in our days, as well illustrated by the 6 cases shown by Charters Symonds at the 1890 Summer Meeting of the Section of Laryngology,* are largely the result of the brilliant idea of Solis-Cohen when he proposed to cut across the trachea, detach it completely from the larynx, and fix the orifice to the skin in the middle of the neck.

As regards laryngo-fissure, the successes which now attend it are, according to the writer of this article, chiefly due to the prescience and boldness of two English surgeons, Arthur Durham of Guy's and Butlin of Bart's, although as long ago as 1867 Solis-Cohen of Philadelphia had performed it on a patient who survived for twenty years, and then died of apoplexy. But most of the early efforts met with heart-breaking disaster. The first 8 cases of laryngeal cancer treated in Europe by laryngo-fissure were operated on between 1870 and 1884. Six died of recurrence, one survived two years and nine months, and the eighth was lost sight of. Paul Bruns recorded 19 cases, of which only two survived a year; Morell Mackenzie, in 1880, wrote that "the results of thyrotomy are extremely unsatisfactory." Nevertheless three of the laryngologists who at first condemned the operation afterwards achieved brilliant results with it. Thus, in 1883, Butlin categorically stated that "not the slightest encouragement is afforded by public accounts to induce one to perform the operation of thyro-fissure."

Since 1890, when Butlin limited laryngo-fissures to intrinsic cases, the perfecting of the operation and the brilliant results are well known.

* *Journal of Laryngology*, xxxv., 1920, No. 9, p. 257.

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The writer of this paper can record 50 cases without an operative death, and with lasting cures in over 80 per cent. Such results, as Mackenty says, are only obtained by meticulous care. As Chevalier Jackson points out, "the operable cases are extremely rare." There are not enough to allow of every laryngologist becoming an adept at treating them. "These cases," says Jackson, "should be sent to a few men in each large centre who may thus have a collective experience."

ST CLAIR THOMSON.

PERORAL ENDOSCOPY.

Congenital Atresia of the Œsophagus. I. SETH HIRSCH, M.D., Director, Roentgen-Ray Department, Bellevue Hospital, New York. (*Journ. Amer. Med. Assoc.*, Vol. lxxvi., No. 22, 28th May 1921.)

CASE I.—Patient vomited everything since birth and passed only meconium by bowel. Fluoroscopic examination—a soft catheter did not pass beyond a point above the level of the arch of the aorta. The œsophagus appeared to end as a blind sac at this point. Gastrostomy was followed by death four hours later. Post mortem showed the œsophagus patent to the level of the fourth dorsal vertebra, where it ended blindly in a dilated pouch. From there it was continued as a fibrous band to within about 1 in. of the stomach, where it again became a patent tube.

CASE II.—For the first three days of life the child vomited everything. A catheter could be passed into the œsophagus only for a distance of 4 in. from the gum margin. X-ray examination disclosed a moderate dilatation of the gullet just above the aortic arch. As the sac became distended there was severe coughing, followed by the expulsion of some of the bolus. The trachea and bronchi were clearly outlined on the screen and the point of actual fistula could be demonstrated. Gastrostomy was performed but the child died the next day. No *post-mortem* was held. A very comprehensive review of the literature is appended.

PERRY GOLDSMITH.

Tracheocele: the Endoscopic Aspect. Dr J. GUISEZ. Illustrated. (*Bulletin d'Oto-Rhino-Laryngologie*, Paris, November 1921.)

The author relates how endoscopy has revealed the nature of these air-containing swellings of the neck. Hitherto they have been considered hernias of the mucosa between tracheal rings. This condition does occur after labour but rapidly subsides. The true tracheocele represents a rupture of the whole tracheal wall. The onset may be sudden, with a muscular effort, but is usually gradual without definite

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history: they tend steadily to increase. Guisez gives the history of 2 cases. (1) The patient (aged 23) was blown up in battle (? made a violent effort with closed glottis). Immediately there was great swelling of the neck, pain, dyspnœa, and slight blood-stained expectoration. Diagnosis, rupture of the trachea, surgical emphysema: no external wound. Two years later, at rest, the neck showed slight central swelling: the gap in the left side of the trachea could be palpated. On the least exertion a soft swelling appeared in front and to the left of the trachea extending from larynx to sternum. By endoscopy, in quiet respiration the left cord was seen above a smooth red subglottic swelling which extended into the trachea. It was readily compressible by the examining tube, and showed pulsation, communicated from the carotid. On expiring with the tube blocked, it disappeared, and the swelling in the neck became visible. (2) The second case showed similar appearances. The patient (aged 56) said he had had it all his life.

Dr Guisez considers the prognosis serious; although progress may be slow it is steady. Low tracheotomy alone relieves.

E. WATSON-WILLIAMS.

Spasmodic Closure of the Lower End of the Œsophagus (so-called Cardio-spasm). Dr L. DUFOURMENTEL. (*Revue de Laryngologie*, October 1921.)

As the result of the examination of 30 cases of "œsophago-spasm" in Professor Sebileau's clinic the writer formulates the following conclusion:—

(1) The closure occurs at the œsophageal orifice in the diaphragm. This conclusion is supported by radioscopic findings and endoscopic examination. There is no cardiac sphincter of the œsophagus.

(2) The œsophageal opening in the diaphragm may be compared with the rectal opening in the pelvic diaphragm. Constrictions of these openings close up the abdominal cavity during straining effort.

(3) The musculature surrounding the diaphragmatic opening, like that surrounding the pelvic opening, is subject to spasm. The spasms are usually acute in onset and temporary only, but may become chronic.

(4) Spasm is usually due to irritation in the œsophagus, often of the sub-diaphragmatic portion. Irritation of the open cardia by hyper-acidity of the gastric contents is suggested as a cause. Varicose veins at the lower end of the œsophagus may be another cause. These varicosities are analogous with those occurring in the neighbourhood of the perineal sphincter, *i.e.*, rectal hæmorrhoids.

G WILKINSON.

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