Abstracts.

PHARYNX.

Durand (Nancy) and Gault (Dijon).—Surgical Treatment of Pharyngeal Tumours by the Buccal Route.—"Proceedings of the French Society of Laryngology, Otology, and Rhinology," May 15, 1912.

The authors observe that many patients who present themselves with, say, a small circumscribed lympho-sarcoma of the tonsil, refrain from undergoing removal by the external route and consequently allow the growth to persist, until oftentimes it becomes finally inoperable. Were the internal route suggested they would submit, and the chances of operative success would be greater. The internal route is justifiable for limited tumours in their early stage of development. With powerful illumination and thorough retraction of the tongue and cheek, the operative field is almost rendered a superficial one. To combat hæmorrhage, Rose's position must be adopted, with constant swabbing, and, if necessary, compression, with or without a special instrument, preliminary tracheotomy, etc. The authors quoted Prof. Jacques, who drew special attention to the merits of endo-buccal surgery for neoplasms about the faucial isthmus, convinced as he then was from personal experience of four cases, that if it be a little more difficult to excise a carcinoma of the palate and pharynx than an ordinary tonsil, it is not in any case much more dangerous.

In this report the authors show the possibility of making a free and complete extirpation of growths, clearly circumscribed and with or without slight glandular involvement by the oral route.

A comparison of the various methods of intervention on tumours of the faucial isthmus follows the description of thirty-one cases of malignant growths of the meso-pharynx, dealt with by a free and methodical excision *per vias naturales*. The procedure is not accompanied, as one might expect, by serious hæmorrhage; ligature of the external carotid or preliminary tracheotomy are in the majority of cases needless. The neoplasm can always practically be removed, and if not culminating in a definite cure, there is an appreciable period of survival unattended by pain. The patient is afforded physical relief and mental comfort, without being exposed to a serious danger. The authors briefly recall the various procedures of external pharyngotomy.

(A) *Difficulties: External Route.*—The multiplicity of operative methods, the number of cutaneous incisions proposed, expediency of definite or temporary resection of the mandible, seat of resection, problem of anæsthesia, indication for ligature of vessels, and after-treatment of the wound, are still matters of controversy.

Buccal Route.—The authors quote Jacques' opinion on the subject: "This procedure, obviating the long and laborious external operation, conserves the patience of the operator and the resisting powers of the patient. Moreover, aided by good illumination and with experience in oral operations, one can dissect out a very extensive tumour with precision." Anæsthesia, which at first seems to offer difficulties in the case of large growths impinging on the breath-way, can be facilitated, if necessary, by a temporary tracheotomy.

(B) *Dangers and Inconveniences: External Route.*—Operative trauma of the large vessels, vagus and facial nerves, etc., frequency of dressings, infection of the wound, ulceration of vessels, broncho-pneumonia,

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local phlegmon, osteitis of the divided surfaces of the mandible, salivary or alimentary fistulæ, etc.

Buccal Route.—The chief danger which would appear inevitable is hæmorrhage, with its consequences on the air-passages, but all published cases demonstrate that it is but slight and easily controlled by compression, or, if necessary, ligature.

(C) *Results : External Route.*—Examination of statistics is not very encouraging. Krönlein, who practised lateral pharyngotomy in all his cancer cases, reports as follows:

(1) Out of 8 pharyngotomies he had 6 deaths and 1 relapse.

(2) In a series of 60 other cases 29 were operated on, 11 died as a result of the operation, and 18 survived. Of these 1 died of intercurrent disease, 1 was well two years afterwards, another remained well for seven years and then developed cancer in the opposite tonsil; recurrence took place in 15 cases.

Vallas gives the following statistics: Out of 19 pharyngotomies following mandibular resection he observed 12 recoveries and 7 deaths, 5 from broncho-pneumonia, 1 from syncope on the day after the operation, and 1 from an unknown cause. He explains that the mortality in these cases was inconsiderable, as he had to deal with extensive lesions necessitating the sacrifice of a portion of the mandible. His pupil Latarget cites 10 cases, where the transhyoid route was preferred to mandibular resection. Lindenborn (1904), out of 23 cases operated on, had 9 immediate deaths and 14 rapid recurrences.

Buccal Route.—These isolated cases have not enabled the authors to arrive at precise satistics from this method of operating. Because the cases published have all been followed by operative recovery and survival for varying periods it must not be concluded that there may not have been unsuccessful ones. It is, however, fair to give prominence to the rarity of pulmonary complications and to the fact that the patient is spared the inconvenience and sometimes dangers which attend external pharyngectomy.

Indications and Contra-indications : Benign Tumours.— Internal pharyngotomy is applicable to all benign growths, solid or fluid, except the rare cases where they are excessively large or particularly vascular.

Malignant Tumours : (a) Sarcomata.—The fasciculated variety, according to Moure, would be most frequently met with; this form is generally encapsuled, accompanied with little or no infiltration or glandular involvement. It sometimes has a tendency to pedunculisation. It is, in the author's opinion, the type of malignant growth amenable to buccal intervention. On the contrary, the lympho-sarcomata, when diffuse with early glandular invasion and running a rapid course, should not be attacked by the oral route.

(*b*) *Epitheliomata.*—Here the desirability of operating by the mouth will depend on the duration and extent of the disease. In the early stage, when there is little or no glandular involvement and the laryngeal vestibule has been respected, a simple operation would be of service; in the advanced stage, with glands infected and the body of the mandible infiltrated, all operative treatment would be out of the question.

Situation of the Growths.—According to their site of origin, four groups may be distinguished:

(1) *Those of the velum*, the removal of which is usually easy and complete.

(2) *Those of the tonsil*, the most common, finally invading the adjoining parts, giving rise to dysphagia, salivation, aural pain, hæmorrhage,

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etc. In practice two conditions are met with: either the glands are small and mobile, and then one can and ought to operate even when the growths are extensive; or there is a large glandular mass fused with the jaw—abstention is then the rule.

(3) *Lingual Tumours.*—Usually originating in the glosso-tonsillar sulcus, excision of which by the buccal route is generally very easy.

(4) *Growths of the Posterior Wall.*—These are for the most part the result of extension, and can be easily extirpated in consequence of the facility with which the posterior wall can be detached from the underlying structures.

Upon the whole, the authors feel that internal pharyngectomy will be indicated in almost all cases where the external operation can be practised, and one ought to consider less the nature and extent of the growth than the glandular infiltration accompanying it.

Operative Technique of Internal Pharyngectomy.—*The preparation of the patient* consists in bucco-pharyngeal disinfection, removal of tooth stumps, use of nasal ointment, alkaline gargles, and sometimes prophylactic injections of gelatined serum, or chloride of calcium internally, for some days prior to operating.

Anæsthesia.—Except for small growths, where a 1 per cent. solution of cocaine can be employed, the author prefers chloroform.

Tracheotomy is not required save in cases of a growth towards the larynx, threatening suffocation at the commencement of anæsthesia, or if serious laryngeal or tracheal obstruction manifests itself during the operation. In such cases, laryngotomy will be practised with Botey's trocar cannula No. 5.

Ligature of Vessels: Extirpation of Glands.—Hæmorrhage observed by most operators, has been moderate and especially venous in character; preliminary ligature may be reserved for those cases where sterno-mastoid or retromaxillary adenopathy necessitates the opening of this region; a ligature can then be applied to the commencement of the external carotid when the glands are removed.

Excision of the Growth.—Encapsulated tumours can be enucleated with the finger after incision over their most prominent part. Hæmorrhage is usually arrested spontaneously after removal of the mass. In the case of a malignant tumour, connections and prolongations must be defined by critical palpation. This done, a vertical incision of the palate is made with a bistoury or thyrotomy scissors, an incision is then carried through the mucosa surrounding the growth, so as to embrace it in a circle with concavity infero-internal, extending from the median line to the base of the tongue and passing outside the anterior pillar. This is deepened under ocular control. The bulk of the growth is now rapidly removed, and hæmorrhage controlled by tamponment, and if necessary forci-pressure; the application of forceps is not always easy. Michel's clamps, recently modified by Wengener, may be employed with advantage. They can be left in the wound, and even if swallowed will not damage the patient. The operative field is then explored to follow up possible prolongations or suspected points of infiltration, attention being directed to the posterior pharyngeal wall, the tonsillar recess, and the region of the internal pterygoid muscle, where infiltration is much to be dreaded on account of the special proneness to diffusion and recurrence.

Sutures are employed to reduce the area of the wound, preferably catgut.

Post-operative Treatment.—Serum injections are often necessary.

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Food is withheld on the first day, but is administered in liquid form on the day following. When the wound is extensive, alimentation is effected by a catheter passed through the nose. The oral cavity is irrigated with chlorated biborate of soda. Recovery is generally rapid. Rhinolalia aperta and reflux of food, which result from extensive excision of the palate, tend to diminish, owing to tissue retraction, and it is quite exceptional to have to resort to prosthesis.

Conclusions.—Daily experience demonstrates how tolerant the mucous cavities are to instrumentation in expert hands. Those who have familiarised themselves with thoracic endoscopy know to what extent buccal interventions have improved the prognosis of peri-bronchial or peri-œsophageal phlegmons induced by foreign bodies. Also, without repudiating the operative procedures which have secured so much success for general surgery, the authors feel it the duty of the laryngologist to restrict the character of the operative methods to the extent warranted by the progress of our special technique, without sacrificing the result aimed at to the simplification of the practice adopted. Meso-pharyngeal growths can for the most part be as effectually dealt with by the buccal route as by the external route. *H. Clayton Fox.*

NOSE.

Horn, Henry (San Francisco).—The Ætiology and Treatment of Ozæna. "Journal of American Association," August 28, 1915.

To verify the positive statements of Hofer, of Vienna, that the *Cocco-bacillus fœtidus ozæna* of Perez was the true and only ætiologic factor in this disease, and his enthusiasm over the results of treatment by vaccines, Dr. Horn, of San Francisco, conducted a series of laboratory and clinical experiments with cultures furnished by Hofer. The laboratory experiments showed that the intra-venous injection of live cultures in very large doses will kill rabbits in from twelve to twenty-four hours, the only necropsy finding being the selective action of the organism on the turbinate bones of the nose. At first there is intense congestion, later on pus forms in and about the turbinated bodies, finally entirely blocking up the nares, and if the rabbit lives long enough, marked atrophy of the turbinates appears. The organism has been recovered from the nose of the injected rabbit in all cases, but so far Horn has been unable to obtain an agglutinating serum. The vaccines for treatment are made from seven or eight different strains, to which has been added one strain of the Perez bacillus which occurs normally on the mucous membrane of the nose of dogs. Autogenous vaccines would probably give the best results; but, as Hofer states, in clinical practice this is an impossibility. In many cases which clinically are undoubtedly ozæna one is unable to isolate the Perez bacillus, but an administration of the stock Perez vaccine will either cure or greatly improve the case. In administering the vaccines it is well to start with an initial dose of fifty million, doubling until the proper constitutional symptoms develop. The dose varies with every vaccine and every patient. The clinical manifestations are the best guide to dosage, and a period of at least one week should intervene between injections. The local reactions, as coryza, free discharge from the nose, sensations of heat and fulness over the bridge, are what one should endeavour to produce. Improvement is usually noted after the first dose. The odour diminishes, the crusts blow out more readily, and the feeling of tightness across the forehead improves.

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From five to fifteen injections are considered necessary for a complete cure, and the patient must be carefully watched for a relapse, when the treatment should again be instituted. From his experiments and observations Dr. Horn draws the following conclusions:

(1) The *Coccobacillus fœtidus ozæna* Perez, as isolated by Hofer, has answered all the bacteriologic requirements necessary to establish its identity as the ætiologic factor in ozæna.

(2) The isolation of this organism is attended with considerable difficulty.

(3) The production of agglutinating serum in rabbits is an exceedingly difficult task.

(4) The preparation of autogenous vaccines in every case is very difficult, if not impossible.

(5) At present mixed vaccines made from various strains of Perez bacillus is the most practical method of treatment now available.

(6) It may be necessary to precede or combine with the treatment the vaccines made from the organisms which are usually present in combination with the Perez bacillus.

(7) It may be possible that there may be two or more types of ozæna, bacteriologically different but clinically identical. *Birkett* (*Rogers*).

LARYNX AND TRACHEA.

Iglauer, S.—Accidental Pneumothorax during Tracheotomy, with Report of a Case. "Annals of Otology," xxiv, p. 303.

The accident referred to in this paper is rare. The author's case was a male child, aged twenty-three months. A diagnosis of foreign body in the air-passages was made, and, the child being cyanosed, a low tracheotomy was done without an anæsthetic. The child struggled continuously and pneumothorax of the right side resulted. Under careful treatment the child recovered, the lung having re-expanded by the twenty-seventh day. No foreign body was discovered, the real cause of the trouble probably being acute subglottic laryngitis. *Macleod Yearsley.*

REVIEW.

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