SCHWABACH (Berlin).—**The Question of the Bursa Pharyngea.** *Deutsch. Med. Wochenschr.*, No. 27, 1887.

FOUR polemical papers concerning the bursa pharyngea, but only of personal interest to the authors. MICHAEL.

LARYNX.

PICHEVIN. — **Anæsthesia and Tracheotomy.** *Gaz. des Hôp.*, 4 *and* 11, *June*, 1887.

THE following are the conclusions arrived at by this writer, in respect of the recent discussion at the Société de Chirurgie (see this Journal, pp. 192 and 231).

1. Chloroformization seems to be the usual practice abroad (*i.e.*, in all countries except France) when it is desired to open the laryngo-tracheal passages.

2. Anæsthesia is not as dangerous as might be thought; it has the advantage of calming laryngeal spasm, and suppressing agitation on the part of the patient.

Anæsthesia is indicated—(1) in the operation of tracheotomy; (2) in cases of foreign bodies in the absence of extraction; (3) when the surgeon fears inability to keep his patient quiet; (4) when the thickness of the soft parts to be cut through is considerable; when the larynx is steadied with difficulty; the prominent regions are not well determined; (5) lastly, and above all, when one has not at disposition a sufficient number of intelligent assistants. JOAL.

AUDRY.—**Tracheotomy in a Case of Œdematous Laryngitis of Tubercular Nature.** *Société Méd. de Lyon, March*, 1887.

THE subject survived three months, and succumbed to numerous hæmoptyses. Audry exhibited the larynx, which showed deep and extensive lesions. The canula was removed on the tenth day after the operation, and the wound healed without any tracheal contraction. JOAL.

SMITH, S., and WALDO.—**Three Cases of Intubation of the Larynx.** *Lancet, June* 18, 1887.

THE authors conclude by remarking that in each of the cases they would have been absolutely compelled to perform tracheotomy had not intubation been substituted. Their object is rather to show that intubation of the larynx is in some cases attended with perfectly satisfactory results, but yet has dangers of a somewhat more serious character than some recent writers would lead one to suppose.

GREVILLE MACDONALD.

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SOTA, RAMON DE LA.—Intubation of the Larynx in Croup. *Revista Médica de Sevilla*, No. 8, 1887.

THE author records a case of intubation with immediate good results, and relief of the intense dyspnœa at once. The diphtheritic process having, however, extended to the lower air-passages, the little girl died sixty hours after the performance of the operation. Sota gave a clinical lecture on the case in the Polyclinic of the Medical School of Seville, in which the following conclusions were drawn:—1. Whenever asphyxia threatens, by reason of respiratory impediment in the larynx or trachea, laryngeal intubation and tracheotomy are indicated, and one or other must be performed when the life of the patient is in danger. 2. When the dyspnœa depends on bronchial obstruction, no good result can be expected from intubation or tracheotomy; we also observe its uselessness when the diphtheritic swelling has invaded the lower air-passages after having operated on the patient. 3. Laryngeal intubation and tracheotomy are equally efficacious. 4. Intubation is preferable to tracheotomy because it does not risk the life of the patient, causes no pain, is performed without making any wound, does not require the permanent care of an instructed person, convalescence is more rapid, and no after-effects are left. 5. Although the operation is very easy it requires, as all operations do, a certain degree of dexterity which may be obtained by practice on the cadaver or an artificial apparatus.

RAMON DE LA SOTA.

NEWMAN, DAVID (Glasgow).—**Splinter of a Rifle Ball Removed from the Left Ventricle of the Larynx.** *Glasgow Med. Jour.*, *May*, 1887.

EXHIBITION of specimen before the Pathological and Clinical Society of Glasgow, November 22, 1886. HUNTER MACKENZIE.

BOYCE, CHARLES (Maidstone).—**Foreign Body in the Air-Passages.** *Lancet*, *May* 28, 1887.

THE mouthpiece of a pipe, about an inch long, and one-third of an inch diameter, was broken off in the patient's mouth by a fall, and was not seen again. Only on lying down at night the breathing became whistling; there was no cough, impairment of breathing, or pain. A laryngoscopic examination was not made. More than three weeks after the occurrence, during a violent fit of coughing, the piece of pipe was brought up, and violent pain at the sternal end of the right clavicle was experienced. The author thinks that the foreign body had been lodged crosswise in the trachea at its bifurcation, its position being slightly altered on lying down.

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COHN, EUGEN.—On the Results of Extirpation of the Larynx. *Deutsch. Med. Wochenschr.*, No. 29, 1887.

FOUR cases of extirpation for carcinoma operated on by Dr. Hahn.

1. A shoemaker, sixty years old. For six months he had pains in the larynx and hoarseness. He had also a tumour, of which a piece was removed by a laryngologist, who diagnosed carcinoma. Tracheotomy and extirpation of the larynx. Tamponnade of the trachea by the press-sponge canula (invented by the reporter). The next day the press-sponge canula was removed, and a canula covered with iodoform gauze introduced. Third day, death from pneumonia and erysipelas of the face.

2. Patient fifty-one years of age. A tumour covered the larynx. Larynx sensible to pressure. No enlarged glands. Deep tracheotomy. Introduction of the iodoform press-sponge canula. Extirpation of the whole larynx. Artificial larynx. Cure.

3. Patient thirty-seven years old. He had for two years hoarseness, which always improved if a piece of a tumour, which existed in the larynx, was taken away. Now he has hoarseness, stridor, and the laryngoscope shows an ulcerating tumour on the right side of the larynx. Tracheotomy, tampon canula. Exsection of the larynx. Scraping with the sharp spoon. Cauterization with the Paquelin cautery. Iodoform gauze tamponnade. The canula could be removed after some weeks. Cure.

4. A patient of fifty-two years of age with carcinoma. Extirpation. Cure.

MICHAEL.

DUPONT.—Extirpation of the Larynx. *Rev. Méd. de la Suisse Romande, March*, 1887.

BILLROTH first practised this operation. Up to 1884, sixty-eight operations had already been done (not counting those performed in France). Labbé, in a recent communication, counsels preliminary tracheotomy to be performed some time in advance of the major operation. The author think the operation should be performed as soon as the disease is recognized. He also thinks that the use of Trendelenberg's canula would avoid preliminary tracheotomy. The author relates the notes of an operation performed by himself, in which he commenced to dissect out and separate the trachea from the œsophagus, intending, after it had been cut through, to suture it to the edge of the wound at the sternal fourchette. He was forced, however, to introduce a canula to prevent asphyxia. The trachea being cut across and fixed to the wound, very slight hæmorrhage occurred, which was easily controlled, and the larynx was then extirpated rapidly without hæmorrhage, along with the epiglottis and a portion

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of the pharyngeal wall, which was involved by the growth. Several indurated glands were removed from the submaxillary region. The wound—from the hyoid bone to the sternal fourchette—should be left open and covered with iodoform gauze, placing a pad of ordinary gauze in the superior part of the pharynx. Nothing should be given to eat for twenty-four hours. A sound was introduced into the pharynx, but had to be removed. It was, however, re-introduced several times daily with facility. The author thinks that Trendelenburg's canula should not be left in for fourteen or fifteen days, as has been proposed, since tamponning the wound will suffice to keep the secretions of the wound from entering the trachea.

Many patients have survived this operation 1, 1½ years, and one for 8 years.

In the author's successful case an artificial larynx was tried, but without success, by reason of the saliva which filled the instrument.

ARIZA, RAFAEL.—Syphilitic Laryngitis. *Revista de Laringologia Otol. y Rinol., May*, 1887.

Ariza believes that laryngeal syphilis has not any constant relation in form with the manifestations seen elsewhere. The most usual form of secondary syphilis observed by him was that of mucous patches, which have not in the larynx their typical appearance, but present a tendency to lineal form and to ulceration. In the larynx, syphilitic erythema is oftener combined with patches than in the pharynx. In many patients, the patches observed on the cords, and on the arytenoids, were whitish round spots of the size of a lentil, and in only one patient were they observed upon the epiglottis, as small and irregular erosions of granular surface, and white and red colour.

As a means of discrimination of these patches from tuberculosis, we look for other patches in the mouth and fauces, and note also that there are not any hypertrophied tissues in the larynx as in tuberculosis. Syphilitic patches further develop on the superior surface of the vocal cords, the tubercular ulcer, on the contrary, being situated on their edges. When patches exceptionally assume this latter position, they are distinguished by more or less remarkable vestiges of the syphilitic erythema which is always associated with them. Syphilitic erythema also occurs sometimes without the complication of patches, and it differs from simple catarrhal laryngitis by its colour, the irregular mode of its distribution, and the freedom of the mucous membrane from mucosities. In secondary syphilitic laryngitis there is a special hoarseness; the voice sounds rough, coarse, resonant, and strong like that of a drunkard, and it is not a voice of small intensity. The author relates several cases in order to show that tertiary laryngeal

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syphilis is a very dangerous disease, which may cause death, even while yet in a period of curability, if tracheotomy be not performed at the right time; that its diagnosis can be made even in the absence of antecedent evidence; that cure is sometimes obtained completely; that in other cases the patient gets rid of the syphilis, but is compelled to wear the canula all his life; and finally, that in spite of tracheotomy, death may occur when necrosis has affected the whole or greater part of the laryngeal skeleton. RAMON DE LA SOTA.

GRÜNWALD.—On the Combination of Laryngitis and Tuberculosis in the Larynx. *Münchener Med. Wochenschr.*, Nos. 21 and 22, 1887.

REVIEWING the literature of the subject the author draws the following conclusion: If in a larynx is found, besides distinctly radiated cicatrices, progressive destruction, especially on the anterior portion of the epiglottis, or if there are papillary and larger tumours of the posterior wall which are increasing or recurring, the diagnosis of a combination of syphilis and tuberculosis is certain. He relates three very interesting cases of this combination. In the cases formerly published by Schnitzler, this author speaks of transformation of syphilitic ulcers into tubercular. The cases here related show that ulcers of both kinds can exist together. The diagnosis is confirmed by treatment, since anti-syphilitic treatment will cure the ulcers, but tubercular ulcers are always progressive and uninfluenced by such medicaments. MICHAEL.

FISCHER (Meran Gleichenberg).—**On some rare Cases of Laryngeal Diseases.** *Wien. Med. Woch.*, Nos. 17 and 18, 1887.

1. CIRCUMSCRIBED gumma in the larynx in a syphilitic patient of forty-one years old. Round tumour on the posterior wall, looking like a tuberculous affection. The prompt effect of pot. iod. confirmed the diagnosis of syphilis.

2. Laryngitis syphilitica with ulceration of the epiglottis, stenosis of the larynx, and two gummatous tumours of the larynx; cured by local treatment and pot. iodide.

3. Dermoid cyst of the left vocal cord opened with a laryngeal knife. The tumour was fusiform and as large as a hemp seed.

MICHAEL.

BARLOW, W. H. (Manchester).—**On Respiratory Convulsions, with Especial Reference to Laryngismus Stridulus and Allied Conditions in Infancy.** *Brit. Med. Journ., June* 18, 1887.

OF the deaths of infants under one year of age in England, 73·3 per cent. are returned as "convulsions." Convulsions are in themselves

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rarely the cause of death, and when so this is due largely to spasm interfering with respiration and circulation. Hughlings Jackson has pointed out three levels of motor centres, the first and lowest being the grey cells of the anterior cornua of the spinal cord, medulla, and pons. The nuclei of the ocular muscles in the floor of the aqueduct of Sylvius are the highest of these lower motor centres. This level also includes the centres for respiration and circulation, nutrition, and vaso-motor actions. The second, or middle level, includes Hitzig and Ferrier's motor centres in the cerebral cortex, the sensory region, and Horsley and Schäfer's trunk centres. The third, or highest grade, comprises the brain in front of the motor centres, viz., frontal and prefrontal lobes, and the part behind the middle sensory centres. The first and lowest level represents all parts in co-ordinated groups; the second represents the same parts, but doubly indirectly and in co-ordination of greater complexity; the third, or highest level, represents them trebly indirectly and in still greater complexity of co-ordination. There are three kinds of fits: first, epileptic fits depending on discharging lesions of the highest centres; second, epileptiform, depending on similar lesions of the mid-centres; and third, respiratory convulsions due to discharging lesions of the lowest centres, and first in evolution. Laryngismus stridulus, spasmodic asthma, fits in whooping-cough, &c., are examples of the lowest grade convulsions; convulsions commencing in one hand, and "epileptiform," are examples of the second grade lesions; and those commencing with epigastric or cephalic sensations, of the highest level fits, or epilepsy proper. In a young child the lowest grade centres are the most active; the higher centres, being little developed, have little power to check their discharging lesions. These convulsive fits mostly occur in young children who are rickety, and probably often from venosity of the blood (from deficient aeration due to imperfect action of the chest walls); but still more often they are due to anæmia from whatever cause. Any peripheral irritation acting upon these preponderant low level centres also excites convulsion, *e.g.*, gastric disturbance. There is also predisposing cause in the centres themselves of hyperexcitability. Dr. Barlow refers to the frequency of spasm about the muscles of the face, and of "tetany" with this condition. He considers the disease hereditary. In 114 cases, 70 boys were affected, and only 44 girls. In 98 of these cases rickets was noted, and 11 died.

The author thinks that whooping-cough is closely allied to this condition, and convulsions are often present in the more severe cases. Such convulsions also often usher in or complicate severe diseases

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of the respiratory organs. Emotion, crying, fright also induce attacks where there is predisposition. Toxic conditions of the blood, such as lead poisoning, also produce spasmodic affections of the larynx. In laryngismus we have two main factors—rickets and venosity of the blood—and any slight peripheral cause, *e.g.*, flatus, is sufficient to induce an attack. In whooping-cough there is specific irritation of the entrance of the larynx.

Every obstruction to respiration should be overcome, and pure warm air is essential. During a convulsion a starch enema of one to three grains of chloral for a one-year-old child is beneficial. Reflex irritations, swollen gums, ascarides, overloaded stomach, &c., should be treated efficiently. Hygienic conditions should be obtained; milk, raw meat, lime water, and cod-liver oil be administered. The bromides with chloral are well borne by children.

CHEADLE, W. B. (London).—**Clinical Lecture on Pathology and Treatment of Laryngismus, Tetany, and Convulsions, with Illustrations of Cases.** *Lancet, May* 14, 1887.

THESE disorders are different expressions of the same constitutional, morbid state especially associated with the first two years of life, with the period of rickets and with the period of dentition, all being distinguished by the occurrence of muscular spasms. They are the positive, comparative, and superlative of the convulsive state in children. A predisposing state exists in a condition of hyper-excitability of the nervous system. Two cases of laryngismus are quoted at length, in which the glottic spasm was excited most violently by crying and laughing, also occurring chiefly on waking (from crying). Both children suffered from rickets, and the second case had tetany (thumbs drawn tightly into the palm, which was arched longitudinally, fingers adducted and overlapping; feet arched and toes flexed; the cramps causing pain).

The family history of this case was instructive. Five living children had been born, all plump and apparently healthy. The first had general convulsions at three months, and died in an attack of laryngismus at six months; the second died at six and a half months from diarrhœa and wasting without laryngismus or convulsions; the third is alive, but when an infant had convulsions while teething; the fourth had "croup" at four months, and died at one year and ten months from general convulsions. The tendency to this condition had, the author thinks, been developed by defective nutrition, from hand-feeding. In the adult tetany is not accompanied by laryngismus, since in the infant there is greater reflex nervous

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excitability. Even tossing a healthy infant into the air, or a violent fit of passion will cause glottic spasm.

The carpo-pedal contractions so often noted in laryngismus, and supposed to be a symptom of laryngismus (by Ley, West, Hillier, Meigs, Pepper), is really tetany, and the minor symptom is overshadowed by the major. In adults tetanoid contraction alone is the expression of the same condition. The affection occurs in children in nearly every instance under three years of age—the period of rickets and dentition. In every instance seen by the author, rickets has been present. In all Abercrombie's fourteen cases there was rickets, and in all the latter's and also the author's cases, tetany was combined with laryngismus. Dr. Cheadle thinks the latter is invariably bound with rickets, and convulsions are an expression of the same rachitic condition. Gee found rickets in forty-eight cases out of fifty, and noted general convulsions in nineteen out of fifty cases of laryngismus. Rickets is not mere defective nutrition of bone, but of *all* structures, and arises from deficiency of animal albuminates and fats. Consequently, treatment should be directed to this point, both on the part of the infants and the nursing mothers. So long as the excessive irritability of the motor nervous system is evidenced by carpo-pedal contraction, and attacks of laryngismus remain, so long is the child in danger from spasm of the glottis fatally prolonged, or supervention of general convulsions. The treatment of laryngismus should be a dash of cold water in the face; a hot sponge to the larynx; a finger in the throat to induce vomiting; chloral and bromide in the intervals of attacks: high feeding—milk cream, raw meat, infants' food, entire wheat flour, cod-liver oil, syrup of lacto-phosphate of lime and iron. Brandy ℥ss. to ℥j. in half an ounce to one ounce of food every four or six hours, increases blood-flow to anæmic centres, and is a sedative to children.

NEWMAN, DAVID.—A Lecture on Some Points in relation to the Diagnostic Significance and Therapeutic Indications of Laryngeal Symptoms resulting from Pressure of Aneurisms upon the Vagus and Recurrent Laryngeal Nerves. *Brit. Med. Journ. July* 2, 1887.

THE purpose of this paper, as the author states, is to represent the general and important facts, the finer distinctions being left out of account. Four highly instructive cases are related, the author's remarks bearing specially upon four points. The first case is one of unusual interest, described by the author as "Aneurysm of innominate artery and descending aorta. Paroxysmal dyspnœa from unilateral spasm of right vocal cord, followed three months later by bilateral spasm of adductors" (due to peripheral irritation of the

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right vagus), "and at a more remote date by bilateral paralysis of adductors," due to structural changes in the nerve centres. He shows (1) that aneurism may exist giving rise to laryngeal symptoms only; (2) that in the early stage pressure may cause paroxysms of the most urgent dyspnœa; (3) that at a later stage paralysis occurs, usually limited to one side, characterized by phonative waste of breath and imperfect cough, but without dyspnœa, except when reflex spasm is indicated on the opposite side; and (4) that in certain cases tracheotomy should be performed actually as a remedial measure. In the course of his remarks he discusses the cause of the attacks of dyspnœa. He quotes the experiments of Rosenthal, Rutherford, Waller, &c., and from them draws the conclusion that pressure upon one recurrent laryngeal nerve is not likely to lead to serious dyspnœa, while, on the other hand, pressure on the vagus frequently leads to serious obstruction, by inducing spasm of the adductor muscles on both sides. He next reviews the diagnosis between glottidean obstruction and that arising from pressure on the air-tubes, and points its importance in relation to tracheotomy. In laryngeal dyspnœa the head is thrown backwards, the larynx descends during inspiration, the stridor is associated with a metallic ring, and the voice and cough are altered or suppressed. When the lumen of the trachea is lessened, on the other hand, the head may be thrown forwards, the larynx remains stationary, the stridor is whizzing or sipping, and the voice is weak but not otherwise altered. In conclusion the author discusses the question of tracheotomy. He remarks that experience has taught him that in a large number of cases of aneurism death from hæmoptysis is preceded by threatening of laryngeal suffocation; and in many cases he has been convinced that the rupture of the sac has been directly caused by the spasmodic attacks of dyspnœa. He affirms that tracheotomy should be resorted to whenever it is evident that the patient's life may be placed in jeopardy by laryngeal dyspnœa. GREVILLE MACDONALD.

SCHÄFFER (Bremen).—**Aneurysma of the Aorta Anonyma.** *Monats. für Ohrenheilk.*, No. 1, 1887.

Two cases in which the diagnosis could only be made by laryngoscopical examination. In the first case the patient, sixty years of age, had paralysis of the left vocal cord. Some days later, the patient had a hæmorrhage; with the laryngoscope a bleeding point could now be seen in the wall of the trachea. It could be accurately determined that that was the place of the perforation. A month later the patient died of hæmorrhage. In the second case there was also paralysis of the left vocal cord, but no more severe symptoms.

MICHAEL.

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KIDD, PERCY.—Bilateral Paralysis of the Dilator Muscles of the Glottis, with Subsequent Paresis of the Constrictors. *Lancet, July* 16 and 23, 1887.

THE first half of this paper is a *résumé* of the various theories and experiments so often detailed. The author quotes Morell Mackenzie at length, enunciates Rosenbach's and Semon's views as to special vulnerability on the part of the abductor fibres. He allows that these authors may have arrived at their conclusions independently. Next Krause's views are necessarily advanced, and his experiments detailed at some length. Other authors, *e.g.*, Fraenkel, Seifert, Simanowski, are cited, and the author proceeds to relate his case. The patient presented at first the appearance of bilateral paralysis of the dilators, to which was added subsequently paresis of the constrictors of the glottis. The anatomical relations of the new growth found at the necropsy explain the succession of symptoms. Both vagus nerves were compressed above the origin of the recurrent laryngeal nerves, one of the latter being involved. The author opines that Rosenbach and Semon have proved their point as to the vulnerability of the abductor nerve-fibres; but an explanation, he admits, is still wanting.

GREVILLE MACDONALD.

GOUGENHEIM, Dr.—Supplementary Glottides. *Revue Mensuelle de Laryngologie, March*, 1887.

THE author relates a case in reference to what for some time he had believed possible, viz., the existence of a supplementary glottis. Having had, however, the opportunity of examining the patient repeatedly, he has become assured of the existence of a respiratory glottis almost normal, which for some days was hidden by the supposed supplementary glottis. Gougenheim then reports two other cases, published in the *Annales des Maladies de l'Oreille et du Larynx*, by Dr. Cadier (1884), and by Dr. Garel (1887). He concludes from these three observations that it is not proved that the glottis can actually be replaced after its destruction by a new glottis, seeing that complete destruction of the vocal cords had not been established in any of the cases. But it is possible that the relations of the neighbouring parts may, in a pathological condition, acquire a physiological importance by augmenting the tones feebly emitted by the altered glottis. At the same time this effect cannot be produced when the condition of the surfaces destined to this *rôle* are the seat of an inflammatory or rather active process—a fact proved not only by the cases cited but by other very numerous instances where aphonia is induced every time the superior vocal bands are actively congested, although the true vocal cords are normal in their colour and function. JOAL.

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OPPENHEIM (Berlin).—**Case of Tabes combined with Gastric and Laryngeal Crises and Spasm of Deglutition (Pharyngeal Crises).**

THE pharyngeal crises are spasms of deglutition occurring twenty-four times a minute whenever the patient made an attempt to swallow. The attack lasted ten minutes. The attack occurred spontaneously or upon pressure on a painful spot on the side of the larynx. This symptom has not been described before. MICHAEL.

BRESGEN.—On Premature Fatigue of the Voice (Mogiphonia of B. Fränkel). *Deutsch. Med. Wochenschr.*, No. 19, 1887.

THE author has sometimes seen cases of mogiphonia, such as are described by B. Fränkel. These cases were mostly combined with affections of the nose. The best treatment for the vocal condition is to treat the nasal affection. This condition is not to be considered as originating by reflex neurosis, but from mechanical impediment to nasal respiration. Some of the patients recognized that they were fatigued by the fact that occlusion of the nose rendered production of sounds difficult. MICHAEL.

JACOBSON, ALEXANDER (St. Petersburg). — **Structure and Function of the Thyro-Arytænoid Muscle.** *Archiv für Mikroskop. Anatomie, tome* xxix.

JACOBSON observed a case in which the arytænoid cartilages remained quite immovable in perfect adduction both during phonation and expiration, and also during the deepest inspiration. The left vocal cord, during inspiration, remained immovable in the median line, but the right one, at the same time, was contracted so that its margin became concave, the glottis consequently becoming plano-convex. The case was distinguished by this form of the glottis produced only during inspiration from cases of paresis of the thyro-arytænoid muscle, in which the glottis remains plano-convex in all attempts at phonation.

As the distribution of the thyro-arytænoid muscle is not universally agreed upon, the author examined very carefully the topographical distribution of the isolated fasciculi of the muscle. He found the longitudinal fibres which have been described by all authors, and besides these he observed fasciculi passing in different directions; some starting from the processus vocalis and the external surface of the inferior part of the arytænoid cartilage turned up in an inward direction, to the free margin of the vocal cord, and ended here in oblique manner in parallel rectilinear fibres, which penetrated the tissue of the vocal cord like the oblique teeth of a comb. In many cases these fasciculi were inserted into the vocal cord immediately in front of the point of the processus vocalis, probably

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originating from the crico-arytænoid lateralis muscle. Another portion of these fasciculi, starting from the extreme margin, and from the inner and fore part of the processus vocalis, pass behind and to the outer side, and assist, according to Jacobson, by their contraction, in the abduction of the arytænoid cartilage, so that the opening of the glottis is not accomplished exclusively by the posticus muscle. Jacobson attributes to these muscular fasciculi an important effect upon the changes in the elevation of the sound, and compares it to that which is produced by moving and pressing the finger upon a fiddle-string whilst playing it. These fasciculi would, therefore, probably be only found in the well-developed larynges of singers. H. K.

POIRIER.—Lymphatics of the Larynx. Lymphatics of the Subglottic Region. Pre-laryngeal Gland. *Ann. des Mal. de l'Oreille, du Larynx, etc., May,* 1887.

THE lymphatic system of the larynx is remarkable for its development. There are two regions, one supraglottic, in which the lymphatics are extremely rich, the other subglottic, in which they form a network with large meshes.

The lymphatic network of the subglottic region of the larynx is an extremely rich interlacement of vessels, the mucous membrane almost disappearing when they are injected. It is continuous with the lymphatic network of the trachea. Above it reaches the free edge of the inferior vocal cord, and is continuous with the network of the ventricular region. It forms vertical vessels at the angle of insertion of the vocal cords and thyroid in front, and on the internal face of the arytenoids behind, passing into the vessels of the ventricular region.

Lymphatics of the ventricular region.—This is a rich network, continuous with those of the upper and lower glottic regions.

Lymphatic trunks.—These are superior and inferior. The former are sufficiently well known. The trunk vessels which proceed from the subglottic region have escaped the observations of anatomists; three or five in number, they traverse the crico-thyroid membrane and pass to a gland in front of this membrane, the pre-laryngeal gland, or into lateral glands, on the lateral and inferior regions of the larynx between this organ and the carotid.

The pre-laryngeal gland.—This is not mentioned in text-books. It exists in about 50 per cent. of bodies examined. Its size varies with age of the subject. It is placed in the middle of the fat and arterial and venous branches which fill the **V** caused by the crico-thyroid muscles. Sometimes (1 in 6) there are two glands, and when this gland is absent, the laryngeal trunk vessels of the subglottic region having

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penetrated the crico-thyroid membrane, pass to the inferior lateral chain of glands mentioned before. The laryngeal mucosa thus possesses a rich lymphatic supply, occupying the superficial layer of the mucosa, developed equally in the vestibular, ventricular, and subglottic regions, and being very thin at the free edges of the vocal cords, especially on the under surface. The large trunks follow the course of the laryngeal arteries. A certain number of sub-hyoid abscesses are probably suppurative adenitis of these laryngeal glands.

NECK, &c.

FUHR.—Extirpation of the Thyroid Gland. *Archiv für experimentelle Pathol. u. Pharm.*, No 21.

COMMUNICATION of several experiments made upon dogs which prove that after extirpation of the whole gland death followed in every dog; and further that death is caused by the removal of the thyroid, since other operations, such as cutting the nerves or arteries, do not give rise to the same symptoms. Total extirpation of the thyroid is therefore unphysiological, and is not a justifiable operation on the human subject. MICHAEL.

REVERDIN, L.—Contribution to the Study of Myxœdema Consecutive to Total or Partial Extirpation of the Thyroid. *Rev. Méd. de la Suisse Romande, May and June*, 1887.

IN 1882, the author drew attention to a cretinoid condition consecutive to removal of the thyroid, and then stated that he had ceased to remove the whole gland, in the face of these untoward results, contenting himself with enucleating part or removing one lobe only. In the following year, the author, along with Auguste Reverdin, in a study of twenty-two cases operated on by them, called attention to the resemblance of this condition with the "pachydermic cachexia" of Charcot and Gull, and "myxœdema" of Ord, and they proposed the term "operative myxœdema." Kocher's work (to whom the author had communicated his observations in 1882) appeared in 1883, and this author found only two cases out of a total of eighteen total extirpations had escaped this condition, and both these suffered a recurrence of their goître. Kocher proposed the term "cachexia strumipriva." These results have been plentifully confirmed by other surgeons in various countries. The author gives a complete literary *résumé* of the question. Kocher reported, in 1885, thirty-four cases operated on, of which twenty-four had developed cachexia strumipriva, and later he stated his opinion that in young subjects not having yet attained full development, total extirpation of the goître was *always*

https://doi.org/10.1017/S1755145500159809 Published online by Cambridge University Press