granulations, due generally to caries of the subjacent bone. The fibromata had a well-marked epithelial covering (with prickle cells), and the occasional recurrence of cysts in them was explicable by the degeneration of ingrowing epithelial columns. *Dundas Grant.*

Lane, Arbuthnot (London).—*Antrectomy as a Treatment for Chronic Purulent Otitis Media.* "Arch. of Otol.," April, 1892.

MR. LANE has, in a "very considerable number of cases" of chronic purulent otitis media, chiselled open the mastoid and removed the osseous septum between the external meatus and the antrum. He has then inserted a metal tube in the opening thus made, and (by gradual shortening) has allowed the cavity to fill from the bottom with dense fibrous tissue. The tympanum was also emptied of its contents, and every trace of the membrane entirely removed. Careful cleansing, the use of an antiseptic instillation, and the insertion of a cotton-wool plug, or Ward Cousins' artificial drum, constitute the subsequent daily toilet of the ear operated on. [Mr. Lane has undoubtedly shown the feasibility of this operation in ordinarily skilled hands, but the indications are very meagrely described. We trust that few aural surgeons have on their hands any "very considerable number of cases" justifying this somewhat severe, though scientific, radical treatment.] *Dundas Grant.*

ASSOCIATION MEETINGS.

THE PARIS SOCIETY OF LARYNGOLOGY, OTOLOGY, AND RHINOLOGY.

Meetings, March and April, 1892.

Non-Traumatic Deviations of the Nasal Septum.—Classification.—Embryology. General Rules for Treatment. By DR. HENRI CHATELLIER.

From the study of sections of nasal fossæ in human embryos of three to four months' gestation, the author has determined that ossification has commenced in the vomer, upper and inferior maxillæ, and the middle and inferior turbinateds, the ethmoid being at that time completely cartilaginous. The perpendicular plate at its centre presents a considerable thinning; *this is then its weak spot* The quadrangular cartilage is prolonged in front of the perpendicular plate, and is insinuated like it between the two laminæ of the vomer. The latter is formed by a body of small height; and at its upper border it is divided into two laminæ, which separate to form an open antero-posterior furrow above, in which is placed the inferior edge of the perpendicular plate and of the quadrangular cartilage. The septum may then be considered to be constituted by two segments; the upper one formed by the perpendicular plate and the quadrangular cartilage, the lower one by the vomer. These two segments are united to form the ethmoido-chondro-vomerine articulation, the means of union being the

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connective tissue covering the furrow of the vomer. *This articulation is the second weak spot of the septum.*

The inferior wall of the nasal fossæ is formed by the palatine apophyses, of which the two upper and inferior laminæ, not yet joined to each other, advance towards the middle line in front of their congeners of the opposite side. But the right and left osseous plates are not yet in contact. Between them there exists a space, filled with connective tissue, on which rests the inferior edge of the vomer. This point is the weak spot of the osseous walls of the nasal fossæ.

Remembering that the perpendicular plate and the quadrangular cartilage are developed from the median bud of the face and the upper maxillæ and their palatine apophyses from the lateral buds, this difference of origin is not without influence on the later development. Whatever causes modify the parallel development of the septum (median bud) and the lateral walls of the nasal fossæ (lateral buds), we may conceive that in certain cases the *septum may be too long for a cavity the vertical dimensions of which are proportionally too small.* The septum will therefore be obliged to be outside the cavity which encloses it, or must diminish in length.

1. *The septum projects from the nasal fossæ.*—The septum, too long, presses above (A) and below (E). But above we know that the upper border of the perpendicular plate is strongly compressed into the base of the skull, and that below is a weak point (E). It is effectively at this point that the septum is insinuated between the palatine apophyses and makes at the vault of the pharynx an antero-posterior projection, which old authors considered to be a sign of hereditary syphilis. This hernia of the inferior edge of the septum is then, compensatory for its vertical dimensions, too large for the cavity which encloses it.

2. *The septum is diminished in length.*—The vertical dimensions of the septum are too great, but the walls of the nasal fossæ everywhere are resistant. In order to be properly lodged it is necessarily diminished in length. Two processes conduce to this result :—

(*a*) The septum is buried in itself, and *gains in thickness* what it loses in length, thus diminishing in calibre one or both nasal fossæ.

(*b*) The septum is *incurved*, making a projection into the nasal fossa and diminishing its transverse diameter, the fossa of the opposite side being increased proportionately. This is deviation without thickening. We know that the perpendicular plate of the ethmoid is strongly joined to the base of the skull, and that at its centre it presents a notable thinness, that its inferior border articulates with the vomer by a zone of connective tissue, that the inferior edge of the vomer also articulates with the palatine apophyses by means of connective tissue when deviation is produced, the upper edge of the perpendicular plate is fixed, an angle of curvature is made at the level of the thinning of the perpendicular plate (B), a compensatory curvature is produced at the ethmoido-chondro-vomerine articulation ; the vomer itself participates in the displacement, either by lateral projection of its articular plates (V), or, more rarely, by obliquity of the whole bone, the movement passing into the vomero-palatine articulation (E). Thus is constituted the deviation, the projecting angle of which, oblique in front and behind, and from above below, is formed by the articulation of the perpendicular plate and the quadrangular cartilage on the one hand, and the upper border of the vomer on the other hand.

In this variety there is a diminution of the transverse diameter of the nasal fossa where the projection exists, and proportional increase of the other fossa.

Certain patients present a deviation complicated with thickening.

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The feeble points of the septum have their minimum of resistance in the fœtus; they become more rigid as ossification and suturing of the bones occurs, but they preserve a diminished resistance through life.

Five schematic figures appended by the author will easily make comprehensible the state of the normal and abnormal septum.

Treatment.—Abnormal septa become pathological only when they cause difficulty of passage of air during respiration. In practice all the varieties referred to previously may be reduced to two.

1. Thickened septum.

2. Incurved septum, but the resection of the projecting portion would cause an orifice of communication between the two nasal fossæ.

1. The thickening will be dissipated by numerous methods (electrolysis, cutting forceps, chisels, Bosworth's saw).

Bosworth's operation is the best. It is easy, rapid, without danger, and whether the thickening be cartilaginous, osseous, or osseo-cartilaginous permits the desired end.

2. In incurvation without thickening the difficulty is greater, for every loss of substance of the septum, if the soft parts are not preserved, will be followed by perforation.

Compression gives no result, the too-long septum regaining its former curvature when the compressors are removed.

The indication is to diminish the vertical dimensions of the septum, respecting the soft parts. With this end in view, Dr. Chatellier, in 1887, devised and practised the following operation, which seems to have been forestalled by Petersen ("Berliner Klin. Woch.") in 1883, and Cholewa ("Monats. für Ohrenheilk.," Sept. 1891) seems to have re-discovered it. The operation is performed without enlarging the natural orifice of the nares. After cocaining both sides of the septum, a first horizontal incision, preferably with a bistoury, is made parallel with the insertion of the septum in the floor, and a second incision, vertically, is made in the prominent part of the deviation—with a sharp instrument the mucous membrane, periosteum, and perichondrium are cut through together, thus exposing the whole part of the projection. The septal skeleton is then cut through to the under surface of the perichondrium of the opposide side, thus avoiding perforation of the mucous membrane of the opposide side, which is difficult when the curvature is sharp. Through this orifice the septum is separated from the integuments, then with chisel and punch the skeleton is resected as much as possible, thus removing the whole of the projecting portion. This part of the operation, easy when involving only the quadrangular cartilage, is much more difficult when the vomer or perpendicular plate of the ethmoid has to be resected. When all the obstruction is removed, it is only necessary to replace the mucous flaps side to side (*periosteum against periosteum*). An iodoform tampon suffices to maintain the parts in contact, and no suturing is necessary. The first tampons are removed at the end of forty-eight hours, the second after two days, boracic ointment being then employed. After the first tamponing the parts are already healed together without any perforation. The safeguards against this are better in this operation than in Krieg's, who removes the mucous membrane of the projecting side. The author has performed the operation five times with complete success. In a sixth case, where the curvature produced a very acute angle, a small perforation resulted.

In mixed cases (deviation with thickening) it will be necessary to determine if simple ablation of the thickening will give a sufficient passage, or if it will be necessary to have resource to Petersen's operation.

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Critical Study on the Etiology of Deviations of the Septum, with Presentation of a Specimen. By Dr. POTIQUET.

From observations upon the living subject and the cadaver, it is true, as Schech remarks, that a straight and symmetrical septum in man, at least the European, is quite the exception.

The author discusses critically the various theories which have been propounded — development of the septum among bones which circumscribe it, pressure, traumatism, lying on the same side always, the use of the handkerchief, pressure from hypertrophied turbinateds, syphilis, scrofula, adenoids, rachitism, exostoses of the septum and organ of Jacobson, prolonged obstruction from paralysis of the dilators of the nose, etc.—and believes that the defect of harmony between the development of the septum and that of its osseous environment is at the root of the matter. It is by comparative anatomy and the study of the conditions to which the septum is subjected in its growth that we must look for elucidation of the question. This lateral incurvation, more marked in man than woman, in superior than inferior races, oftenest absent in anthropoids, appears to be a fact of evolution.

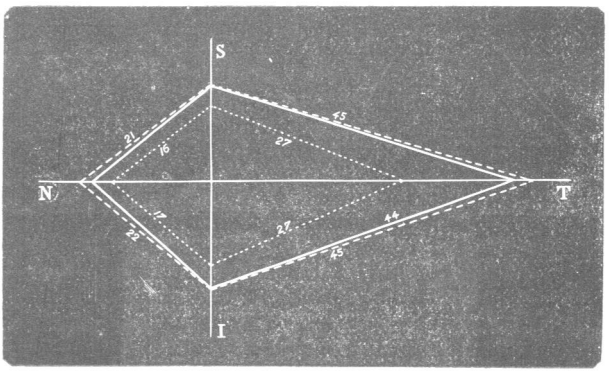
Ecker demonstrated that under the influence of growth of the cerebral mass the schema formed, according to the theory of Oken, by the cranial vertebræ tends to incurve the more in the antero-posterior sense as one rises in the scale of mammals, attaining its maximum of inflection in the European. Lissauer proved that this movement of inflection continues in man from birth to adult age, and that in the same race and in subjects of the same sex it may vary in amplitude and reach a greater or less degree according to the subject. This movement of inflection is expressed by a growth of the superior maxilla proportionally much greater in the vertical than in the transverse plane. Comparing the relative dimensions of this bone in the new-born and the adult, would not lateral incurvation of the nasal septum proceed in part from the difficulty, probably variable according to the individual, which the cartilaginous lamina may find in accommodating itself to the movement of antero-posterior inflection, varying in different subjects, which the cranio-facial axis submits to from birth to adult age? Researches undertaken at the museum and amphitheatre of the hospital would lead to this conclusion, which the author promises to elucidate in a succeeding publication.

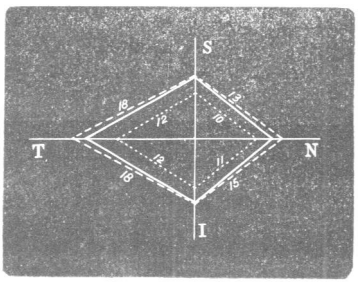
Dr. GELLÉ reported a case of *Hemi-Anæsthesia of the Face, Head, and Organs of Sense in the course of Otorrhœa.*

A man, aged twenty-one, a young soldier, had articular rheumatism at nineteen, and two months afterwards (September, 1888) perceived rapid diminution of hearing, and two or three days after noticed a discharge from the left ear. After a short time all disappeared, but about every month a discharge appeared, lasting five to six days. In November, 1890, there was acute pain in the left ear and fresh suppuration. Three injections of warm boric water were given by Dr. Roy. A week afterwards, after three injections, the patient fancied he saw a veil before the left eye, the left ear becoming the seat of great pain. He at the same time noticed that he felt nothing over the whole of the left side of the face, head, and neck. Vision became gradually enfeebled in the left eye, and Dr. Roy stated complete hemi-anæsthesia of the left side of the face. Tactile, thermic and cold sensation were abolished over the whole of the left side of the head and neck as far as the clavicle. The left side of the tongue, cheeks and lips was insensible, also the anterior faucial pillar, the pharynx and arch of the palate. The functions of the right side were intact. Anæsthesia existed in the left naris, and sensibility

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was impaired also on the right side, and also in the left cornea. Complete insensibility of the ocular and palpebral conjunctiva existed. The pupil reacted well to light, but remained a little dilated. On the left side taste was abolished, and smell (tobacco and iodoform) lost on the left side. Acuity of vision was diminished below one-tenth, the patient having a vague notion of the contour of objects, and being able to distinguish with trouble the five fingers of the hand held close. Examination of the visual field gave the following results.





It is restricted on the left side just as in hysterical anæsthesias. The right eye was normal. Ophthalmoscopically the papilla and fundus were normal. There was no vaso-motor disturbance. The left side of the mouth and nares were dry. No trouble in masticating; frontal headache; no motor lesion of the face or arch of the palate. Over the rest of the body sensation and movement normal, abdominal and cremaster reflexes normal, but patellar reflexes greatly diminished on both sides.

Examination of the ear: Greenish purulent discharge, large tympanic perforation, insensibility of the auditory passages.

Treatment: Warm boracic irrigations and iodoform insufflations.

The hemi-anæsthesia decreased as the otorrhœa diminished, and on the twentieth day of treatment the patient was discharged cured of all symptoms.

There was no disturbance of equilibrium or vertigo. The labyrinth was not evidently the part affected. The part played by the suppurative otitis is incontestable, and perhaps it was an affection of the middle ear.

As the onset of the affection coincided with the application of irrigations, it is possible that these caused, through a softened and perforated tympanum, a traumatic shock to the tympanic plexus.

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Moos recorded a similar case ("Arch. of Ophth. and Otol.," 1875, pp. 102-107.)

Cannot an accident, analogous to those described under the name hystero-traumatism, be imagined? It is an inhibitory action which would be produced. The anæsthesia went beyond the extent of the limits of innervation of the trigeminal. Roy regarded this as characteristic of the hysterical nervous condition. Urbantschitsch admits the influence of irritations of the trigeminal in the genesis of these sensory affections, and similar effects have been observed by rhinologists and ophthalmologists.

The neuralgia which followed shows in these cases that the trigeminal was affected. In his work on facial paralysis, Dr. Gellé has insisted on the association of otitis, neuralgias, and paralyses of the face. The same irritation can be the point of departure of an excitation or an inhibition (Brown-Séquard).

Berger has published a case of hemi-anæsthesia in otorrhœa. Robin, in his thesis, has concluded that affections of innervation occur in one-seventh of these cases. These nervous symptoms in otorrhœa may announce complications more grave on the part of the meninges, brain and vessels, and observation shows how these symptoms may progress very insidiously. Examination of the eye has been recommended by Knapp, Moos, Kipp, Zaufal, Calmettes, Galezowsky, and Wreden, as a means of solving this difficult diagnostic problem. Moos saw a transitory hemiopia with Ménière's vertigo in a case of suppurative otitis with perforation. Hack, Berger, &c., have observed similar phenomena in affections of the nasal fossæ and sinuses.

In this case, from the absence of lesions of the fundus, from the form of contraction of the visual field, the extensive hemi-anæsthesia of the sense organs, passing beyond the limit of the trigeminal, and from the rapidity of cure, it may be concluded that the nervous complication was of purely reflex character.

Dr. Gellé had (in 1876) a case similar to Dr. Roy's, viz., that of a young man, with suppurative otitis for five weeks, opening spontaneously ten days before observation. Along with severe frontal cephalalgia, there was hyperæsthesia and neuralgia of half the face and all the left side of the body. The tympanum was perforated, and painful and full of bleeding vegetations.

A third case is cited of a man who had shot himself through the right ear with a revolver, and a large perforation of the antero-inferior third of the tympanum and suppurative otitis followed. There was no affection of the middle ear. Complete right facial paralysis resulted, and left hemiplegia with contraction. The pistol ball was supposed to have penetrated the skull, but at the autopsy nothing could be found of it. The left hemiplegia was doubtless of hystero-traumatic nature, the facial paralysis due to the wounding of the right ear. There was some power of hearing left in the right ear, and this, and the preservation of the upper third of the tympanum and of the ossicles, made Dr. Gellé disbelieve that the ball had penetrated the intra-cranial cavity. The ear was the point of origin of numerous reflexes.

Prognosis ought to be guarded, bearing in mind that Matthewson, of Brooklyn, found an abscess of the cerebellum many months after the apparent cure of an otorrhœa with nervous symptoms.

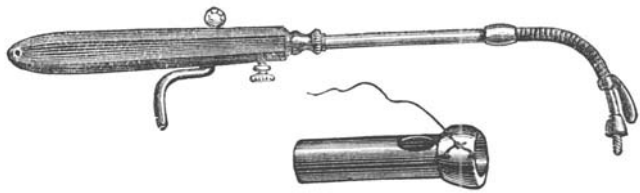
Dr. LICHTWITZ read a paper on *Extirpation per vias naturales of Multiple Papilloma of the Larynx in a Child, by a New Method. Intubation with a Fenestrated Tube.*

All laryngologists know the difficulties experienced in operating on children, and though with patience they may be seen laryngoscopically, endo-laryngeal extirpation is oftenest met with insurmountable obstacles, either from indocility, pendant epiglottis or narrowness of the vocal organ, and stenosis, and cocaine is

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dangerous. There are very few cases recorded in which papilloma have been removed from children under twelve years of age *per vias naturales*, but many of laryngo-fissure. This is far from being devoid of danger, in spite of Hopmann's seventeen favourable cases. Hoffa's statistics of one hundred and four cases of laryngo-fissure prove that, before performing laryngo-fissure, every effort should be made to remove the growth endo-laryngeally. In multiple papillomata, opening the larynx has not even the effect of allowing complete removal and avoiding recurrence. Laryngo-fissure has often had to be performed a second time (Hopmann), or recurrent papillomata have to be removed endo-laryngeally (Bornemann). The results as to phonation are certainly less favourable with laryngo-fissure than by the endo-laryngeal method. Thyrotomy is practised for papilloma in the child, only in default of a better method.

In a little girl with laryngeal papillomata, the author endeavoured to remove the papillomata by the endo-laryngeal method, but his efforts remained fruitless until the idea occurred to him of employing a modified *intubation with a fenestrated tube*. With this method, he further believes, that many cases of benign growths in the larynx may, in the child, be operated on endo-laryngeally, where thyrotomy would be employed. The exact situation of the growth must be determined laryngoscopically. *An intubation tube, pierced with a fenestrum, situated exactly over the tumour, so that the latter will project into the tube*, is then employed. (See figures: the applicator one-third natural size, the tube three-quarters natural size.)



Having inserted a tube, of dimensions corresponding to the age of the child, examination with the laryngoscope is made to determine if the neoplasm appears in the fenestrum of the tube. A suitable forceps, curette, snare, porte-caustique, or other instrument is then introduced into the tube, under guidance of the finger, and the growth is removed. In children of tender age it is important to use tubes cylindrical and with thin walls, and not flattened and thick-walled tubes, the former having a greater lumen, and more easily permitting the introduction of laryngeal instruments. Experiments on the cadaver show that the upper projecting edge of the tube rests on the ventricular bands, which prevent its falling into the trachea, the neck of the tube corresponding to the level of the vocal cords. For growths of the vocal cords, the fenestrum ought to be cut with its centre immediately above the thick border of the tube, and lower down for sub-glottic tumours. For growths of the ventricular bands it is necessary to make a notch in the projecting edge, or, better still, to slightly withdraw the tube by the thread attached to it, and to make the fenestrum below this.

According as the growth is in the anterior commissure, or to the left or right, the fenestrum will be arranged accordingly. As innocent growths are almost always implanted in the anterior portions of the larynx, tubes with fenestra directed backwards will rarely be necessary. In order to facilitate laryngoscopic examination, the tubes are blackened internally. While laryngoscopic examination is impossible after intubation, it is impossible to hurt by making efforts to extract the growths. It may, however, be necessary to introduce a tube with larger

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fenestrum. Such is the procedure which Dr. Lichtwitz employed in one case where laryngo-fissure would otherwise have been inevitable. The case was that of a child of five and a half years, with crises of suffocation, stridor, and aphonia, due to a flap-like growth situated at the anterior commissure, carried up against the epiglottis during strong expiration, and into the sub-glottic space during inspiration. With slight cocainization, efforts were made unsuccessfully to extract the growth with laryngeal forceps, and, though it was partly seized by a cold snare, it could not be extracted. Constant efforts were made for three weeks, during which time it was observed that two-thirds of the larynx anteriorly and the sub-glottic space were covered with cauliflower-like papillomata. A trial was made, as recommended by Ranke[1] and Baldwin,[2] to obtain disappearance of the growths by pressure of an intubation tube. A tube was introduced every other day for a month. The child could only bear its presence for fifteen to thirty minutes. Although many fragments of papilloma were expelled, the growths did not diminish in volume, and the dyspnœa increased. The introduction of a fenestrated tube with a slit of five millimètres diameter allowed numerous fragments to be removed with Schroetter's forceps and Heymann's curette, and in five successive sittings all the growths were thus removed, and the larynx was cauterized with Schroetter's porte-caustique, holding nitrate of silver. The child was then perfectly well, and in February, 1892, was found to have no growths left or signs of recurrence.

The method acts more promptly than the simple endo-laryngeal method, is quite harmless, the tube protecting the healthy parts of the larynx, and it permits of the extraction of sub-glottic growths by preventing the movements of the vocal cords. It will be also useful for sub-glottic growths in the adult. In chronic stenosis of the larynx, with these tubes it will be easy to combine dilatation with section of the cicatricial membrane, through the fenestrum; also for electrolysis, curettement, etc. Tubes with thin walls will be necessary.

THE FRENCH SOCIETY OF LARYNGOLOGY AND OTOLOGY.

Annual Meeting, May 2, 1892.

President—Dr. MOURE.

Committee—MM. CHARAZAC, GAREL, JOAL, JOLY, LACOARRET, LANNOIS, LAVRAND, MOURE, NOQUET, ROUGIER, and WAGNER.

Dr. MIOT was elected *President* for 1892; Drs. GAREL and CARTAZ, *Vice-Presidents;* Dr. CADIER, *Treasurer;* Dr. JOAL, *General Secretary;* and Dr. CHARAZAC, *Secretary.*

Dr. GAREL made a communication on *Two Cases of Lupus of the Larynx—one primary, the other secondary.*

Primary lupus is rare, and its diagnosis is based only upon direct examination of the larynx and the microscope. Five cases were observed by Ziemssen, Isambert, Haslund, Breda, and Obertüschen up to 1888, but only the latter had the diagnosis confirmed by the microscope. Since then Garel has only found one recorded case, viz., that of Garré—(*Lupus of the Entrance of the Larynx; Ablation by Sub-Hyoid Pharyngotomy.* "Beit. zur Klin. Ch. von Bruns," 1890).

[1] Ranke: "Münchener Med. Woch.," Nos. 28 and 29, 1889.
[2] Baldwin: "New York Med. Rec.," March 8, 1890.

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Garel's case was that of a young woman of twenty-two, in apparently perfect health, without trace of tuberculosis or cutaneous affections in the family history. She had never had any scrofulous affection in childhood. In 1890 she began to cough, and had prickings in the throat, with mucous expectoration. This lasted for two months, and after that she frequently had blood-stained expectoration. The voice became hoarse, and coughing ceased, except at long intervals. There was no loss of flesh, fever, night sweats, or diarrhœa. About a year after she came to the hospital with slight cough and hoarseness, and laryngoscopically the epiglottis was found to be enlarged, pale grey, irregularly mammillated, and with a nodule as big as a small pea projecting from its free edge. The ary-epiglottic folds were enlarged, and more or less cylindrical, forming with the epiglottis a sort of crown, encircling the upper part of the larynx. These folds were pale grey and mammillated, the ventricular bands were the same, enlarged, and hiding the vocal cords very greatly. These were a little red, and their edges irregular. A greyish bud existed in the inter-arytenoid region. The patient was absolutely free from signs of tuberculosis. A portion of the epiglottic growth was excised and examined by M. Lacroix, who pronounced it to be lupus.

On the forearm two or three spots of *psoriasis guttata* were seen; small nodules slightly projecting, covered with whitish scales. But this was a very recent symptom. General tonic treatment and Fowler's liquor was given, and lactic acid (eighty per cent.) used locally, the galvano-cautery being applied to the epiglottis. The patient was improved but not cured, and has since had slight bronchitis and crises of suffocation, which are produced even by laryngoscopic examination.

Dr. Garel's second case, of secondary lupus of the larynx, concerned a young girl of seventeen, who began with lupus of the left cheek, followed by lupus of the larynx ten months after. She had a history of frequent coryzas in childhood, and lachrymation, photophobia and redness of the eyes. There had been no pulmonary affection. Laryngoscopically the left half of the larynx was found to be absolutely free, the epiglottis, the ventricular band and vocal cord being affected only on the right side. After galvano-caustic operation on the epiglottic tumour, erysipelas of the face followed. The epiglottis afterwards greatly improved in appearance, and the voice improved. Swabbings of lactic acid were also made, and whether the improvement was due to this or to erysipelas seems doubtful.

Dr. Moure also regarded primary erysipelas of the larynx as very rare. He recently reported to the Anatomical Society of Bordeaux a case in which the lupoid nodules showed microscopically epithelial degeneration, probably due to galvano-cauterization.

Dr. PAUL RAUGÉ read a paper on *The Rarity of Cortical Laryngeal Paralyses.*

It has been considered necessary to seek in the upper cerebral regions the nucleus for excitation of any laryngeal movement; but it is natural and satisfactory to localize in the medulla, by the side of other reflexes, purely organic, of which this organ is the ordinary centre, the origin of the highest and evidently psychical unction, viz., the phonatory act, this primary and necessary element of articulation, which is only a transformation of an elementary laryngeal sound more intellectually differentiated.

The cause of misunderstanding is probably in an incomplete analysis of the laryngeal attributes, the fact having been neglected that the larynx is an apparatus with a twofold function, each of which, up to a certain point, is antagonistic; the one the mechanical act of respiration (dilation by the abductors), the other making the larynx the organ of phonation. If the first, like all the functions of vegetation, comes from the medulla, the conscient and voluntary nature of the second act suffices *à priori* to establish its cortical origin. The idea of seeking in the cerebral

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convolutions for the phonatory centre properly belongs to Ferrier, who, however, vaguely conceived it, and it was Duret who in the following year gave this a definite form and experimental control. Neither, however, succeeded in establishing an autonomous and complete vocal centre, a region of the cortex alone controlling all the mechanical acts which constitute phonation. Both forgot that the glottic vibrations which constitute the voice require not only the putting into activity of the larynx but the collective intervention of at least two muscular acts; contraction of the glottis and conscient expiratory effect voluntary and rhythmical. Two associated but anatomically distinct centres ought to control these synergic acts. The merit due to Krause, Massini, Semon and Horsley was to separate the part played by the larynx, and in introducing into their experiments a rigorous method and precise experiment.

The little we know of this question of localization is derived from experiments upon animals. Pathology has done nothing to help it; only those cases exist which can be utilized to control the affirmatious of pure physiology.

Logically, laryngeal paralyses of cerebral origin ought to be as frequent as common hemiplegias, and twice as common as motor aphasia, since there exists only one centre of Broca, and two laryngeal centres. But if the ideas of Semon and Horsley be accepted, of bilateral representation of those centres in the cerebral cortex, each behaving differently from other symmetrical psychico-motor centres in that the destruction of one leaves the other competent to preside over the laryngeal functions bilaterally, cerebral paralyses of the larynx would be not only an exception but a perfect impossibility, except in the extremely rare event of coincident lesions attacking both hemispheres. But a small number of facts, well observed and worthy of all credence (Garel, Déjerine) exists, in which hemiplegia of the larynx has undoubtedly arisen from a limited affection of the cortex. These observations are convincing in spite of the rather tenacious scepticism of Semon and Horsley, and they suffice to prove that unilateral affections of the laryngeal centre do not remain latent, but are expressed clinically by a hemiplegia of the opposite side of the glottis.

Semon's doctrine does not seem to be the true explanation of the paucity of clinical facts; the latter is really due to the particularly obscure conditions surrounding the phenomena, and the difficulty of observation of the patients under these circumstances.

Firstly, cortical paralyses are revealed only by vocal troubles, never by respiratory. These may exist unperceived more easily than other paralyses, because of their constant unilateral nature. The paralysis of one adductor is soon compensated for by the increased action of the healthy cord, and there is no aphonia, but simple dysphonia, determined by deficiency of tension of the paralysed cord. The lesion produced is not therefore a coarse one, but a slight one easily escaping notice.

When aphasia exists, the vocal trouble would be impossible to recognise but or one sign, *i.e.*, the mechanical disorder in the movements or attitude of the cords, and what the ear cannot detect the eye can see with the laryngoscope. That these cases are not oftener examined is due to the fact that they are rarely seen by the laryngologist, the state of the larynx being quite a minor consideration, and these patients find their way into the general medical wards, and, moreover, they lend themselves with difficulty to laryngoscopic examination. Suppose even the lesion is discovered, a complete autopsy would be absolutely necessary to confirm the diagnosis.

The discovery of a lesion of the cortex even exactly circumscribing the presumed seat of the laryngeal centre would not be sufficient, but it would be necessary to

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determine that the motor trouble could not come from any other source (subcortical, internal capsule, peduncles, pons, the medulla, roots of the spinal accessory or vagus, laryngeal muscles, crico-arytenoid articulations, etc.). Such macroscopical and microscopical examination would have to be of the most thorough description.

Not until the day when the laryngoscope is applied to all hemiplegics (all aphasico-aphonic or not), and to all patients with cerebral affections, will facts be gathered to found solid bases for a chapter upon the nervous pathology, for which at present we can only apply to experimental physiology.

The author does not hesitate to affirm that the simple appearance of a motionless cord will give a clue to a diagnosis of the probable cortical seat of the lesion.

Lesions of the cerebral cortex leave the unconscious and continuous effort of dilatation unaffected; consequently the glottis is apparently normal in the state of repose. But when effort is made to voluntarily phonate, the affected cord remains passively in respiratory attitude, and cannot reach the cadaveric position. There is then absolute loss of movement of the cord, both in respiratory and vocal effort, not, however, resembling the position characterizing total glottic paralysis. It is wrong to speak of the "cadaveric position" in these cases.

The healthy cord, having an abnormal compensatory excursus, marks the degree of abduction of the affected cord. The glottis is, however, always oblique. During calm respiration the two cords remain quite symmetrical. This permanent fixation of one cord is not seen in bulbar paralyses, where there is, on the contrary, loss of abduction, nor in recurrent nerve paralyses, which produce the cadaveric position sometimes, or paralysis of the abductors (contraction of adductors of Krause).

There is one condition in which, as in lesions of the laryngeal centre, the cords are fixed in extreme abduction, with absolute powerlessness of abduction—viz., hysterical paralysis. But motor hysterical paralyses are always bilateral, while cortical (unless in lesion of both centres) are always hemiplegic. This unilateral condition is not absolutely distinctive of cortical laryngoplegias, since it may occur in lesions of the nerve trunks, or of the medulla, but it is presumptive evidence of a cerebral origin of the lesion.

Dr. LUC read a paper on *Sarcoma of the Tonsil—Difficulty of Histological Diagnosis.*

The patient was a man of fifty, in apparent good health, with a swelling of the left tonsil which had lasted a few months. This was also ulcerated. There was no syphilis and no glandular enlargement. A piece of the tonsil excised was microscopically examined and pronounced to be simply hypertrophy, specially characterized by the presence of abundance of lymphoid cells in the reticulum of the gland. The ulceration continuing, a second piece was microscopically examined, two months after, by another histologist, and pronounced to be the same as the first. Two months after this there was enlargement of the submaxillary glands of the left side, dysphagia, and lancinating pains. Dr. Gombaut examined a piece of the excised tonsil, and pronounced it to be small-celled sarcoma ("fuso-cellular," or it might be called "lympho-sarcoma").

If the histological examination could have determined the true nature of the case at an early period, it would have been right to operate; unfortunately, exact microscopic examination came too late.

Dr. LAVRAND contributed a paper on *Adenoid Tumours—Two Successive Recurrences in one Case, and one recurrence in another.*

In one case, in 1885, a few growths were removed from a child nine years of

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age, and in 1887 the pharynx was nearly free of adenoids, and the child was cured of her asthmatic attacks, which before had been severe, and of her deafness, and breathed through the nose. At the end of 1888, the respiratory obstruction again occurred, and the naso-pharynx was again found to be full of adenoids. In 1889 these were removed under chloroform with forceps, the few remaining ones not being curetted. In 1891 the symptoms recurred, and there was an enormous crop of adenoids. The whole were curetted off, leaving not a trace of growth, and cure was this time successful.

The moral of this case is that the removal of most of the growths did not lead to atrophy of the rest.

In the second case—a boy of six—imperfect curettage was followed by recurrence within a few months, the whole naso-pharynx being filled with growths. A year after, they were all carefully removed, leaving no trace, and there has not been any recurrence.

The author insists upon the fact that removal of some adenoids does not guarantee atrophy of the rest of them, and that nothing short of thorough curetting will prevent recurrence.

Dr. VACHER read notes of *A rare Case of Ulceration of one Vocal Cord.*

In a young woman, twenty-seven years of age, the author found a punched-out ulceration at the insertion of the right vocal cord into the arytenoid, the cord appearing detached at its insertion. The importance of the case, however, is not in the nature of the ulceration—which could not be determined—but in the bearing upon the theory of the second register of the human voice, improperly called head voice or falsetto. The ulcer in the neighbourhood of the arytenoid produced aphonia for the first register, because the cords could not vibrate in all their length and thickness. When, by violent effort, the cords were brought together, in all their extent, the air escaped violently through the anterior one-third of the glottis, and produced the last sounds which the larynx of this patient could attain to.

The author thinks it would be well to collect all the cases in which the existence of some notes can be determined, in spite of complete aphonia, and it could thus be proved that the two registers of the voice are produced by the same factors, and that they differ only in the length of the vibrating parts.

Dr. POLO.—*The Spray in the Treatment of Diphtheria, with presentation of an apparatus.*

The apparatus consists of a lamp, a boiler to hold three litres of filtered water, communicating with two injecting tubes, a superposed basin to hold six litres of liquid, with two aspirating tubes fixed above to the injecting tubes. The apparatus will last in action for six hours, the basin being filled every two hours. About one and a half litres of sprayed liquid pass into the atmosphere an hour. The apparatus is placed sixty centimetres from the patient, who is protected as to the head, bedclothing and pillow and the bed being surrounded with a tent to concentrate the vapour round the child.

Carbolic acid, 3 to 5 per 1000, alternately with 10 per 1000 tincture of eucalyptus leaves, is employed by the author, and the apparatus is in use night and day.

Dr. CHARAZAC thought expensive apparatus were inapplicable to poor patients, and he employed Renou's method of evaporating carbolic acid in the room until signs of intoxication appeared.

Dr. DELIE read notes of a case of *Inter-Arytenoidean Fuso-Cellular Sarcoma—Operation per vias naturales—Cure lasting eight months—Recurrence—Tracheotomy.*

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The patient was a man aged sixty-three, who for ten months had had some difficulty of deglutition, which increased until violent attacks of cough and suffocation made him afraid to eat. A red, smooth, round tumour, pedunculated, and situated on the mucous membrane between the two arytenoids was seen with the laryngoscope. It was easily removed with Fauvel's forceps, the slight hæmorrhage resulting being checked by ice. Microscopically it was found to be a fuso-cellular sarcoma. There was no infiltration of the surrounding parts, and the tumour was clearly limited. All the parts between the arytenoid cartilage were submitted to thorough galvano-caustic curettement. In a month the patient appeared to be perfectly cured, the inter-arytenoid space was cicatrized, eating and drinking were performed without difficulty, there was no pain, and the voice was fairly preserved.

This was in March, 1891. In November the voice was again lost, and difficulty in swallowing returned. There was now swelling of the whole arytenoid region and posterior part of the ventricular bands. On the œsophageal surface of the inter-arytenoid space was an irregular swelling, and pressure on the larynx was painful. There were no enlarged glands. The patient declined surgical operation. Since December the growth invaded the whole larynx and neighbouring parts, glandular enlargements in the neck followed, and in January, 1892, tracheotomy became necessary. An attack of influenza with pulmonary complications carried off the patient.

From this case the author concludes that—

1. A sarcoma may exist for a long time without causing any alarming symptoms or glandular infection.

2. Operation *per vias naturales* may be followed by cure lasting for some time.

3. Recurrence develops rapidly with severe lymphatic complications.

Dr. WAGNIER read a paper on *The Treatment of Naso-Pharyngeal Fibro-Myxomas.*

He recognised two kinds of fibro-myxomas—one in which the tumours are round, smooth, hard, and pedunculated, freely movable, causing only obstruction, but no pain or hæmorrhage, and seldom deafness.

This kind differs from true fibroma, with its great power of development, its tendency to hæmorrhages, and its almost exclusive predilection for the male sex, especially between the ages of eleven and twenty-five. Their base is not pedunculated, but large and fibrous—they spring from the basilar apophysis, while fibro-myxomas spring from about the posterior orifices of the nares. A second variety of fibro-myxomas resembles in structure and appearance the mucous polypi of the nose, springing oftenest from the middle turbinateds.

The author employs by preference the metallic snare passed through the nose, and especially the modification of the galvano-caustic loop which he has already described. The loop, passed through the nose, is adjusted with the finger in the naso-pharynx. To avoid the difficulties frequently met with in adjusting the snare in this manner, the author has devised a method of reducing the volume of the growth to permit of its being seized in the cold or galvano-caustic loop. The method consists of pressing the growth towards the choanæ with the finger, and, if possible, causing it to enter the nasal fossæ, just as in reducing a hernia. This the author maintains diminishes the volume of the tumour, and it may be pressed back into the naso-pharynx, when the snare will easily encircle it. This method is less painful than attempts to adjust the snare with the finger. The author relates four illustrative cases.

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Dr. ROUSSEAU read a paper *Concerning Operation for Adenoid Vegetations of the Nasal Pharynx.*

The author exhibited his electric curettes, which he has now used one hundred times. The instrument is rendered less flexible by using phosphorized bronze in place of copper, and the conducting wires are superimposed instead of being placed side by side. They are also more effectually isolated. The author has constructed a curette which can be used for young children. With these instruments the adenoids can be completely removed, the point of implantation being at the same time cauterized. Consecutive hæmorrhage is *nil.* The wire ought only to be heated to a dull red.

Cutting instruments give rise sometimes to severe hæmorrhage, from which tamponing of the nasal fossæ has sometimes been required. Fifteen such cases have been collected by the author and Dr. Cartaz.

As to septic or inflammatory complications, two cases of traumatic fever (Moldenhauer), a case of erysipelas of the face (C. Michel), a case of slight angina and cervical adenitis (Cartaz), and cases of middle ear inflammation, have been recorded. The pharynx is also the resting-place of numerous microbes, which require only a slight abrasion to produce suppuration and septic accidents. Cutting operations favour this complication. Why, asks the author, risk this, when a perfectly aseptic instrument (hot wire) not only destroys all the micro-organisms, but by producing an eschar, forms a barrier to their entrance into the subjacent parts? The fall of the eschar is not accompanied with hæmorrhage when a dull red heat is employed. Subsequent antisepsis is obtained by the use of antiseptic gargles and nasal sprays.

The author's conviction is that we shall never be free from the risk of complications until we remove adenoid growths by electricity, whether using his own, Capart's or Chatellier's instrument. He also thinks that electric methods are too little employed in rhinology, having an incontestable superiority over cutting operations.

Dr. MOURE asked if the author had never seen inflammation of the Eustachian tube after the use of these instruments?

Dr. ROUSSEAU replied that he had never seen it, because only a curette was employed to remove the median part of the vegetation, leaving the orifice of the tube protected by a small circle of adenoid tissue?

Dr. GAREL believed that an incomplete operation did not suffice to cure deafness, and operation was easier and more radical with Gottstein's curette.

Dr. SUAREZ DE MENDOZA asked if Dr. Rousseau examined the children to determine what amount of tissue was left round the Eustachian tube after the operation.

Dr. ROUSSEAU replied in the negative, stating that when they breathed through the nose they oftenest were definitely cured.

Dr. ROUGIER remarked that he operated with Wilde's snare by anterior rhinoscopy, using Moure's speculum or Zaufal's tube. The vegetation was thus easily enclosed in the loop, and all could be removed effectively, and without wounding the mucous membrane.

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AMERICAN LARYNGOLOGICAL ASSOCIATION.

The Fourteenth Annual Congress was held at Boston on June 20, 21, and 21.

THE following is a list of the papers read :—

Dr. SAJOUS—"The Present Status of the Treatment of Hay Fever."

Dr. BRYSON DELAVAN—"The Influence of certain Diathetic Conditions upon the Prognosis in Operations upon the Throat."

Dr. CHAPMAN—"Some Pathological Conditions of the Upper Air-Passages accompanying 'la Grippe' Attacks."

Dr. F. I. KNIGHT—"Pharyngo-Mycosis."

Dr. J. WRIGHT—"A Case of Carcinoma at the Base of the Tongue."

Dr. FLETCHER INGALS—"A Case of Cancer of the Tonsil treated by Lactic Acid."

Dr. BEVERLEY ROBINSON—"Report of some Cases of Membranous Sore Throat."

Dr. C. H. KNIGHT—"Intubation for Chronic Sub-Cordal Stenosis of the Larynx in a Boy Twelve Years of Age."

Dr. A. MAC COY—"Rare Forms of Laryngeal Growth."

Dr. H. L. SWAIN—"A Case of Tumour of the Larynx."

Dr. J. SOLIS-COHEN—"Two Cases of Laryngectomy for Malignant Disease."

Dr. C. C. RICE—"The Value of Sprays in the Treatment of Catarrhal Affections of the Upper Air-Passages."

Dr. C. E. BEAN—"Nasal Hydrorrhœa."

Dr. W. H. DALY—"An Eligible Method of Repairing a Broken Nose."

Dr. J. O. ROE—"The Correction of Deformity resulting from Abscess of the Nasal Septum."

Dr. T. A. DE BLOIS—"The After-Results of Nasal Cauterization."

Dr. D. R. RANKIN—"Diseases incident to the Frontal Sinus."

Dr. T. H. BRYAN—"A Case of Suppurating Ethmoiditis."

OFFICERS FOR 1891-2.

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AMERICAN PEDIATRIC ASSOCIATION.

Meeting, May 3, 1892.

KOPLIK (New York). *Forms of Diphtheria which simulate simple Angina.* "Med. Rec.," May 14, 1892.

Certain cases of apparently mild forms of angina were shown by bacteriological examination to be truly diphtheritic. He had found animal experimentation (the biological test) satisfactory.

Dr. CAILLE, in discussing Dr. Koplik's paper, said it was folly to try to discard clinical observations for bacteriological investigations. The main point was to decide at the bedside of the patient whether we had a case of diphtheria or not.

Dr. LOUIS FISCHER believed it was easy, with proper precautions, to make a diagnosis with the aid of certain trifling instruments, as, for example, a long toothed forceps, properly sterilized, and a few agar tubes. The tubes after being inoculated could be laid in the incubator after being carried about for a few hours. While waiting for the result of the examination he would use all symptomatic treatment to counteract any serious symptom, and put the child on expectant plan of treatment; this usually did not take more than about one-half or three-quarters of a day.

Dr. A. JACOBI insisted on isolation in all doubtful cases. He impressed upon his hearers that in many cases of angina a probe could be carried into the follicle, whereas in diphtheria this is not the case. He hoped that some method would be devised for rendering the bacillus of diphtheria as readily discoverable as that of tuberculosis. *Dundas Grant.*

REVIEWS.

Pollatschek (Carlsbad).—*Die Therapeutischen Lieferungen des Jahres* 1891. *Ein Jahrbuch für Praktische Aerzte. 3te Jahrgang.* ("The Therapeutic Acquisitions of the Year 1891. An Annual for Practical Physicians.") Wiesbaden: J. Bergmann, 1892, 234 pp. Third year.

THIS year again the author gives a review of the German therapeutic papers published last year. Very complete attention is paid in some articles to the treatment of diphtheria, laryngeal tuberculosis, and the different medications recommended for laryngeal and nasal affections. *Michael.*

Mikulicz (Breslau) and **Michelson, T.** (Königsberg).—*Atlas der Krankheiten der Mund und Rachenhöhle.* Zweite Hälfte. Berlin: Aug. Hirschwald, 1892. ("Atlas of the Diseases of the Mouth and Pharyngeal Cavity." Second Part. With thirty-one chromo-lithographic tables.)

IT is a matter to be regretted that one of the authors has not lived to see the completion of his work. Dr. Michelson, to whom we owe so much, is dead. It must have been a great source of satisfaction to him to see how

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