

Abstracts.

PHARYNX AND NASO-PHARYNX.

Ewing, S. A.—**Relation of Adenoids as Causative Factor of Middle-ear Suppuration.** "Medical Journal of Australia," March 27, 1915.

During a period of seven years 445 patients suffering from suppurative otitis media, the large majority being cases of chronic disease, attended the Alfred Hospital. The ear condition in practically every case was due to unhealthy conditions in the nasopharynx. A. J. Brady.

NOSE.

Mahu, M. G.—**Radical Cure of Maxillary Sinusitis by the Nasal Route.** "Proceedings of the Parisian Society of Laryngology, Otology, and Rhinology," 1911.

As a sequel to the former work published by him on this question (*Press Médicale* du 10 Fevrier, 1909, et *Annales des Maladies de l'Oreille*, Septembre, 1909) the author communicated certain improvements which he has effected in operative technique, with the idea chiefly of facilitating examination, curettage, and hæmostasis of the maxillary antrum after trephining the sinuso-nasal wall. He uses the following instruments:

- (1) A punch forceps, cutting from behind forwards to enlarge the anterior part of the sinuso-nasal opening.
- (2) A self-retaining nasal speculum, which gives greater access to the maxillary sinus.
- (3) A rigid U-shaped curette for the anterior and inferior recesses.
- (4) A curved dressing forceps, the shape of which facilitates the introduction of gauze for effecting hæmostasis. H. Clayton Fox.

Taylor, H. N.—**Note on a Tumour of the Maxillary Antrum.** "Lancet," May 1, 1915, p. 912.

A woman, aged thirty-four, complaining of pain "in the right side of the face." There were pain, tenderness, and bulging of the right cheek. No nasal discharge or obstruction of the nasal duct, and no exophthalmos. Extraction of teeth for the pain had not improved matters. Transillumination showed much opacity. The tumour was removed, and examination showed it to be both unusual and obscure in nature. It was composed largely of tough, fibrous tissue, with masses of gland-like elements all around near the surface and lymphatics with proliferating growth. No normal tissue was present, and its bulk was fibrous.

The patient made a good recovery. Macleod Yearsley.

LARYNX AND TRACHEA.

Poyet, G.—**Laryngeal Syphilis with Œdema treated and cured by "606."** "Proceedings of the Parisian Society of Laryngology, Otology, and Rhinology," 1911.

The three patients in question presented grave respiratory troubles: Dyspnœa, stridor, and inspiratory recession. These symptoms rapidly

diminished (forty-eight hours) after the first injection and then totally disappeared. The author concludes that "606" may be successful in laryngeal syphilis accompanied by œdema, that is to say in the cases where the employment of iodide of potassium is contra-indicated and respiratory troubles demand prompt intervention. *H. Clayton Fox.*

Berard, Sargnon, and Bessiere (Lyons).—Contribution to the Study of Laryngectomy. "Arch. Internat. de Laryng.," May-June, 1914.

Laryngo-pharyngectomy.—Whether the operation is done in one or two stages, the authors prefer, for the avoidance of infection, to remove the glands first of all. In cases where the posterior pharyngeal wall is certainly not involved, or if only a strip of it can be preserved, this strip is very useful to coapt the new (skin) wall of the pharynx. After the operation the patient is fed for some time by a nasal tube; eventually this is replaced by an œsophageal tube, which is used until a plastic operation is performed. In this latter two equal, or two unequal, lateral flaps may be used, or one large lateral flap covered over by another from the opposite side; this second flap is cut higher up and obliquely. A persisting fistula heals more readily if high up than if low down near the tracheotomy wound.

Laryngectomy apart from Malignant Growths.—When laryngo-fissure does not suffice, these operations are atypical, being usually less radical than for cancer. It is always possible to preserve the skeletal box of the larynx. The operation is usually done in one stage. Local anæsthesia is, as a rule, preferable, because there is no vomiting, and the patient can cough up blood; also, he is deprived of laryngeal reflexes which could interfere with the operation.

The authors consider hemi-laryngectomy the operation of choice for intractable cicatricial or cartilaginous stenoses

Segmental Resection of Larynx and Trachea.—This is suitable for stenoses at the lowest part of larynx or uppermost part of trachea, or as a preliminary means of access to the œsophageal orifice.

The first step is a low tracheotomy; the method is more risky than simple laryngostomy, but the results are more rapidly obtained.

Partial Submucous Resections of Larynx.—The thyroid or cricoid cartilages may be attacked in this way, or, especially for ankylosis of the crico-arytænoid joints, one or both arytænoids may be removed through a laryngo-fissure opening. For this submucous removal of one or both arytænoids the surgeon employs a vertical incision, either through or just to one side of the posterior commissure.

If it be required to curette the laryngeal ventricles a transverse incision is made at the level of the upper border of the true cords. The cartilages of Wrisberg and Santorini need not be touched. The authors suggest that for persistent adduction-stenosis of the true cords the removal of a piece of lining mucosa of the ventricles, as is done in veterinary surgery, would be a more sound procedure than the mere curettage of the ventricles. During any manœuvres in these regions the larynx must be absolutely immobilised by an assistant. The after-treatment consists in intubation.

The complications and sequelæ exemplified in the authors' detailed list of recorded cases correspond so closely to those familiar to all laryngologists that very brief reference suffices. All their cases (three), which died as the result of the operation, died from secondary hæmorrhage due to sloughing. Death from falling back of the trachea into the thorax, which has occurred several times, is a strong argument for two-

stage operations, so that adhesions may fix the trachea in the tracheotomy wound. The contrivances of Péan and of Claude Martin combine a swallowing with a phonetic apparatus. The mortality from operation has been reduced from 50 per cent. to 20 per cent. Recurrence is common, sometimes *in situ*, but especially in the glands. It is of paramount importance to combine a maximum of drainage with a minimum of sutures.

H. L. Whale.

THYROID GLAND.

Pern, Sydney.—The Necessity of Lime in the System and its Relation to Goitre. "Australian Medical Journal," November 9, 1912.

The writer lives in a district where goitre is very frequent. For the purposes of study he divides goitre into two classes—endemic or purely hypertrophic and exophthalmic. Endemic goitre is prevalent in limestone districts. Exophthalmic goitre occurs where the drinking water and food are deficient in lime. In the writer's district there is absence of lime in the water, and a deficiency of the same in the food. Adults who came into his district did not get exophthalmic goitre, but their children did (activity of thymus gland in children); in some cases there are three generations of exophthalmic goitre. It is not necessary for the thyroid secretion to be above normal to produce symptoms of hyperthyroidism. Thyroid secretion forms some combination with lime, in which both are rendered inert; the combination is absolutely necessary for the proper growth and metabolism of the system, so that if there was not sufficient lime coming into the system to balance the secretion there would be all the effects of hyperthyroidism with a normal amount of secretion.

The treatment used in exophthalmic goitre is lactate of lime in 10-gr. doses three times a day. At first this seems to aggravate the symptoms; in about ten days or a fortnight this effect passes off, and improvement begins. Within a month the improvement is very noticeable; the patient begins to put on flesh rapidly; the goitre gets soft, then shrinks. As lime seems to aggravate the symptoms when first given, very acute cases were first treated with ergot to tone up the peripheral circulation, and take the strain off the adrenals, then calcium salts were gradually introduced. The whole arrangement of the peripheral circulation is regulated by the adrenals and the thyroid under the control of the vaso-motor centre. This study of the action between the adrenals and thyroid gland are worked out in an interesting manner, but it is too long for an abstract. Pern has found lime useful in asthma, general nervousness, and hay fever.

A. J. Brady.

ŒSOPHAGUS.

Barclay, A. E.—Peptic Ulcer of Œsophagus. "Proceedings of Royal Society of Medicine, Electro-Therapeutical Section," May, 1915, p. 96.

Patient was a nervous girl, aged eighteen. She gave a history of having brought up some blood at one time, and that, from time to time, she had difficulty in swallowing.

On giving opaque food it was found that there was a complete obstruction at the level of the seventh dorsal vertebra, which persisted for ten minutes at a time. The obstruction was clearly due to spasm.

(Esophagoscopy (Sir W. Milligan) showed a small ulcer $\frac{1}{4}$ in. in diameter.

The ulcer was treated by ionisation with zinc. A bobbin-shaped electrode on a wire, insulated with shellac, except at the neck of the bobbin, was dropped into the stomach. The patient then took bread-crumbs until the spasm came on. The bobbin was then easily pulled up till the obstruction was felt; applying more traction the bobbin slipped through the spasm, and the neck was firmly gripped and held in position by the spasm itself in contact with the ulcer.

Relief of symptoms was almost immediate, and the patient was perfectly well for three months.

Another ionic treatment was carried out, with the result that the patient remained perfectly well for a year. *Archer Ryland.*

E.A.R.

Mahu, M. G.—Radical Mastoid Operation in a Child, with Preservation of the Ossicles. "Proceedings of the Parisian Society of Laryngology, Otology, and Rhinology," 1911.

The case resembled two others published by the author in the *Annales des Maladies de l'Oreille*, October, 1910. The patient was aged eight. Aërial conduction was fairly good and he practised a partial radical operation, with resection of the bridge, as well as a portion of the attic wall, but preserved the ossicles in spite of invasion of the aditus and attic by granulations. As in the two previous cases, the final result was satisfactory and hearing was improved. Mahu draws attention to the point that there was in each of his three cases a mastoid fistula opening into the external meatus, through which pus escaped more freely than through the perforation in the membrane. He thought that if the presence of this fistula warranted one in assuming that there was a grave mastoid lesion, it also afforded hope of slight involvement of the ossicles, because it acted as a safety-valve, permitting the escape of pus from the antrum by an easier route than through the aditus, attic, and tympanum. If, therefore, in a case of chronic otorrhœa, without deafness, labyrinthine trouble, or cholesteatoma, one resolved on the radical operation with respect for the ossicles, the presence of a mastoid fistula must support this resolution. *H. Clayton Fox.*

Kœnig, C. J.—Iodine Fumigation. "Proceedings of the Parisian Society of Laryngology, Otology, and Rhinology," 1911.

Having read with interest in the *Press Médicale* of November, 1911, Reyne's article on Long's method, Kœnig draws attention to what he has already employed for the past six or seven years in the treatment of various affections of the ear (otitis sup. chronica, otitis adhesiva atrophica, etc.) and which enables iodine fumigation to be easily carried out by employing pure iodine, the iodine vapour being retained and carried onwards by a current of hot air, the effect of which is added to that of the iodine. To accomplish this, he employs:

(1) A small metallic capsule formed of two hemispheres screwed together, each being mounted with an end-piece, one conical for introduction into the end of the Eustachian catheter, the other cylindrical for adjustment to the tube of the hot-air apparatus.

(2) Lermoyez and Mahu's hot-air apparatus, with which all laryngologists are familiar.

(3) The following preparation: Menthol, 1 grm.; camphor; iodine aa , 2 grm.; powdered talc, 30 grm.

This mixture, finely powdered, yields a powder the colour of cocoa. He has arrived at these proportions after experimental investigations. If less talc be added, a moist useless mass is obtained. A small quantity of this mixture is placed between two layers of cotton-wool with which the hemispheres of the capsule are lined. After having passed a current of hot air through the apparatus for a period varying with the temperature and strength of the current, nothing remains but the white talc powder. All kinds of volatile medicaments can be employed. In otology we can employ iodine vapour by passing it through the Eustachian catheter into the tube and middle ear, or into the latter alone *via* the external auditory meatus when there is a perforation of the membrane. In certain forms of chronic suppuration and adhesive otitis, the results are very appreciable. Another very simple method of utilising the properties of iodine, and more at the disposal of the general practitioner who may not possess the above apparatus, is that suggested by Paul Laurens and which consists in employing a concentrated solution of sodium iodide (30 per cent.), followed by the addition of an equal quantity of a solution of peroxide of hydrogen (12 vols.). The latter, like all peroxides, possesses the property of liberating iodine from iodides. This method might be termed the moist, and the other the dry. Each has its indications and advantages. The moist method cannot be employed through the Eustachian tube; the only route lies through the external auditory meatus.

H. Clayton Fox.

Wilson, J. Gordon (Chicago), and Pike, F. H. (New York).—Vertigo.
 "Journal of the American Medical Association," February 13, 1915.

Vertigo, its conception, and how this conception aids in the diagnosis and treatment of cases, so difficult both to the general practitioner and to the specialist, is the subject matter of this preliminary report. The complex ætiology of vertigo, its occurrence in so many diverse diseases, and its elusiveness to treatment are only too well known. One difficulty in its proper interpretation is the absence of any clear conception of what vertigo is. Although we have nearly all experienced, still few would be prepared offhand to define it. Whilst the term of "vertigo" is commonly applied to a sensation of rotation of surrounding objects or oneself, still there are other forms in which the sensation is one of instability either of oneself or the surrounding objects. Under the term "vertigo" must also be included sensations of many kinds: "a blurring vision, a feeling of discomfort or of anxiety, fulness in the head, as after smoking, a feeling of weakness, a disturbance of consciousness; in short, a variety of sensations which, if they persist, tend sooner or later to become more pronounced as disturbances of equilibrium."

Usually vertigo is due to some pathologic condition affecting the mechanism of equilibrium, but at other times it may be brought on by the mere thought or fear that should a disturbance of equilibrium occur a serious fall would result; for example, looking over a bridge into a ravine. When vertigo has once arisen, under certain conditions, it will be readily and more easily provoked again by the recurrence of these same conditions, due probably to the fact that anatomic paths once travelled are more easily travelled again.

To preserve equilibrium, impulses are constantly coming to the brain from (1) the ear, (2) the eye, (3) muscles, tendons, and joints, and (4)

the skin, touch, and pressure, all which impulses result in muscle co-ordination. That vertigo bears some relation to disturbance of equilibrium is admitted by all, though instability without vertigo, as in ataxia, also does occur. The tabetic, with his eyes shut, has instability, and he may have the sensation of vertigo, but he does not fall because of his vertigo. He falls because he experiences a sudden, unexpected loss of afferent impulses from the eyes, and he has vertigo because the sudden closing of the eyes has intensified the mental confusion resulting from the inadequacy of the impulses from the muscle, tendon, joint, and skin. In the tabetic the muscular inco-ordination, which is the primary factor, may appear without vertigo. In the labyrinthine irritation the instability is the outward manifestation of the vertigo, which is, or has been, present and may precede the instability. The most important of these impulses, on which the subject bases his conception of his position, or change of position, in space, and from a confusion or dissociation of which vertigo results, arise from the otic labyrinth and the muscular and retinal portions of the eyes. Both ataxia and vertigo are due to disturbances of afferent impulses concerned with equilibrium; but the ataxia is due to a loss in a group of afferent impulses, while vertigo is due to a dissociation of certain groups of afferent impulses, especially those from the head segment.

“It is not instability alone which constitutes vertigo on its subjective side; it is the rising into consciousness of the sensation of instability; it sometimes is the fear that such an instability may occur, or a fall be possible.”

Normally the afferent impulses which maintain equilibrium are harmonised subconsciously in the cerebrum, and it is only when this harmony is ruptured that our attention is drawn to them. The conscious confusion which results is vertigo.

Vertigo, then, may be considered as the confusion resulting from the coming into consciousness of afferent impulses concerned with equilibrium, which impulses ordinarily are associated, but now for some reason have become dissociated. The most important of these afferent impulses are those from the ear, and slight disturbance of the labyrinth will cause severe vertigo. Visual vertigo is not so common clinically as labyrinthine.

Vertigo arises not only from disturbance of the peripheral sense organs, but lesions involving their central paths will also produce it. So disturbance, in the complex vestibular path, or the cerebellum, pressure on the eighth nerve or in the posterior fossa, and cerebral lesions will all cause vertigo. Again, it may occur in a hyperexcitability of the nervous system, as in neurasthenia, where the impulses, say, from the two eyes or two ears, may vary in intensity and vertigo result. *Birkett (Rogers).*

Borden, Charles R. C.—Systemic Infection of Middle Ear Origin in the Exanthemata. “Annals of Otology, Rhinology, and Laryngology,” xxiv, p. 1.

An excellent exposition of a subject well known to otologists. One paragraph deserves especial prominence: “Both aurists and general practitioners of medicine may study aural complications more carefully, with profit to themselves and their patients. Only a comparatively few general practitioners understand the significance and dangers of such complications. *The average physician at large recognises an aural complication only when a profuse discharge from the ear refuses to be concealed any longer.* [The italics are the abstractor’s.] The particular lesson for

the average specialist to learn is not to wait for the last possible symptom of mastoiditis, jugular thrombosis, or meningitis to develop before taking active operative measures for the relief of urgent symptoms. The extent to which this practice is followed by men whose wide experience should have taught them better judgment in the matter is astonishing. The excuse given is the patient is too ill to be operated upon. The sufferer is therefore allowed to die and the one real opportunity to save his life is lost.”

Macleod Yearsley.

Haughey, Wilfred.—Bacterial Vaccine Therapy in Diseases of the Ear.

“Annals of Otolaryngology, Rhinology, and Laryngology,” xxiv, p. 15.

Reports 16 cases, 6 being subacute purulent otitis, 6 chronic purulent otitis, and 4 classed as mastoiditis. The cases are added to those reported by Dabney in the *Laryngoscope* for November, 1914, and the total number thus classified is 425. Of these, 9½ per cent. were lost sight of and deducted, showing 78 per cent. of cures, 13 per cent. of improved, and 9 per cent. of unimproved in cases of subacute purulent otitis media treated by vaccines. In chronic purulent otitis media, the percentages are: 28 cured, 30 improved, and 42 unimproved; and in cases of mastoiditis they are 67, 24, and 9 respectively.

Macleod Yearsley.

Sawrey, Ernest R.—The Causation and Diagnosis of Suppurative Otitis.

“Medical Journal of Australia,” March 27, 1915.

Adenoid vegetations are the most common cause of this condition. A small amount of adenoid tissue, insufficient to cause nasal obstruction, may be a potent cause of evil when situated in the region of the Eustachian tubes. In suppurative otitis media where free drainage is established through the meatus, if pain continues the probability of extension to the mastoid must never be overlooked. Disease of the mastoid may exist when the mastoid appears perfectly normal externally. Attention is drawn to an important point. Sometimes in a case of acute mastoiditis, often on both sides, in which a very thorough opening and drainage has been made of the mastoid, antrum, and aditus, immediate amelioration of symptoms results, but in a few days, or perhaps at once, the symptoms recur, rigors occur frequently. The patient has an evening temperature of 102° F. or even 106° F. for days or even weeks. It has been impossible to find any local cause for the symptoms; in spite of this every one of these cases has got perfectly well.¹

A. J. Brady.

MISCELLANEOUS.

Cumberbatch, E. P.—Malignant Growths treated by Diathermy: (1)

Carcinoma of Tongue; (2) Carcinomatous Ulcer of Cheek.

“Proceedings of Royal Society of Medicine, Electro-Therapeutical Section,” April, 1915, p. 53.

Both cases inoperable. Ulcer of the tongue measured 1 in. by ¾ in., and there was much surrounding infiltration. The diathermic cautery was applied in January, 1914. The ulcer completely healed six weeks later. The only present indication was the appearance of the outer

¹ For discussion on pyrexia after mastoid operations see JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOLARYNGOLOGY, September, 1915, p. 350.

border of the tongue, which was slightly concave. It was now covered by a smooth layer of epithelium.

The operation took ten minutes, and the result was better than could have been expected after the application of the knife.

The second patient, a man, aged sixty, had a rodent ulcer on the cheek in front of the ear. Treated with X rays and radium without permanent result. Last July the diathermy cautery was applied, and the edges and base of the ulcer were coagulated and sloughed off. Smooth, supple skin could now be felt covering the site of the former ulcer.

Archer Ryland.

NOTES AND QUERIES.

THE LUTIN REACTION FOR THE DIAGNOSIS OF SYPHILIS.

Lutin is an extract of the killed cultures of several strains of the *Treponema pallidum* (*Spirochæta pallida*). The killing of the spirochætes for this purpose is effected by heating to 60° C.; 0.5 per cent. trikresol is added as a preservative. The preparation is carefully tested to insure sterility, and is then placed in sterile ampuls or capillary syringes.

Method.—A site on the skin of the arm is cleansed and sterilised, and the lutin is injected into the skin as superficially as possible. The injection should be made *between the layers of the skin, not under the skin*. If properly done a small pale swelling is produced, which subsides in from ten to fifteen minutes.

Dosage.—The amount of lutin to be injected for one test is 0.07 c.c.

The following phenomena indicate various types of positive reactions:

(a) The *papular type* consists of a large raised papule, reddish in colour and usually 7 to 10 mm. ($\frac{1}{4}$ to $\frac{1}{2}$ in.) in diameter, which makes its appearance in twenty-four to forty-eight hours. The papule may be surrounded by a diffused redness and show marked telangiectasis. The size of the papule and the induration may increase slowly during the following four to five days, after which it begins to recede and the colour gradually becomes dark brownish red. The induration gradually disappears within two weeks.

(b) The *pustular type* resembles the papular type until about the fourth or fifth day, when, instead of beginning to recede, the inflammatory processes increase in intensity, the surface of the papule becomes œdematous, with the formation of multiple miliary vesicles, and a central softening of the papule. Within the following twenty-four hours the papule is converted into a vesicle filled with serum, which later becomes purulent. The pustule soon ruptures and becomes covered with a crust that falls off within a few days, leaving a small induration, which is converted into a cicatrix after healing.

(c) In the *torpid type* the site of injection fades to an almost invisible point within three to four days, so that it may erroneously be considered a negative reaction. After ten days, or even longer, the spot suddenly begins to enlarge and goes through the same stages as seen in the pustular type.

Results.—Noguchi¹ reports the results of the cutaneous reaction of 642 cases, comprising 315 syphilitics, 77 parasyphilitics and 250 controls.

In cases of primary and secondary syphilis which had had either insufficient treatment or no treatment at all, the reaction was negative except in a few instances in which the positive reaction was of the indurated papular type.

Most of the syphilitics in the secondary stage who had been treated with mercury followed by salvarsan, and who remained without symptoms for some months thereafter, gave strong positive reactions. In cases of tertiary and late hereditary syphilis there is usually an intense positive reaction. It is in these cases that the lutin test is of the greatest value. By this means it is possible to diagnose the disease in its diverse and obscure manifestations—a feature of great importance when it is desired to ascertain whether or not internal lesions are syphilitic. In this stage of the disease the Wassermann reaction is frequently negative, especially when patients have received recent treatment.

¹ "Serum Diagnosis of Syphilis," by Hideyo Noguchi, M.D., M.Sc. J. B. Lippincott Company, Philadelphia. Third edition, 1912. Chapter on Lutin Reaction.