ABSTRACTS

EAR

Injury to the Middle Ear through vomiting of a Caustic Poison. F. ZÖLLNER. (*Arch. Ohr-, u.s.w., Heilk.*, 1938, cxliv, 361-366.)

It appears that the whole otological literature contains no report of the penetration of vomitus into the tympanic cavity viâ the Eustachian tube, although Wittmaack has suggested that this occurs in the fœtus or young infant and is one of the causes of infantile otitis. The author reports two such cases. A man, aged twenty, wishing to commit suicide, drank 30 c.cm. of a concentrated solution of corrosive sublimate. Immediately afterwards he had a coughing fit, vomited and felt a severe pain in the right ear. The right ear was the seat of chronic suppuration from childhood, and it has always been recognized that the Eustachian tube more readily admits foreign substances when a perforation exists than when the tympanic membrane is intact. The patient died from the general poisoning and *post mortem* the necrotic changes caused by the corrosive sublimate in the middle ear could be shown (sections in text). The second patient accidently swallowed a small amount of ammonia solution, and this was followed at once by a coughing fit and vomiting. The symptoms were a burning sensation in the mouth and lips and a feeling of pressure in one ear. The ear showed changes characteristic of acute middle-ear catarrh.

Under normal conditions the soft palate shuts off the naso-pharynx completely both during swallowing and vomiting. If the vomiting is very sudden and violent, some of the vomited material may reach the nasopharynx. If a coughing attack occurs at the same time, foreign matter may be forced into the Eustachian tube and middle ear. J. A. KEEN.

On the origin of primary Carcinoma of the Middle Ear. J. BERENDES. (*Arch. Ohr-, u.s.w., Heilk.*, 1938, cxliv., 425-429.)

Malignant tumours arising in the tympanic cavity are exclusively of the squamous epithelioma type, although the middle ear is lined by columnar epithelium. There are two possible explanations for this. It is generally recognized that malignant disease in this region is always preceded by chronic middle-ear suppuration. Either the neoplasm has arisen from the lining of the bony meatus which has grown into the tympanic cavity, or there has been a metaplasia of the epithelium in the course of the chronic suppuration.

Abstracts

The author describes a rare case in which the new growth was not preceded by chronic suppuration, yet it was a squamous epithelioma. He concludes that primary malignant tumours of the middle ear must be looked upon as arising from the epithelium of the external auditory meatus in every case.

J. A. KEEN.

Facial Palsy of Otitic Origin. A. H. PERSKY (Philadelphia). (*Archives of Otolaryngology*, 1938, 27, 395.)

The writer discusses thirty-one cases of facial paralysis which occurred in a series of about 1,500 cases of mastoidectomy. In twenty cases the paralysis preceded operation; in eleven cases it was post-operative. There were ten children and twenty-one adults in the series. Analysis of the pre-operative group showed that the paralysis was a complication of acute otitis media in eight cases, appearing at an interval ranging from ten days to three weeks after the onset of the otitis. In four cases paralysis followed an acute exacerbation of a chronic otitis, and in six cases was associated with chronic suppuration. One case occurred one week after fracture of the temporal bone, and in another the onset was gradual and insidious, over a period of three years (refer to Jefferson and Smalley's paper in the July number of this Journal). The post-operative cases followed simple mastoidectomy in five cases, radical mastoidectomy in five cases and ossiculectomy in one case. Additional complications included Bezold's abscess, septicæmia, meningitis and brain abscess (two cases).

Facial paralysis is of greater significance in chronic than in acute otitis media. In acute cases one is inclined to temporize, while in chronic cases operation is indicated. Simple mastoidectomy gives better results than does radical mastoidectomy, with exposure of the nerve, in pre-operative cases. When facial paralysis follows operation, an immediate attempt should be made to expose the injured nerve. The procedure may consist in simple drainage, in removal of a bony spicule, in splitting the nerve sheath or in introducing a graft, according to the type of lesion found. The longer the paralysis has existed, the less favourable is the prognosis.

DOUGLAS GUTHRIE.

Continuously Open Eustachian Tube. G. E. SHAMBAUGH (Chicago). (*Archives of Otolaryngology*, April, 1938, xxvii, 4, 420.)

The continuously open Eustachian tube is a definite clinical entity which is not mentioned in standard text books of otology. Bezold is the only writer who has given a complete account of the condition, and he stated that it was found only in emaciated persons in whom the pad of fat, which normally maintains the closure of

the tube, has become atrophied. In the present series of four cases reported in detail by Shambaugh, only one patient was emaciated. In one case it was the result of the contraction of scar tissue in the fossa of Rosenmüller, following tonsillectomy; in another case the atrophy followed irradiation of a carcinoma of the nasopharynx, and in a fourth patient there was simple atrophy of the mucosa for which no cause could be found.

A continuously open Eustachian tube causes the patient to hear very loudly the sound of his own voice and he may complain of a roaring sound, synchronous with breathing. The treatment recommended by Bezold is simple and effective. It consists in the insufflation, through a Eustachian catheter, of a powder composed of one part salicylic acid and four parts boric acid. The salicylic acid is an irritant which causes inflammatory swelling of the mucosa of the tube and then gives relief for several weeks. The powder may be used repeatedly without losing its effect. Two of the writer's patients have ultimately been able to dispense with the treatment.

DOUGLAS GUTHRIE.

Objections to the accepted interpretation of Cochlear Mechanics. A. G. POHLMAN (Omaha, Nebraska). (*Acta Oto-Laryngologica*, March 1st-April 30th, 1938, xxvi, 2.)

E. H. Weber correctly assumed the middle ear apparatus to have the function of an impedance matching transformer which helped to balance out the resistance differences between the air and the labyrinth liquid. However, he disregarded this interpretation in his further analysis of cochlear response. He believed because the labyrinth liquid was quite incompressible and the otic capsule was relatively inelastic that a compensation area must be present to permit the labyrinth liquid to " accept " the vibrations of the stapes. The result of this scheme was the translation of the longitudinal displacements in the scalae into transverse vibrations in the basilar membrane. This interpretation forms the basis for all theories on indirect activation, but the shock-absorbing of the internal ear has been mistaken for the displacements in the liquid so essential to audition.

[Author's abstract.]

H. V. FORSTER.

Impaired Hearing for High Tones. S. J. CROWE and S. R. GUILD (Baltimore). (*Acta Oto-Laryngologica*, March 1st-April 30th, 1938, xxvi, 2.)

The middle-ear lesions resulting from occlusion of the pharyngeal orifice of the Eustachian tube may cause a greater impairment of

hearing for high tones than for low tones. The authors believe that the judicious use of radiation therapy in carefully selected cases is worthy of an extensive clinical trial. This treatment should be used, of course, only after a thorough adenoidectomy has failed to restore normal relations of the orifice of the Eustachian tube and adequate ventilation of the middle ear. The lymphoid tissue occluding the mouth of the tube can be reduced to normal with either radium or X-ray treatments; but so far the results indicate that the use of radium is preferable. The permanence of the improvement obtained in hearing as a result of this kind of treatment cannot yet be decided.

[Author's abstract.]

H. V. FORSTER.

Some recent experimental results in the Electro-physiology of Hearing. C. S. HALLPIKE. (*Acta Oto-Laryngologica*, March 1st-April 30th, 1938, xxvi, 2.)

Two series of experiments are described. In the first place observations were made on the electrical reactions of the cochlear and the auditory nervous system of the cat to a sudden reversal in phase of a continuous sound.

The results show that the vibrating elements of the internal ear responsible for these electrical changes are resonant structures.

In a second series of experiments correlation was established in the cat between the cochlear reaction and the degenerative change in the nerve elements and the auditory cells in the organ of Corti, changes such as would be expected to follow section of the VIIIth nerve. A normal cochlear reaction could be obtained in the case of degeneration of the hair cells, but on the contrary could be weak or absent in the presence of hair cells, which were morphologically normal. A normal reaction or a diminished reaction was also obtainable in the presence of degeneration of the nerve elements in the cochlea.

H. V. FORSTER.

On the Modification of the Elastic Fibres of the Tympanic Membrane at various ages. GIULIO ZANZUCCHI. (*Archivio Italiano di Otologia*, 1938, 1, 203.)

The author recalls the usual description of the structure of the tympanic membrane. It has an internal covering of mucous membrane, an external one of skin and between these two is the substantia propria. This layer contains an external layer of radial elastic fibres and an internal layer of circular ones.

Gruber has also described a third group of fibres which interlace between the other two and are most marked in the posterior segment.

The author has investigated these elastic fibres at all ages and records their occurrence at different stages of life.

He has examined tympanic membranes from twenty-seven individuals, all of which were removed within twenty-four hours of death. The cases are divided into seven groups. The first group consists of fœtuses, the second of infants a few months old. The remaining groups included subjects from one to seventy-five years of age.

In the fœtal cases the membrane is comparatively thick, and there is a considerable degree of vascularization. The radial fibres are well marked, especially in the membrana tensa, whilst the circular fibres are less obvious.

In the new-born child the membrane is less thick and there is less vascularization, the radial and circular fibres occurring in the same proportion.

From one to eight years of age the vascular tissue becomes progressively less marked and the fibres are more obvious and are attached to the periosteum of the malleus and the tympanic ring. Up to about eight years of age the fibres are found to consist chiefly of collagen, their elastic nature being only occasionally seen.

From nine to fifteen the fibres take the stain of elastic tissue and begin to show their adult appearance. The radial fibres reach from the handle of the malleus to the tympanic ring and the circular ones are well marked in the neighbourhood of the umbo. The elastic fibres are present in the membrana flaccida and show their elastic characteristics a little earlier than those in the membrana tensa.

From fifteen to twenty-five there is not much change except that the fibres are a little more obvious, but from twenty-six to fifty they show the classical arrangement in the two zones of radial and circular fibres.

From fifty-one to seventy-five the substantia propria becomes thinner and there is a deposition of sclerosing fibres which are laid down around the umbo and at the periphery. At this stage the elastic fibres are much less obvious and take the specific stain less well.

F. C. Ormerod.

Effects of Quinine Poisoning on the Acoustic and Vestibular Apparatus. E. Pellegrini and R. Nathan. (*L'Otorinolaringologia Italiano*, 1937, vii, 541.)

The authors have carried out an investigation on the effects of quinine poisoning on the various parts of the auditory and vestibular apparatus. Previous work had been done this subject by many writers, that of Wittmaack being of the greatest value. Earlier workers had reported hæmorrhages into the auditory nerves

and internal ear. Wittmaack showed that these were either produced during the death agony or *post mortem* during the removal of the temporal bone. He himself had administered very large doses which killed the animals and found minimal changes, in sublethal doses which caused moderate changes and finally in long-continued small doses which produced the greatest changes in the tissues.

The present authors have injected quinine into three groups of guinea pigs. The first were normal animals and were given either lethal doses or were poisoned chronically. The second had previously had the labyrinths destroyed and were acutely poisoned. The third group were decerebrate and were also acutely poisoned.

Functional tests were carried out immediately after the injection of the quinine and, after death, comprehensive examination of the auditory and central nervous systems were made.

After injection, especially after heavy doses there was a spontaneous nystagmus. The reaction to rotation tests was reduced both in amount and in duration.

Histologically there were degenerative changes in the ganglion of Corti and in that of Scarpa, the changes being more marked in the acoustic than in the vestibular systems.

There were no hæmorrhages and there were no vascular changes. There were degenerative changes in the central nervous system but they did not show a prediliction for any particular region.

The diminution of the duration of the post-rotatory nystagmus is explained by the labyrinthine changes. The spontaneous nystagmus was present even in the labyrinthectomized animals, and the authors state that it is possible, but not demonstrated, that this phenomenon is due to the poisoning of the oculo-motor nuclei. F. C. ORMEROD.

Ménières Disease. A study based on examinations made before and after an intracranial division of the vestibular nerve. S. J. CROWE, M.D.(Baltimore). (*Medicine*, February, 1938, xvii, 1.)

This report is based on 117 patients seen at the Johns Hopkins Hospital during the past nine years. Ninety-four of these were operated on, 49 by division of the whole auditory nerve and 45 by division of the vestibular nerve alone. Dandy was the first to publish favourable results of the operation and he has now operated on more than 200 patients with Ménières disease without a fatality and with uniformly good results.

In the present paper the symptoms of the disease are discussed in an attempt to fix the seat of the lesion and the various theories are examined.

The author firmly believes that the vertigo and deafness of Ménières disease are always due to stimulation of, and degenerative

changes in, the peripheral auditory and vestibular structures; that it is impossible to have vertigo after section of the vestibular nerve and that the cure of the disease is due to this fact. If this is true, one must conclude that functional vestibular facts are not always reliable or accurate diagnostic guides.

The strongest reason for the author's belief that Ménières disease is the result of pressure or chemical changes in the endolymph which may irritate or injure the cells of the organ of Corti and have a cumulative irritative effect on the end organs of the vestibular nerve is the frequency and length of the remissions that are so commonly met with.

Anatomically the endolymph, and possibly the perilymph, are the only common factors in which a disorder of one lesion could affect both the organ of Corti and the vestibular end organs. With regard to other theories the author asks some pertinent questions. If the symptoms of Ménières disease were due to a disorder in the metabolism of sodium or fluids, why should patients get perfectly well after division of the vestibular nerve with no change in their dietary habits? and again why should the disease involve only one ear in the majority of cases? Other theories are considered and the objections to them stated. WALTER HOWARTH.

NOSE

Treatment of Vasomotor Rhinitis and Allied Conditions with Sodium Morrhuate. F. E. FISHOF (New York). (*Archives of Oto-laryngology*, April, 1938, xxvii, 4, 413.)

After describing the ætiology and symptoms of vasomotor rhinitis and mentioning the various methods of treatment by turbinotomy, cauterization, ionization, and the use of sclerozing fluids, the writer states his preference for the injection, under the turbinal mucosa, of $\frac{1}{4}$ to $\frac{1}{2}$ c.c. of a 5 per cent. solution of sodium morrhuate. This is followed by increased nasal discharge and obstruction for twelve to twenty-four hours; after this there is gradual improvement. The injection may be repeated at fortnightly intervals but it is rarely necessary to give more than four. The advantages of the method are the simplicity, the preservation of function of the mucosa, and the accuracy of dosage. Seven cases are described. DOUGLAS GUTHRIE.

The Accessory Sinuses of the Nose in Paget's Disease of the Skull. H. BRUNNER (Vienna). (*Acta Oto-Laryngologica*, March 1st-April 30th, 1938, xxvi, 2.)

In Paget's disease of the skull a shrivelling of the sinuses and specially of the frontal sinus is quite often revealed by X-ray examination. From a preparation in which X-ray examination had revealed a disappearance of the frontal sinuses and the ethmoidal

cavities with only a slight shrinking of the sphenoidal sinus, an attempt was made to try to solve the question how the cavities disappear. Microscopical examination showed that Paget's disease may change the lumen of the sinuses in three ways :

1. Narrowing.
2. Deformation.
3. Displacement.

Narrowing of the middle ear has never been observed in Paget's disease, although the nasal sinuses are not infrequently found to be destroyed. The hypothesis is advanced that in Paget's disease the ducts or openings of the sinuses into the nose are obstructed—a phenomenon which has never yet been observed in the Eustachian tube. This must be the reason why low pressure may develop easily in the sinuses and so stimulate bone formation in the walls of the sinuses.

[Author's abstract.] H. V. FORSTER.

Contribution to the Origin of Septum-deviations (lantern slides and demonstration of a model). A. SĚRCER (Zagreb). (*Acta Oto-Laryngologica*, March 1st-April 30th, 1938, xxvi, 2.)

Physiological septum-deviations are a peculiarity of man. The most prominent difference between the human and the animal skull is the enormous development of the brain, the very pronounced kyphosis of the base of the skull and the reduction of the jaws. The kyphosis of the base of the skull may be taken as an adaptation of the human skull to the erect gait and is expressed and measured by the sphenoidal angle (S). The reduction of the jaws has been caused through adaption to special conditions of life and is expressed and measured by Huxley's angle (H).

According to the author's researches the sphenoidal angle (S) in straight septa averages 140° and in curved ones 131°. In straight vomers Huxley's angle averages 93°, in curved ones 86°. Consequently the shape of the septum depends on the S and H angles or in other words on the adaption of the skull to the erect gait and to special human conditions.

This abstract of the author's refers to an exhibition of lantern slides on the subject and to the demonstration of a model.

H. V. FORSTER.

Sphenoidal Sinusitis and its Diffusion to the Meninges and the Optic Nerve. DOTT. I. BELZANO. (*L'Otorinolaringologia Italiano*, 1937, vii, 351.)

The anatomical relations of the sphenoidal sinus are particularly important on its outer wall. This wall may be divided into a posterior or endocranial and an anterior or orbital portion. It is in

relation with the cavernous sinus and the internal catorid artery and with the various nerves that traverse the cavernous sinus in its upper part, and with the optic canal, the optic nerve and the ophthalmic artery in its lower part. The thinness of this wall and the passage through it of numerous vascular and nervous elements render it very easy for the transference of infective processes to take place.

The capillary systems of the orbital and cranial portions are developed from a single plexus and retain anastomotic channels throughout life. This factor favours the diffusion of infective processes. On the other hand the attachment of the tube of dura mater which envelops the optic nerve in its canal is of help in restricting the spread of infection.

Such spread is more likely to occur in the proliferative cases with polypoid swelling of the mucosa causing intermittent retention and discharge of the products of infection.

Once the infection reaches the sheath of the optic nerve it may spread backwards until it reaches the optic chiasma and may then travel along the opposite nerve.

F. C. ORMEROD.

PHARYNX

The treatment of pain after Tonsillectomy. G. HADDAEUS. (*Münchener Med. Wochenschrift*, June 3rd, 1938, xxii., 826.)

In the city hospital at Mannheim the pain after tonsillectomy has been greatly reduced by the use of Optalidon Suppositories (Sandoz). Two or three suppositories are used on the first day and one or two daily for the next few days. This treatment has been found to be very helpful and in the 70 cases treated there have been no deleterious effects.

G. H. BATEMAN.

The Occurrence and Significance of Striated Muscle in the Tonsils. G. SKOPP. (*Hals- u.s.w. Arzt*, 1938, xxix, 268-78.)

The presence of bundles of striated muscles fibres has been described previously and full references are given. There is a great difference of opinion as to the origin of these muscle fibres. In order to arrive at some conclusion the author examined the sections of 1,610 pairs of enucleated tonsils. Bundles of striated muscle fibres were seen 169 times; seldom in transverse sections, but much more often when sections had been made in the frontal plane. The muscle fibres are usually seen where the septa which divide the follicles begin, and occur up to a maximum depth of one-quarter of the diameter of the tonsil.

In forty unselected tonsils serial sections were made and nearly all of these showed the presence of striated muscle fibres in one,

two or three sections from the middle portion of the tonsils. These muscle fibres appear to have been carried into the tonsils with the fibrous septa. They belong to the superior constrictor group of muscles and have been given the separate name of tonsillo-pharyngeus muscle.

J. A. KEEN.

Changes in Waldeyer's Ring in Cases of Long-standing Tracheotomy. DR. D. DELLA CIOPPA. (*Archivii Italiani di Laringologia* 1938, liv, 141.)

The author has investigated the changes that have taken place in the lymphoid tissue of Waldeyer's ring in fifteen patients who had worn a tracheal canula for many years. In every case except one there was atrophy or hypoplasia of all the lymphoid tissue elements. In the one exception there was enlargement of the tonsils.

The author considers that the hypoplasia of the lymphoid tissue is due to the absence of the stimulation which is provided by the currents of air passing over this tissue in a normal individual. If this current of air is interrupted over a long period the lymphoid tissue relapses into a state of inertia.

At the same time, there is found in many of the cases a marked cellular activity in the tonsils with numerous mitotic figures. This condition is not found in the neighbouring lymph nodes. These microscopical hyperplastic changes are only found in those cases which have worn a canula for a very long time.

The author considers that the hypoplastic changes, particularly in the tonsils render the passage of infection through the tonsils more easy.

He also states that, in his opinion, the thickening of the trabeculae in hypertrophic conditions of the tonsils increases the barrier to invading organisms.

F. C. ORMEROD.

LARYNX

Total Laryngectomy with Moulonguet's modification of Langenbeck's incision. PROF. E. TOTI. (*Bollettino delle Malattie dell 'orecchio della gola e del naso*, 1938, lvi, 81.)

The writer has recently performed five operations for laryngectomy with successful results. The first three were operated upon by Glück's method and the U-shaped flap used. The latter two were treated after Moulonguet's method which includes an inverted T-incision, the horizontal limb of the T being curved with the concavity upwards. The junction of the two limbs of the T is the point at which the trachea will be brought to the surface.

Local anæsthesia is used for all cases. 0·75 per cent. novocain with the addition of solution of sulphate of potassium and one drop

of 1/1000 adrenalin solution to each 5 c.cm. 100 c.cm. of this fluid can be used with safety, but the writer finds that about 75 c.cm. is usually enough. He does not anæsthetize the mucosa of the pharynx or trachea, as this may eliminate the valuable cough and swallowing reflexes.

The author is strongly opposed to preliminary tracheotomy, as it tends to cause stenosis of the trachea and makes the tracheal ostium more difficult of accomplishment. He uses an aspirator throughout the operation for the removal of blood and secretion. The skin flaps are covered with gauze soaked in equal parts of saline and eusol throughout the operation, and the wound is frequently irrigated with this solution.

The nasal feeding tube is fixed in position before the pharyngeal wound is closed. Drainage is a very important factor in promoting recovery. Iodoform gauze is used for the upper part of the wound and rubber drainage tubes at the lower end, lateral to the tracheal opening. These drain the dead spaces between the skin flaps and the sutured pharyngeal wall. A pad of gauze placed on the skin just above the tracheal orifice, exercises gentle pressure and conduces to adhesion between the skin and the œsophagus.

The tracheal canula is changed after three or four days, the drainage tubes are removed at the end of a week.

The patient is kept in a very humid atmosphere for ten to twelve days, an electric sterilizer being used to produce the necessary moisture. From the second to the twelfth day ten units of insulin are injected daily.

The author insists that the post-operative treatment is very important and must be carried out by a specially trained person.

F. C. ORMEROD.

The Treatment of Laryngeal Syphilis. JEAN REBATTU and P. MOUNIER-KUHN. (*Annales D'Oto-laryngologie*, April, 1938.)

This is a long article which covers the treatment of every phase of laryngeal syphilis. We are first given a survey of the present day syphilotherapy and its special application to laryngeal syphilis. The effect and dosage of the usual drugs : mercury, arsenobenzenes, bismuth and potassium iodide are discussed in detail. The kind of treatment recommended differs, according to the period of infection and to any complications that may arise. These are noted and suggestions are made as to the appropriate treatment. One of these complications is dyspnœa and the rôle of the surgeon in this connection is discussed. Should he tracheotomize or intubate and what are the indications and probable results ? Space is devoted to the benefit derived by hydrotherapy ; waters containing sulphur not only reinforce the action and the elimination of mercury but increase the tolerance of the individual to mercurial treatment and

allow intensive treatment to be carried out in subjects who could not otherwise support it. The relative merits of the sulphur springs in the Pyrennees and the Alps are contrasted. Finally, the authors discuss the surgical treatment of syphilitic laryngeal stenosis. The results obtained at various home and foreign clinics are noted, and the conclusions at which they arrive are of a very pessimistic character.

M. VLASTO.

BRONCHUS

On the Anatomy and Physiology of the Bronchial Tree. EELCO HUIZINGA (Groningen). (*Acta Oto-Laryngologica*, March 1st-April 30th, 1938, xxvi, 2.)

Many anatomical and physiological questions may be studied by bronchography. Stereographs affirm the spiral build of the bronchial tree. It is impossible to indicate a special system for its ramifications for there are too many different anatomical variations : the most important of these are described.

As the bifurcation undergoes only slight differences in position, these displacements are more marked in the periphery. During inspiration the bronchi of the inferior lobe approach each other.

Marked changes in the lumen of the bronchi may take place during deep breathing ; the diameter of the peripheral bronchi may increase two to three times. The changes in the lumen also appear when there are no pressure-changes ; the lumen changes with the expansion of the lung. These lumen-changes are considered to be of great importance in expectoration.

Peristaltic movements of the bronchial tree were not observed : the respiratory movements can easily lead to errors in observation.

[Author's abstract.]

H. V. FORSTER.

ŒSOPHAGUS

Tuberculous Ulceration of the Œsophagus. Dott. C. GHIGI. (*L'Otorinolaringologia Italiano*, 1937, vii, 437.)

The writer reviews very fully the literature on tuberculous ulceration of the œsophagus. The condition is almost always associated with severe and advanced disease of the chest.

The infection may reach the œsophagus by direct spread from the larynx, it may reach it from infected tracheo-bronchial glands or by the swallowing of live bacilli which become implanted in the wall of the œsophagus.

When infected directly from the larynx it occurs in the upper third, usually immediately below the post-cricoid sphincter. There are patches of infiltration which ulcerate at an early stage, and there is a tendency to penetrate into the muscular layer.

The spread from the tracheo-bronchial glands occurs in the

middle third or in the lower part of the upper third, and consists of an infiltration and thickening of the wall with immobilization of the œsophagus. Granulation tissue forms in the submucosa and eventually causes ulceration.

The symptoms are pain and difficulty on swallowing, when the lesion is in the upper third, and there is often regurgitation of food and drink owing to spasmodic contraction. The lesion in the middle third, due to spread from the tracheo-bronchial glands, is almost symptomless.

Active treatment is usually impossible on account of the very bad condition of the patient. Gastrostomy would be of value if practicable, but as a rule the application of analgesics is all that can be done.

F. C. ORMEROD.

MISCELLANEOUS

Blood Cultures after Tonsillectomy. H. SOUTHWORTH and C. G. FLAKE (New York). (*American Journal of Medical Sciences*, May, 1938, cxcv, 5.)

The writers report that in twenty-two patients in whom tonsillectomy was performed and from whom pre-operative and post-operative cultures were taken, four (18·2 per cent.) showed growth of organisms in the post-operative culture, and three (13·6 per cent.) showed growth on the pre-operative culture.

Whether the positive cultures represented blood stream invaders is doubtful in most of the cases, and it is to be remarked that the pre-operative growths were nearly as numerous as the post-operative ones and that in no case was the growth both pre-operatively and post-operatively in the same patient. There was no constant relation between the clinical course and the presence or absence of a positive culture. The authors therefore suggest that the discrepancy of results in various investigations recorded in the literature is due to differences in technique and in interpretation. Rubin and others, in 1929, did not find a single positive culture in seventy-eight tonsillectomies. Schwartze and Frisch obtained three positive results in eleven cases in which the specimen of blood was taken during tonsillectomy, while cultures made from blood taken seven hours later remained sterile. O'Kell and Elliott reported that in eighty-four cases of dental extraction, 60 per cent. showed a transient bacteræmia. The above difference in results following dental extraction and those following tonsillectomy is explained by the fact that in the former a purulent focus may be laid open to the blood stream while in the latter this is rare. The evidence from the cases recorded in the present paper and from perusal of the literature suggests that bacteræmia is not a common sequel of tonsillectomy.

DOUGLAS GUTHRIE.

Review of Book

Persistence of the Thyro-glossal Duct with median cervical Fistula. SORU, POPP, IOANITESCO and NEUMANN (Bucarest). (*Annales D'Oto-laryngologie*, April, 1938.)

These authors report in a short article two cases illustrating the above condition. That the condition is very infrequent, is shown by the Mayo statistics; thirty-six cases out of 86,000 operations. It is considerably more frequent in females and 20 appears to be the age of election. The first case is described in considerable detail and the fact that a fistulous tract was associated with acute inflammatory phenomena gave rise to the diagnosis of Ludwig's angina. At a later date, it was observed that coloured fluid injected through the fistula was observed in the mouth and could be seen issuing from the foramen cæcum. Radiography with lipiodol confirmed the diagnosis, and a photoradiogram depicts the condition. The fistulous tract was excised in both cases and in neither case was it found necessary to excise a portion of the hyoid bone.

M. VLASTO.

REVIEW OF BOOK

The oto-neurological and surgical study of Vertigo. By MAURICE AUBRY and MARCEL OMBRÉDANNE, published by Masson et Cie.

Charcot recognized many years ago that the division of the vestibular nerve is the only logical operation for the relief of intractable vertigo, but patients and their medical advisers are usually averse to a brain operation and are apt to postpone it until the symptoms become unbearable. This is a mistaken idea probably based on the reminiscence of the fatalities that occur when brain tumours are removed. There is however a great difference between the operations, as in the one the intracranial pressure is increased whilst in the other there should be no change whatever. One would perhaps hesitate to say that brain surgery has developed to the point at which opening a skull to divide a nerve entails no more risk than opening the abdominal cavity, but the publication of this book shows that in the hands of MM. Aubry and Ombrédanne the operative risk is minimal whilst the functional results are brilliantly successful. It is, moreover, a matter for considerable satisfaction that these results have been achieved by aural surgeons. Out of a large number of cases of vertigo (more than 1,000 in one year), seen in the service of Dr. Hautant at the Hôpital Tenon and elsewhere, forty-six have been operated on. It is the main object of this monograph to determine what type of vertigo is likely to respond and which should be left alone.