ABSTRACTS

EAR

The Pathogenesis and Treatment of Apicitis. N. ARNOLDSON. (*Acta Oto-Laryngologica*, xxiii., 1.)

Disease of the apex of the pyramid occurring in the course of an acute otitis media is often described as "petrositis"; the author however prefers the term "apicitis" as it indicates more exactly the localization of the disease.

He recognizes two varieties, namely (1) apicitis acuta pyramidalis progressiva, in which the disease, due usually to the streptococcus mucosus, advances forwards and inwards towards the apex slowly and often almost without symptoms, until the sudden outset of a fatal meningitis: (2) the commoner and *relatively* benign apicitis acuta pyramidalis circumscripta, in which a localized abscess forms either in a single large apical cell or by the breaking down of several cells. This may proceed further to the total destruction of the apex and the formation of a true extra-dural abscess, as in two of the Author's cases.

In the progressive form the only hope of arrest, and that a slender one, lies in the complete exenteration of the pyramid including the labyrinth, whether this has been previously destroyed or not. In the circumscribed variety drainage of the abscess is not infrequently successful. This has been accomplished in a few cases by following up a track under the arch of the superior semicircular canal. The simplest and most direct method, however, is to reach the apex by raising the temporal lobe and the dura which covers it from the upper surface of the pyramid. This operation which involves no risk to the labyrinth may be called apicotomia temporalis.

For the diagnosis of apicitis X-ray examination is indispensable. By this means the nature of the disease can be detected before the characteristic symptoms appear, and a timely operation will then, at least in the circumscribed form, offer a good prospect of a successful result

THOMAS GUTHRIE.

Clinical Observations on Apicits. G. ÄNGGÅRD. (*Acta Oto-Laryngologica*, xxiii., 1.)

This paper is based on twelve cases of apicitis treated during the last ten years in Dr. Arnoldson's clinic at Stockholm. All but one were cases of acute otitis media, which had run a protracted

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course and had had the mastoid opened. Eight of the patients were males and four females. Other observers have noticed a similar preponderance of males. Apart from the fact that men are more liable then women to ear diseases in general, it has been shown by X-ray examination that well developed apex cells are present in 46·37 per cent. of men and only 27·03 per cent. of women.

Trigeminal neuralgia is the most frequent symptom; it was present in nine of the cases, but in very different degrees, from slight transitory discomfort to pain so severe as to be unrelieved by narcotics. In two of the cases facial paralysis was present in addition to paralysis of the sixth nerve.

The author was struck by the scarcity of the symptoms and the consequent difficulty in making a sufficiently early diagnosis in many of these cases.

The great value of repeated X-ray examination in the diagnosis of apicitis is shown by four cases which are described, and illustrated by skiagrams.

THOMAS GUTHRIE.

The Reaction of the Meninges to Drainage of Brain Abscess. ENRICO BOZZI. (*Archivo Italiano di Otologia*, October, 1935.)

A very complete résumé is given of the various methods adopted by different writers in opening the meninges, and abscesses in the cerebrum and cerebellum, the type of drainage they employ and what steps they take to procure adhesions between the layers of the meninges and the brain.

The author has conducted a series of experiments on guinea-pigs. In one series he removed by a trephine a circle one centimetre in diameter. He then introduced a needle seven or eight millimetres into the brain and afterwards inserted by the same route a rubber tube of very small calibre. The animals were killed after 6, 12, 24, 48 hours and after eight days. In the last case a somewhat larger tube was introduced at the end of forty-eight hours.

In a second series a similar exposure was made. For forty-eight hours cotton wool impregnated with 10 per cent. tincture of iodine was kept in contact with the dura mater. At the end of this period rubber tubes were introduced as in the first series and the same procedures carried out.

Two other series were made, in the first a large cruciform incision was made in the dura which was untouched, and in the other in dura which had been subjected to iodine for forty-eight hours. In both of these series drainage tubes were inserted.

In each of the first two series one animal died as a result of the operation, in the third series all the animals died after about thirty-six hours. In the fourth series all the animals survived

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more than forty-eight hours. Complete macro- and microscopical examinations were carried out *post mortem*.

The results of the experiments show that:

1. The application of iodine to the dura mater is innocuous to the meninges and the brain.
2. Such application does not encourage adhesions between the layers of the meninges and the brain.
3. In Lemaitre's method of drainage it is found that after six hours there is a considerable degree of adhesion between these structures.
4. Lemaitre's method of drainage is harmless.
5. Very bad results are obtained with wide incisions of the meninges, which results are mitigated by previous treatment with iodine.

The author appeals for records of large numbers of cases treated by Lemaitre's method.

F. C. ORMEROD.

NOSE AND ACCESSORY SINUSES

A Method of Displacement and Immobilization of the Lateral Nasal Wall in Atrophic Rhinitis. D. S. W. VAN VOORTHUYSEN (The Hague). (*Acta Oto-Laryngologica*, xxii., 1-2.)

Palliative methods have been disappointing in the treatment of atrophic rhinitis and yet whenever surgical intervention has actually succeeded in establishing a narrowing of the nasal passages the results have been so favourable that there is much encouragement to employ surgical methods.

Various operations have been devised to loosen the medial antral wall from its osseous frame, then to flatten out its concave nasal surface and to bring it close to the nasal septum and finally to fix it in this position, but disappointment in certain cases is to be attributed to the tendency of the wall to be withdrawn to its original position by scar tissue. The greatest number of successes so far appear to have been achieved by Hinsberg's transmaxillary method, though the inclusion of the margin of the pyriform aperture in the resection does not appear to offer any advantage.

The author uses the transmaxillary method and begins by loosening the medial antral wall as low down as possible but the mucous membrane is also loosened from the nasal floor so that the base of the bony plate will rest upon bone and form a bony union. The forward vertical incision of the medial antral wall is made behind the pyriform aperture. This, as well as the upper and posterior border lines, is chiselled inwards but not actually through and the cone shaped medial wall is then flattened out by multiple crackings against a metal plate according to Lautenschläger's

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method and the whole bony plate is finally loosened along its margins.

This mobilized antral wall is then kept close to the nasal septum by a large and massive rubber tube placed in the antrum, the tube being doubled up to exert a spring effect. It appears to be necessary to keep the rubber tube in position for three months to enable bony consolidation to take place.

H. V. FORSTER.

Researches on the Movement of the Cilia in Luschka's Tonsil. E. RENVALL (Gothenberg). (*Acta Oto-Laryngologica,* xxii., 1-2.)

The capital rôle which cilia play in the maintenance of health in the nose is receiving more and more attention. The effects of acids, bases and salts were studied by Sharpey and Gray who found that the slowing down effect of acids depended on the rate at which these penetrated the cellular substance, and that the action was reversible on neutralization. Lillie, studying the action of different ions on the cilia, found sodium paralysing and potassium stimulating. Mittermaier, determining the pH of secretions in a case of chronic purulent sinusitis, showed that the pH was low and that the secretion had an acid reaction but Proetz found that in long-standing sinusitis the cilia maintained their activity and so we might conclude from Mittermaier's work that the mucosa, having a good blood supply, could maintain the nutrition of the cilia in spite of their being bathed by an acid medium.

Negus has recalled the favourable effect of calcium therapy in sinusitis and the use of alkaline lavage by solutions of a favourable strength to counteract the effect of the acid products of bacterial activity, and Cone and Proetz have examined the effect of temperature on the movements of cilia.

Under the direction of Professor Holmgren and assisted by M. M. B. Franzen and E. Carlens experiments were carried out on material removed from adenoid patients, an idea which was suggested by M. E. Hartmann. Small pieces of this tissue were preserved in Ringer's solution and examined under the microscope. The fragments were placed on a fine wire grille adjusted close to the coverslip of the warm chamber through which the fluids could be passed, using an aspirator. The effect of temperature and various medicaments was examined. At 0° Centigrade, movement was arrested but was accelerated as the temperature rose as far as 37° C. to 40° C., but with arrest of movement at 45° C. The action ceased to be reversible above 40° C.

With regard to the effect of medicaments, concerning the action of which a table of results is given, the only one of these which caused acceleration of ciliary activity for a certain time was ephedrine.

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Alcohol may bring about arrest of ciliary movement which it was possible to restore to normal after the use of Ringer's solution and which, even after the use of a 20 per cent. solution of alcohol, gave the result which the author goes so far as to describe as: "perfect reversibility."

H. V. FORSTER.

Submucous Conchotomy. E. RENVALL (Gothenberg). (*Acta Oto-Laryngologica*, xxii., 1-2.)

The treatment of chronic rhinitis with hypertrophy causing symptoms of nasal obstruction has always been controversial.

After removal of part of an inferior turbinate, healing takes place rather slowly and with crust formation, whereas after galvano-cautery or chemical cautery treatment scar tissue forms and there may be interference with the physiological rôle of the mucosa.

At the end of the last century Bloebaum and Schmidt introduced the method of submucous cautery treatment and some years later Linhart and Kyle published the results of their method using an appropriate instrument for destroying the cavernous tissue of the inferior turbinate by the submucous route.

Lowe, Würdemann and Zarniko suggested removing the bone of the inferior concha by the submucous route and Renvall reports favourably on an operation of this type. Under local anæsthesia, the anterior end of the inferior turbinate is incised and the mucous membrane separated from the bone which is then easily removed by Brünings' forceps.

H. V. FORSTER.

The Treatment of Acute Frontal Sinusitis. T. B. LAYTON. (*Lancet*, 1935, ii., 1345.)

The author considers the treatment of acute frontal sinusitis should be purely medical. The first necessity is the emptying of the bowels, for which he prefers castor oil. If the colon is loaded it must be emptied first. Position is the second necessity, the essentials being a sitting position, with head slightly flexed and supported thus by pillows. The room must be warm and well-ventilated, and the author regrets the abolition of the bronchitis kettle. Diet must be largely fluid, and in severe cases as much as 300 ounces should be given (presumably daily). Fruit juices and water with sugar or glucose are advised, but if they become wearisome, plain water is better than nothing. For food, the patient may take what he fancies. The above essentials are all that is necessary, and the author is opposed to drugs. If there is pain, small doses of aspirin will relieve it, if severe a morphine injection. Local medication is unwise, and the removal of the anterior end

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of the middle turbinate may be actually dangerous. Inhalations are undoubtedly of value once a passage through the nose has occurred. The treatment of acute frontal sinusitis may be summed up in "There is no room for surgery and the medical treatment is the minute attention to a hundred details, many of them of the most homely nature, rather than the exhibition of any specific drug or therapy."

MACLEOD YEARSLEY.

LARYNX

Pericarotid Sympathectomy in Tuberculosis of the Larynx. ENRICO RUBALTELLI. (*Archivio Italiano di Otologia*, July, 1935.)

The author reviews the various methods of carotid sympathectomy in cases of tuberculous laryngitis. The object aimed at is the production of vaso-dilatation in the larynx. This object has been attempted by various surgeons by stripping portions of the common, internal and external carotid arteries and in some cases of the superior thyroid artery.

The author points out that there are certain dangers in these procedures. The dilated portion of the internal carotid artery immediately distal to the bifurcation of the common carotid and known as the carotid sinus may easily be wounded and it has in very close relation to it the carotid body which has a very intimate connection with the sympathetic nervous system. This body also has connecting branches with the vagus and glossopharyngeal nerves.

Destruction of the carotid body and large portions of the carotid sympathetic plexus may produce disturbing and even dangerous vasomotor changes.

The sympathetic fibres to the larynx pass from the external carotid plexus, through the plexus of the superior thyroid artery and its branches, the superior and inferior laryngeal arteries.

The author, admitting that good results may be obtained by a laryngeal sympathectomy, restricts his operation to the two laryngeal arteries and the superior thyroid artery, with at the most a very limited stripping of the external carotid artery. He treats the carotid body and the region of the carotid sinus with great respect.

F. C. ORMEROD.

Gold Therapy in Tuberculosis of the Larynx. G. F. CAPUANI and U. SECONDI. (*Archivio Italiano di Otologia*, November, 1935.)

The authors describe thirty-seven cases of tuberculosis of the larynx. These were subjected to courses of injection of either

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Sanocrysin, which is a double thiosulphate of gold and sodium, or Krysolgan which is an organic compound of these two metals.

It is well known that injection of gold preparations into patients suffering from tuberculous lesions of the larynx or pharynx may and often does cause exacerbation of these lesions.

The authors have found that this exacerbation is more likely to occur where small doses are given, but that if large doses are given these adverse changes very rarely occur. Where an exacerbation has occurred after a small dose it can often be abolished by administering a large dose. A small dose is one of one or two centigrammes, given weekly, a medium dose is from five to ten centigrammes and a large dose is described as twenty centigrammes.

Of the thirty-seven cases five were very advanced and final recovery was out of the question, but improvement in the laryngeal condition was noted in all of them. Of the remaining thirty-two, eighteen were cured, three improved, ten remained stationary and one deteriorated. The best results were obtained in the catarrhal cases, especially in those with œdema, and in those with ulceration. Less satisfactory results were obtained in the infiltrated types and in those with hypertrophic formations, or with perichondritis. The only case which was worse after the course was that of a patient with perichondritis.

F. C. ORMEROD.

High Mountain Climate in the Treatment of Tuberculosis of the Larynx. GIUSEPPE SALVADORI. (*Bolletino delle Malattie dell'Orecchio della Gola e del Naso*, September, 1935.)

The author describes the conditions existing in a sanatorium in the Apennine mountains at a height of 1,170 metres. He enumerates the meteorological aspects of such a situation and discusses its effects on the different types of patient. For the well-to-do patient a high altitude sanatorium is necessary, to provide the necessary stimulus to a body whose resources have not been strained. The sanatorium in the plains is too nearly a replica of the normal environment of the well-to-do classes, but provides an adequate stimulus for members of the working classes, for whom the stimulus of a high altitude might be too strong at first.

It was for long considered that tuberculous infection of the larynx was a contra-indication to sanatorium treatment, but during the past few years it has become evident that a great many patients improve very considerably in such surroundings. The author has tabulated the results in the sanatorium under discussion and finds that of the cases of tuberculous laryngitis 10-15 per cent. were cured, 40-45 per cent. greatly improved, 37 per cent. remained stationary and 6 per cent. deteriorated.

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The best results were obtained in those patients in whom the lesion was of a catarrhal type with a general hyperæmia, in those with infiltration of the mucosa, especially with œdema, and in those with proliferative lesions.

Patients who should not be sent to a high altitude sanatorium are those with a persistent pyrexia, with an exudative lesion in the lungs, and those with ulcers in the larynx, especially if they show a tendency to extension and to deep destruction.

F. C. ORMEROD.

TONSIL AND PHARYNX

A Case of Peri-pharyngeal Abscess complicating Mastoiditis, probably by diffusion through the Peritubal Cells. GUSTAVO BORGHEGGIANO. (*Bollettino delle Malattie dell'Orecchio della Gola e del Naso*, January, 1935.)

A boy, aged eleven, suffered from an acute otitis media with mastoid infection. He was treated by a cortical mastoid operation and made good progress. A fortnight later he developed signs of meningeal irritation and the Gradenigo syndrome of symptoms. A further extensive removal of bone and infected cells was carried out with apparently complete recovery. A few days later a complaint of dysphagia led to the discovery of a fluctuant swelling behind the tonsil on the affected side. Two attempts to aspirate this through the mouth failed and it was eventually drained by the retro-sterno-mastoid route. After this, complete cure was quickly attained.

The peripharyngeal region is divided by processes of the deep cervical fascia, which pass from the styloid process to the lateral wall of the pharynx, into the anterior or prestyloid space and the posterior or retrostyloid space. Suppuration in this region may extend along the great vessels of the neck, into the pterygoid space or into the region of the deep cervical glands.

The extension of the suppuration from the middle ear first proceeded along the anterior perilabyrinthine air cells to the tip of the petrous bone—giving rise to Gradenigo's syndrome. This extension was checked by the second operation, but was followed by infection of the peritubal cells which led to the peripharyngeal abscess in the anterior prestyloid space—lying to the outer aspect of the tonsil.

F. C. ORMEROD.

Tuberculosis of the Pharynx. DOTT. AUSANO DELLA VEDOVA. (*Archivio Italiano di Otologia*, March, 1935.)

Tuberculosis of the pharynx is usually found in patients suffering from pulmonary tuberculosis, but certain of the types met with such as the lupoid, do occur in the absence of pulmonary disease.

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The author discusses the mode of infection of the pharynx which may be by direct inoculation from the sputum, from the blood, and from the lymph stream. It is probable that all three channels come into play in different types, but probably the majority are infected from the sputum.

The various types of the condition are described and grouped under the following headings: (1) Infiltrated and ulcerated, (2) Granular, (3) Lupoid and (4) Latent. The first group includes the common type met with in phthisical patients with ulcers on the posterior pharyngeal wall and on the tonsils, the results of sputum-borne infection. The second consists of a miliary infection associated with some degree of bacillæmia. The third or lupoid group includes typical and atypical lupus, which may be associated with similar conditions in the nose and on the face. In some of these cases there may be ulceration and in others sclerosis. The fourth or latent group includes cases in which the infiltration is widespread and may take the form of an acute inflammatory swelling or where there is a chronic and hypertrophic change in the mucosa. In some of the cases, particularly in the last group, there may be a tuberculous infiltration of the muscles of the pharyngeal wall.

The symptoms are those of pain and dysphagia, due in most cases to ulceration but sometimes to infiltration, producing mechanical difficulties in deglutition. This infiltration may involve the soft palate, making it impossible to close off the naso-pharynx and therefore interfering with speech and allowing regurgitation of food into the nose.

Occasionally there may be bleeding from the ulcerated surfaces and there is almost always cervical adenitis.

Treatment is largely general and devoted to improving the powers of resistance of the patient. Local treatment may include electro-coagulation, X-ray therapy, ultra-violet light, radium, and hypodermic injection of organic gold compounds.

The prognosis depends largely on the general and pulmonary condition of the patient, but is better in the case of a single and well-defined, even if large, lesion than in the case of multiple but smaller lesions.

F. C. ORMEROD.

MISCELLANEOUS

Case of Agranulocytosis, with Sinus-inflammation and Brain Abscess. BELA SZENDE (Budapest). (*Acta Oto-Laryngologica*, xxii., 1-2.)

On the hard palate of a man of fifty-nine years, an ulcer formed which led through a fistula in the direction of the maxillary sinus and was accompanied by high fever. The antrum became infected and this infection, extending through the ethmoid cells

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and the lamina cribrosa in the direction of the brain, where it caused an abscess the size of a nut in the right lobus frontalis, could not have been prevented even by operation. The patient died of meningitis. The examination did not indicate lues. In the beginning the blood picture besides granulocytopenia (Leucocytes 1,200) showed the typical displacement to left (Links-Verschiebung) characteristic of sepsis and only later on, when the whole condition became worse, did the blood picture of a pure agranulocytosis form. This supports the conception that the agranulocytosis as described by Schultz is only a biological variant of sepsis. We have a right to ask whether agranulocytosis is not spirillosis, partly because of the influence of arsenic and because of the resemblance of the clinical form of the ulcer to lues.

[Author's Abstract.]

OBITUARY

DR. ALBERT ALEXANDER GRAY

OTOLOGISTS throughout the world will learn with genuine regret of Dr. Gray's death on January 4th, 1936, following an illness of only a few days' duration. He was apparently in his usual good health when, during a visit to relatives in Argyll, he developed influenza and acute abdominal symptoms which demanded his hurried transference up Lochfyneside and over " Rest-and-be-thankful "—through scenes which he knew and loved so well—to a Glasgow Nursing Home which he reached moribund, and where he died the next day.

Dr. Gray came of Quaker parentage to which some of his fine qualities may be attributed. Born in Glasgow in 1869, he was educated partly there and partly in Bootham School, York. In due course he studied medicine at Glasgow University and obtained the degrees of M.B. and C.M. in 1890 and M.D. in 1896, all with commendation.

Having spent two years in general practice in Blackburn and a period in Munich studying oto-rhino-laryngology he returned to Glasgow and began the practice of his speciality. His first hospital appointment was that of Surgeon for Diseases of the Ear to the Victoria Infirmary. During the time of waiting and probation he became associated with the late Professor J. G. McKendrick and together they wrote the chapters on the Ear and Vocal Sounds for Schäfer's *Text-Book of Physiology* which was published in 1900.

From an early period in his career he spent much time in making and photographing anatomical preparations of the ear, especially of

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