

ABSTRACTS

EAR

Plastic Flap and the New Formation of Bone after the Fenestration Operation.

M. MEVER. *Zeitschrift für Laryngologie, Rhinologie, Otologie*, 1951, xxx, 216.

Histological examination of the newly-formed bony lid necessitating a re-fenestration seemed to indicate that this new-formed bone developed from the mucoperiosteum of the meatal flap and not from the fenestra itself. Free Thiersch transplantation with hairless skin for covering the fenestra is suggested by the author.

C. EISINGER.

Operation in Cases of Malformation of the Auditory Meatus and of the Middle Ear. F. ZÖLLNER. *Zeitschrift für Laryngologie, Rhinologie, Otologie*, 1951, xxx, 30.

The procedure depends on the amount of improvement of hearing after opening the mastoid antrum under local anæsthesia. If there is an immediate improvement the opening of the antrum is sufficient in most cases. Otherwise inspection of the chain of ossicles by opening the attic from above, and mobilization of the ossicles, is indicated. The importance of working with appropriate magnification and testing the mobility of the stapes is emphasized.

C. EISINGER.

A Case of Cholesteatoma of the Middle Ear in a Five-month-old Infant. DAVID L. POUSSHTER, Detroit. *Laryngoscope*, 1951, lxi, 942.

In further support of Tumarkin's theory of their origin the author adds to the literature one more case of "cholesteatoma" occurring in the absence of any evidence of previous aural infection. The patient was a five-months-old infant in whom facial asymmetry—with aural discharge—had developed on the morning of admission to hospital. Cholesteatosis was found at operation and confirmed microscopically. The perforation was situated posteriorly.

J. CHALMERS BALLANTYNE.

Observations on Anatomy of the Tympanic Plexus and Technique of Tympanosympathectomy. PAUL FRENCKNER, Stockholm. *Archives of Otolaryngology*, 1951, liv, 347.

Since Lempert presented his observations concerning the tympanic plexus and its functional importance and his experience regarding the effect of tympanosympathectomy, the author has adopted Lempert's idea as a working hypothesis and performed tympanosympathectomy for a large number of conditions, among them Ménière's disease and otosclerosis.

He has found that the variations are such that in some cases the nerve

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passes the entire way in an open sulcus, in others entirely in closed canals, and in still others partially uncovered and partially covered by a thin bony shell, showing that in many cases a complete tympanosympathectomy is not done through the removal of the mucous membrane and the visible nerves on the surface of the promontory alone. It is also necessary to open the closed canals and carefully clean out their contents as far downward and upward as possible in order to remove possible anastomoses. Special attention has been given the millimetre-wide surface between the recess of the fenestra rotunda and the sulcus of the tympanic nerve in order to find the minute nerve suspected of being the ramus anastomoticus acusticus.

The author hopes to be able to contribute eventually to the decision as to whether or not this operation has significance in the abatement of tinnitus.

R. B. LUMSDEN.

NOSE

Air Currents in the Upper Respiratory Tract and their Clinical Importance.

ARTHUR W. PROETZ, St. Louis. *Annals of Otology, Rhinology and Laryngology*, 1951, lx, 439.

Respiratory patterns are closely related to clinical manifestations such as the common cold, which play an important part in the public health and economy. So long as air passes at an unvarying speed through a smooth straight tube of constant calibre no turbulence occurs and light particles which it may contain remain air-borne. If the tube is bent, however, so that the air current changes direction, some turbulence occurs and air-borne particles are deposited on the walls, not at, but immediately beyond, the bend. The more abrupt the bend, the greater the turbulence and the greater the deposit of particulate matter. This phenomenon has been termed the "impingement effect". A similar deposit occurs if, instead of being bent, the tube is constricted. In this case, also, the deposit accumulates distal to the constriction.

The author demonstrates the pathways of the upper respiratory currents and studies the effects of the impingement phenomena in normal and obstructed air passages from the anterior nares to the glottic chink, i.e. the whole upper respiratory tract. The mouth, he shows, plays an important part in warming and moistening the air; one has but to take a deep breath with the lips closed to be aware of the air currents which are projected sharply against the base of the tongue and eddy in the back of the mouth. Cold, dry, contaminated, inspired air does not come in contact with the sinus ostia, at least not in any direct stream, but air currents reaching these openings are all expiratory and therefore moist, warm and clean. In this connection it is significant that the ostium of the frontal sinus, which would otherwise receive the brunt of the inspiratory current direct from the nostril, is safely tucked away behind the middle turbinate even though a long and tortuous passage is required for the purpose; while the ostia of the sphenoidal and posterior ethmoidal cavities, lying, as they do, out of the line of fire, have no such protection.

The three impingement points in the system are also the sites of the principal lymphoid tissue accumulations which constitute the "ring of Waldeyer". Clinically the most significant as well as the most common of the obstructions is that involving the whole upper nasal chamber and caused by a simple

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widespread swelling of the mucosa—the ubiquitous “stuffy nose”. Contrary to expectation and to the general impression, the so-called plough-share shaped spur, when it exists alone, has scarcely any effect on the air currents. This is owing to the fact that its shape, its thinness and its location streamline it to the passing air current. Polyps and local hyperplasias cause deviations in the air patterns according to their locations. Troublesome as they may be in other respects, polyps confined to the middle meatus have little effect on the air streams. Polyps about the posterior ethmoidal ostia, in the superior meatus, are much more apt to deflect them.

There are 30 photographs illustrating the article.

R. SCOTT STEVENSON.

Intranasal Meningocele. T. E. BEYER, J. R. BLAIR and W. R. LIPSCOMB, Denver. *Laryngoscope*, 1951, lxi, 917.

Meningoceles result from the herniation of the pia and arachnoid through a dehiscence in the skull. Intranasal meningoceles may herniate through the sphenoid or ethmoid but more commonly arise through a dehiscence in the cribriform plate. In such cases the sac forces its way through a rent in the dura into the nasal fossa where it presents as a greyish, semitranslucent, sessile tumour covered by septal mucosa. Their site (on the medial wall of the nose) and their age-incidence (occurring in infants) distinguish them from polypi. Aspiration and biopsy are dangerous. In one case reported fully lateral X-rays of the skull showed the dehiscence to lie anteriorly in the cribriform plate. The treatment of choice is ligation of the pedicle either by a radical fronto-ethmoid approach or by a craniotomy.

J. CHALMERS BALLANTYNE.

PHARYNX

Experimental Studies of the Penicillin Treatment of Chronic Tonsillitis. P. BIESALSKI. *Zeitschrift für Laryngologie, Rhinologie, Otologie*, 1951, xxx, 56.

In spite of massive penicillin and sulphonamide treatment micro-organisms, mostly diplococci, were found on histological and bacteriological examination in the crypts, peritonsillar tissue and septa of the tonsils. The bacterial flora of the mouth showed, with high penicillin concentration, a shift in favour of penicillin-resistant germs, but there was no change in the bacterial content of the tonsillar crypts.

C. EISINGER.

MISCELLANEOUS

Influence of Fundamental Concepts in Allergy upon Specific Problems in Otolaryngology. FRANCIS L. WEILLE and A. B. RICHARDS, Boston. *Archives of Otolaryngology*, 1951, liv, 231.

This paper has a twofold purpose: (1) to review some of the fundamental concepts of the allergist and of the rhinologist regarding sinus surgery in asthma; and (2) to report what happened to 197 asthmatic patients who had sinus operations and were followed for an average of 8.7 years. The effect on the asthma and on the nose, together with the operative technique,

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are discussed. The conclusions are that : (1) The asthma became worse in 18 per cent. Fifty-two per cent. were better. (2) The condition of the nose became worse in five of the 197 patients. Two-thirds of the patients were better so far as the nose was concerned. (3) Relatively conservative surgical measures seemed adequate in this group, and were followed by slightly better results in the asthma than when more radical methods were employed. (4) The longer the patients were followed the better were the overall results, both in the nose condition and in the asthma, as judged by 84 patients followed 10 to 20 years.

R. B. LUMSDEN.

Vocal-cord Paralysis in Heart Disease. MILTON PLOTZ and MORRIS J. BROOKS, Brooklyn. *Archives of Otolaryngology*, 1951, liv, 273.

Paralysis of the left recurrent laryngeal nerve may occur in combination with heart disease, most commonly mitral stenosis. The cause of the paralysis is probably compression of the nerve by an enlarged or displaced left pulmonary artery. Two cases of severe hoarseness and left hemilaryngoplegia in association with mitral stenosis are presented. In one case, no improvement was noted on treatment for cardiac disease ; in the other, there was distinct amelioration of both cardiac and laryngeal symptoms with appropriate treatment directed to the disorder of the heart.

(Authors' Summary.)

Radiation Cancer of the Pharynx. A. W. G. GOOLDEN, Southampton. *British Medical Journal*, 1951, ii, 1110.

There have been many examples of radiation cancer of the skin, but only a limited number of cases have, so far, been reported in which a tumour has developed in the deep tissues as a sequel to external therapeutic irradiation. The case histories of four patients who developed tumours in the laryngopharynx many years after irradiation of the neck are therefore of interest.

The four patients whose case histories are recorded have certain features in common, apart from their site of origin. In all of them neoplastic change occurred after a long latent interval, which varied only between 26 and 30 years. They were all treated originally for benign conditions, and in three of them it is known that frequently repeated doses of X-rays were given over a period of six months or more. In the three patients treated for thyrotoxicosis the tumours had arisen approximately 4 cm. deep to the centre of the irradiated area of skin, and these three patients had all suffered severe radiation damage to the skin, two of them requiring excision and plastic repair for either epitheliomatous change or necrosis. Case 4 alone failed to show any convincing evidence of skin damage, and for this reason it is doubtful whether the tumour can be attributed to irradiation. However, this is a comparatively uncommon site for cancer, and it is difficult to be persuaded that its appearance was purely coincidental. It seems reasonable to speculate that, if the treatment of thyrotoxicosis by intense or prolonged irradiation was a common practice 25 to 30 years ago, further cases of radiation cancer in the laryngopharynx may occur, or have perhaps already occurred.

R. SCOTT STEVENSON.

Miscellaneous

Cerebrospinal Fluid Rhinorrhœa and Recurrent Purulent Meningitis. L. E. BEAUCHAMP and BEN BENJAMIN. Montreal. *Canadian Medical Association Journal*, 1951, lxxv, 372.

The writers report a single case of cerebrospinal fluid rhinorrhœa occurring in a 10-year-old boy in whom intermittent nasal drip was complicated by three separate and distinct episodes of acute purulent meningitis caused by different organisms. At exploratory operation on the right anterior cranial fossa an erosion through the dura was found anteriorly in the region of the right cribriform plate over the roof of the right frontal sinus. The rhinorrhœa was thought to be associated with a venous anomaly consisting of a large vein entering the origin of the sagittal sinus in this region. Recurrent meningitis should always suggest the possibility of a communicating tract between the subarachnoid space and the nose or ear and if a cerebrospinal fluid leak can be demonstrated from either of these apertures surgical exploration by a neurosurgeon offers the only hope of cure.

J. CHALMERS BALLANTYNE.

Rubella and Deaf-Mutism in Sweden. BERTEL IVSTAM, Lund, Sweden. *Acta Oto-laryngologica*, 1951, xxxix, 380.

An investigation into the occurrence of rubella during pregnancy of the mothers of the 538 pupils attending Swedish schools for deaf-mutes revealed as follows: (1) The mothers of 31 (12 per cent.) of the 261 children with deaf-mutism of doubtful origin had had rubella within the first four months of pregnancy; (2) There was a certain relationship between the overall incidence of rubella and the frequency of deaf-mutes born to mothers who had had rubella during pregnancy. Thus, of the deaf-mutes born during the years 1937 and 1941—years when rubella was unusually common—the mothers of more than 10 per cent. had had rubella during the period of gestation; (3) In Sweden rubella during early pregnancy seems to cause deaf-mutism in about 3-5 per cent. of the children subsequently born, the corresponding number of total malformations in general being about 10-20 per cent.; (4) The frequency of malformations seems to be high enough to justify prophylactic measures such as the deliberate infection of young girls with rubella and the use of convalescent serum or, if unavoidable, of gamma globulin in those instances in which pregnant women are exposed to the risk of infection with rubella.

(Author's Summary.)