ABSTRACTS

EAR

X-ray Diagnosis and Operative Treatment of Congenital Atresia of the Auditory Meatus. R. MITTERMAIER. (*Zeitschrift für Laryngologie, etc.*, 1933, xxiv., 213-21.)

Congenital atresia is due to a maldevelopment of the *os tympanicum*, and the middle-ear structures are affected to varying degrees. It is now agreed that one should not attempt to make a new meatus. The only operation which is justifiable is to make an opening into the antrum. This becomes lined by skin and, in favourable cases, the sound vibrations reach the cochlea by that route.

It is important to establish the presence of a large antrum and of ossicles in the middle ear beforehand. Only such cases are likely to benefit by an operation. It is possible to demonstrate the head of the malleus by a new X-ray technique which is described and illustrated in the article. In a case of double atresia (girl, aged 20) the author operated on the side on which it was shown that a malleus was present and he obtained a good and lasting improvement in the hearing.

The hearing tests before operation must show clearly that the deafness is of the obstructive type. Cases must be very carefully selected before one consents to carry out an operation. Among five patients with congenital atresia who came to the Freiburg clinic in the course of two years, operation was done only in the one case described above.

J. A. KEEN.

Injuries affecting Hearing. NOEL M. CUTHBERT. (*Medical Journal of Australia*, June 10th, 1933.)

The writer gives a clear and complete account of injuries of the ear and their effect upon its function. A sudden increase of air pressure, as from a direct blow, a bursting shell, high diving, etc., may rupture the tympanic membrane, or the injury may be caused by the sudden vacuum which follows an explosion. Concussion deafness presents difficulties in diagnosis. The patient who is injured by an explosion may remain unconscious for hours and on recovery he may be entirely deaf, but it is doubtful whether severe explosion deafness can occur unaccompanied by loss of consciousness. A history of rupture of the tympanic membrane at the time

of injury suggests concussion deafness. Occupational deafness is of a gradual onset, and there is a prolonged and constant strain in the effort to hear above the noise. It is a question whether air or bone conduction of noise causes more damage. Degenerative changes begin in the organ of Corti and affect the spiral ganglia and nerve later. The state of the hearing following head injuries is a subject of great importance to the otologist. The temporal bone is involved in 30 per cent. of cases of fracture of the base of the skull. Accurate diagnosis is not easy. Bleeding from the ear may arise from the canal, or hæmato-tympanum may occur without rupture of the drum. Prognosis is bad if deafness persists for two months after the injury and, as regards life, it is well to remember that the patient may later develop otitis and succumb to meningitis or cerebral abscess. Transverse fracture of the temporal bone involves the labyrinth, and functional tests reveal complete deafness. As there is no bony union, the fracture is revealed by radiography even after a long lapse of time. When fracture occurs in a case of middle-ear suppuration operation may be advisable, especially in cases of cholesteatoma. In operating it is advisable to avoid jarring by mallet and gouge, but free drainage must be secured. On the other hand, Brunner of Vienna reported seventeen cases of middle-ear suppuration with fracture of the temporal bone, all of which recovered without operation.

In every case of head injury the ear should be carefully examined and the condition of the hearing should be tested from time to time during convalescence.

DOUGLAS GUTHRIE.

Operative Treatment in a Case of Abscess of the Apex of the Petrous, and Peri-Apical Extradural Abscess. E. RUTTIN. (*Acta Oto-Laryngologica*, xix., fasc. 1.)

The case was that of a boy, ten years of age, in whom, in the course of an acute otitis media of the left ear, an abscess developed in the apex of the petrous pyramid. The chief symptoms and signs were temporal and peri-ocular pain, abducens paralysis with double vision, positive X-ray findings, and free discharge of pus. These continued after the radical operation and came from the tympanic and not from the mastoid part of the cavity. As the radical operation had not reached the abscess, at a second operation the dura was raised from the roof of the Eustachian tube and from the apex of the petrous. This failed to disclose the abscess, as also did the opening of the apex by the American method of approach from the front between the promontory, geniculate ganglion and carotid artery, with removal of the posterior wall of the carotid canal. The collection of pus was eventually found in a group of cells in the posterior part of the apex, adjacent to the posterior cranial fossa.

These cells were reached by forming a track through the mass of bone (Labyrinthkern) between the semicircular canals, and upwards and inwards through the bone forming the roof of the internal auditory meatus. This method is only possible when the roof of the internal auditory meatus is of sufficient thickness. The author measured this in forty petrous bones and found that, while the average was 4 mm., a thickness of 7 mm. was not uncommon. In many cases, therefore, the apex of the petrous can be reached by this route, without opening the internal auditory meatus or injuring the cochlea. The operation, however, would not be possible when, as sometimes happens, the thickness is not more than 2 mm., but in such cases air-cell development is likely to be poor, and infection of the apex of the petrous is therefore improbable.

In the case reported, the sixth nerve paralysis had disappeared in two days and the discharge had ceased in four days after the operation.

THOMAS GUTHRIE.

Otitis Media in Sucklings. W. M. MOLLISON. (*B.M.J.*, September 24th, 1932.)

The author feels that this subject has not received the attention it merits in this country. The word " suckling " does not confine the discussion to breast-fed infants, but includes those who are bottle-fed ; the latter run risks of infection which the former should escape.

Infection in the mother or other member of the family passed on to the infant, taking the form of a " cold " or pharyngitis, may lead to otitis media. That the pharynx is inflamed is evident from the frequent association of an enlarged cervical gland and otitis media in infants. It is probable that infection reaches the mastoid process or, indeed, the middle ear, through the blood stream in infants more often than in adults.

Latent otitis media is a phrase which has two interpretations. Le Mée regards otitis media as the undiscovered cause of many illnesses in infants. Krassnig, on the other hand, recognises a real latent otitis media without symptoms.

The author recognises three groups of cases of otitis media in infants :

(1) Obvious otitis media, with symptoms pointing to the ear.

(2) Latent otitis media, with no symptoms pointing to the ear.

(*a*) real, discovered in apparently normal infants ;

(*b*) pseudo, with

(i) general illness, crying, high temperature and refusal of food ;

(ii) diarrhœa and vomiting, so-called parenteral.

(3) Tuberculous otitis media.

Though a great deal has been written about the combination of enteritis and otitis (parenteral otitis), the author submits that too much stress has been laid on this group; that really it should be considered with latent otitis media, that the enteritis is simply the reaction of the infant to the infection.

In discussing the symptoms and signs of obvious otitis media the author notes that mild cases may only show an absence of the light reflex, a point which Le Mée emphasises as an early indication of otitis. He also notes that bulging of a normal membrane may occur when a child cries, and must therefore be regarded with caution. In treatment, incision of the membrane should be carried out at once. After incision the discharge is wiped away with pledgets of cotton wool and drops of glycerine acid carbolic and glycerine, equal parts, instilled into the ear. In a few days these are changed to drops of 5 per cent. argyrol. Should a raised temperature persist and the child show symptoms of toxæmia, it will be necessary to open the mastoid antrum as in older children. The importance of speed at operation is emphasised, to avoid shock and reduce the amount of anæsthetic required.

Pneumococcal otitis media deserves separate mention, since sucklings are especially prone to pneumococcal infections. Infection is generally carried by the Eustachian tube through coughing, sneezing, or vomiting, but sometimes by lymphatics or blood vessels. Evidence of lymphatic spread is found in the presence of pneumococci in the soft palate in cases of œdema of the soft palate. In support of blood-borne infection is the fact that emboli containing pneumococci have been found in the brain. The otitis may occur at all stages of pneumonia or, indeed, may precede it. When it occurs in the early stages, it is probably of septicæmic origin.

In latent otitis media the membrane may show a normal appearance in some cases, even though the general symptoms raise the suspicion that the ear is the cause of the illness. No doubt in these cases the infection is primarily in the mastoid and in a blood-borne infection, perhaps pneumococcal, and the middle ear is secondarily infected.

Tuberculosis of the middle ear is, in the author's experience, not common in infants and he suggests that it is a tradition to state that it is so common.

R. R. Simpson.

Epipharyngeal Rhabdomyoma having invaded the Ear and the Meninges. Folke Soderberg (Upsala). (*Acta Oto-Laryngologica*, xviii., fasc. 4.)

The case is described of a little boy of seven years of age who appeared to be in good general health until April, 1932. About

this time the parents noted some alteration in the child's features though otherwise he remained well. During the same month he contracted measles with discharge from the left ear which was treated for six weeks, after which he showed considerable general improvement.

Later, attacks of giddiness and vomiting with free intervals supervened. On admission to hospital a diagnosis of otitis media and labyrinthitis was made. The external auditory meatus on the left side was discovered to be filled with granulations which on microscopical examination showed necrotic tissue, but no obvious new growth. After a careful otological and neurological examination an intracranial lesion was suspected and a mastoid operation was performed. The mastoid cells were found to be occupied by a pale red tissue and a piece of bone was sent for pathological examination.

As the child, however, became rapidly worse and an ordinary infective condition was not yet excluded, an exploration for brain abscess was made with negative result. The patient rapidly succumbed.

The microscopical report of the piece of mastoid bone revealed invasion by muscle fibres, and at autopsy a tumour—a rhabdomyoma—was found to have extended from the region of the posterior wall of the post-nasal space, invading the cranial cavity and causing compression of the mid-brain and enveloping the left lobe of the cerebellum. It also occupied the Eustachian tube, the middle ear and external auditory meatus, destroying also all the osseous portion of the inner ear.

The case is illustrated by photographs and a diagram.

H. V. FORSTER.

Comparative Hearing Tests in Normal Subjects with the c^5 Tuning Forks and c^5 and c^6 Sounding Rods. L. OBERWEGNER. *Similar Tests in Nerve Deafness.* L. TRÜBSBACH. (*Arch. Ohr-, u.s.w., Heilk.*, 1933, CXXXV., 197-213.)

The authors of these two separate articles discuss the value of high tuning forks in quantitative hearing tests. In the original Bezold series a c^5 fork exists, but its note has a maximum sounding period of eight seconds only. This is much too short to be of any value in quantitative hearing tests. Later c^5 tuning forks with a much longer sounding power (twenty to twenty-two seconds) were made. These were still not quite satisfactory. Ultimately Wethlo of the Marburg Clinic succeeded in constructing special sounding rods (Klangstab) both for c^5 and c^6 with a sounding period of thirty to forty seconds. The physical properties of these instruments are

described and they are now used for quantitative tests in the upper ranges of the hearing scale.

The tests with normal subjects revealed enormous differences in the hearing power for high notes, the variations being up to 100 per cent. in some cases. The tests in nerve deafness showed that hearing for c^6 is diminished to a greater extent than for c^5, as one might expect. The c^5 fork (twenty-five seconds) was found to be preferable to the c^5 rod on account of overtones. The c^6 sounding rod proved to be the most satisfactory. These instruments are being further improved.

J. A. KEEN.

Ménière's Syndrome in Secondary Syphilis. DR. FUMIO NAKAMURA (*Oto-Rhino-Laryngologia*, vi., No. 9, 766.)

A man, aged 41, complained of giddiness, noises in the ear and deafness of the right ear. Ten months previously he had a primary infection on the upper lip which took the form of a hard chancre; it was completely cured by anti-syphilitic treatment. At the time nothing could be seen in the tympanum except indrawing of the membrane without redness. The Wassermann test was strongly positive and after treatment with neo-salvarsan, iodine and bismuth preparations for five weeks, the disorders improved strikingly.

JAMES DUNDAS-GRANT.

NOSE AND ACCESSORY SINUSES

The Histology and Pathogenesis of some severe Developmental Defects of the Nose. W. STUPKA. (*Acta Oto-Laryngologica*, xix., fasc. 1.)

Severe congenital deformities of the nose have hitherto received little attention and no systematic histological examination, especially as regards the condition of the nervus olfactorius.

The author made a complete macro- and microscopic examination of three human and two animal (leveret and goat) examples, showing varying degrees of failure of development of nasal structures. In only one of these (a cyclopic goat) was the nervus olfactorius completely absent, but in the others it varied much in its degree of development.

The defects appear to be due to disturbance of external origin occurring at a very early stage in the embryonic development of the nasal sac and the surrounding parts. The ultimate result depends on the exact position of the lesion, the time of its occurrence in the developmental history, and the duration of its influence.

THOMAS GUTHRIE.

Abstracts

TONSIL AND PHARYNX

Two Cases of Paratonsillar Mixed Tumour. PAUL MÖRCH. (*Acta Oto-Laryngologica*, xix., fasc. 1.)

This paper contains a review and discussion of the many suggestions which have been advanced as to the nature and origin of these tumours which occur, according to Masson, in three types, the benign, the semi-malignant and the malignant. The two cases on which the paper is based must be classed provisionally as benign both from the clinical and the histological aspect. The period of observation is, however, still too short for this to be decided with certainty. Examined microscopically, they showed the characteristic appearances of salivary gland mixed tumours.

THOMAS GUTHRIE.

The End-Results of the Tonsil and Adenoid Operation in Childhood and Adolescence. J. ALISON GLOVER and JOYCE WILSON. (*B.M.J.*, September 10th, 1932.)

In this article the authors deal with various aspects of the subject in some detail from the statistical point of view.

They summarise their conclusions thus :—

(1) The rising flood of tonsillectomy has been shown in the immense and rapid increase in the numbers of operations performed annually, and by the astonishing fact that more than half of the most carefully nurtured children in this country are now subjected to it, whereas forty years ago none of their parents underwent the operation. Whilst the incidence of tonsillitis is at least as high amongst the poor as amongst the well-to-do, the children of the latter have an incidence of tonsillectomy at least four times as high.

(2) A review of the literature suggests that, with the single exception of diphtheria, the incidence of the ordinary infectious diseases is unaffected by tonsillectomy ; that while the incidence of recurrent sore throats is perhaps somewhat diminished, that of frequent colds is unaltered or perhaps slightly increased. The incidence of otitis and mastoid disease is the same, or perhaps slightly increased upon the tonsillectomised, while their liability to bronchitis and pneumonia is also probably slightly increased.

(3) The evidence with regard to the prophylactic and therapeutic end-results of tonsillectomy on acute rheumatism, chorea, and carditis is distressingly confusing. There is no sufficient case for the routine removal of apparently healthy tonsils in a rheumatic or potentially rheumatic child, simply as a measure of prophylaxis against acute rheumatism. Removal should be undertaken only if there is some definite indication.

(4) Observations have been detailed on the relative incidence of naso-pharyngeal infections upon the tonsillectomised and the non-tonsillectomised pupils of a school population numbering nearly

14,000. Most of these pupils were between the ages of 13½ and 18, and belonged to the well-to-do classes. With the exception of two, with a total of 1,100 pupils, all the schools were boarding schools. Rather more than half of this population was tonsillectomised. Some of the observations cover a period of seven terms, or two and one-third years, whilst others are confined to certain terms of epidemic prevalence.

(5) These interim observations (so far as they have gone) give no statistical support to the theory that the removal of tonsils closes an entrance for infectious or respiratory diseases. Hardly any cases of diphtheria have occurred, so that the prophylactic value of the operation in this disease could not be assessed. In scarlet fever, otitis media, and mastoid disease, no significant differences were observed. In the two latter diseases the slight differences observed were in favour of the non-tonsillectomised.

(6) These observations, based on actual attack rates in a school population, generally support the conclusions arrived at by Cunningham from a study of the histories of a similar number of somewhat older students. She found that the tonsillectomised pupils gave a history of higher incidence of all illnesses, and suggests that the fact that children who are often ill are those most frequently tonsillectomised may be the explanation. Comparing the proportion of the amount of illness reported before and after tonsillectomy in the same pupils, she suggests that the removal of tonsils had little influence in lessening the susceptibility to most infections.

(7) We hold no brief for the retention of diseased or really obstructive tonsils or adenoids, nor do we wish to cast doubt upon the high value of the operation in cases in which there is sure evidence of toxic or obstructive damage. A review of the literature and the epidemiological observations made on a highly tonsillectomised child population suggests, however, that the excellent end-results of tonsillectomy in selected cases have been statistically overweighed by indifferent end-results in cases in which the operation has been performed without sufficient indications as a more or less routine prophylactic ritual. In our opinion, a large proportion of the tonsillectomies now done in children are unnecessary, entail some risk, and give little or no result.

A fairly extensive bibliography of the recent work on the subject is given.

R. R. SIMPSON.

Effect of Tonsillectomy on the development of Immunity to Scarlet Fever. CAMILLE KERESZTURI and WILLIAM H. PARK. (*Jour. A.M.A.*, September 2nd, 1933.)

The writers conducted this study in the pediatric service of the Fifth Avenue Hospital. During the period of study, 492 patients

were admitted for tonsillectomy and 675 for other purposes. All these patients received an initial Dick Test. From the study the writers conclude that " tonsillectomy has certainly no marked effect on susceptibility to scarlet fever within six months after it is done, as demonstrated by the changing of a positive Dick Test into a negative."

ANGUS A. CAMPBELL.

ŒSOPHAGUS AND ENDOSCOPY

Foreign Body in Mediastinum. H. J. MOERSCH and B. R. KIRKLIN. (*Jour. A.M.A.*, January 21st, 1933.)

The case reported is that of a girl, aged three, who complained of dysphagia for two months. Röntgenological examination showed a toy horse and rider outside the lumen of the œsophagus. Mediastinitis and infiltration of the right lung were present. Four weeks later, when the inflammatory condition subsided, a consultation was held and it was decided to attempt removal by œsophagoscopy under general anæsthesia (avertin and nembutal). The œsophagus was found to be obstructed in its middle third. The place where the foreign body had ulcerated through was found on the left lateral wall. Under Röntgenoscopic control an opening was made through the wall of the œsophagus and, by blunt dissection, the foreign body was reached and drawn into the œsophagus. On account of its size and many sharp angles, the horse was broken into two pieces and removed through the œsophagoscope. There was considerable immediate reaction which soon subsided, and the patient made a good recovery.

ANGUS A. CAMPBELL.

MISCELLANEOUS

Diffuse Syphiloma of the Upper Respiratory Tract. Nose—Pharynx —Larynx. E. HALPHEN. (*Les Annales d'Oto-laryngologie*, May, 1933.)

Diffuse syphiloma is an expression of tertiary syphilis found only in the upper respiratory tract. It finds its counterpart only in the lower end of the digestive tract. It is a vast neoplastic infiltration leading to the destruction of the organ which it affects and its replacement by fibrous tissue. The nose is the part usually attacked; syphilis likes the nose. The lesion appears relatively early; as a rule three to five years after infection and, exceptionally, in the year following infection. The patients are usually in excellent health, no illness having intervened between the evolution of nasal disease

and the healing of the chancre. Although gummata localised to various areas of the nasal fossae are fairly common, the usual lesion is the one under review, namely the diffuse infiltration of the whole of the nasal fossa. The author describes in detail the symptoms and physical signs of the morbid condition and the consequent deformities, modified or unmodified by treatment. In the pharynx the early functional disability is very slight and may be overlooked. It is only when the soft palate begins to be affected that pain on deglutition becomes very marked. Tinnitus due to involvement of the tubal orifices is a common complaint. In the larynx, diffuse syphiloma often leads to sub-glottic atresia. This condition is pathognomonic of syphilis. Here again the resulting deformities are very important and demand the collaboration of both syphylologist and largyngologist.

M. VLASTO.

The Modifying Influence of a Syphylitic Soil on certain Affections of the Upper Respiratory Tract. M. R. MADURO. (*Les Annales d'Oto-laryngologie*, May, 1933.)

Pediatricians are in the habit of regarding adenoids in sucklings as usually due to inherited syphilis. Of greater interest is the part played by a syphilitic soil in determining the recurrence of adenoids after their removal. Cases are quoted in corroboration of this view. Similarly, in respect of nasal polypi it has been found that many cases in which the polypi have been thoroughly removed by operation, recurrences take place in the presence of a syphilitic diathesis. Many cases of sinusitis which appear to be quite benign and are treated on the usual lines fail to clear up and are sometimes complicated by necrosing osteitis. Antisyphylitic treatment carried out in these cases often succeeds where surgery has failed.

M. VLASTO.

A Note on Scarlet Fever following Operations in the Nasopharynx. ALEXANDER JOE. (*B.M.J.*, August 20th, 1932.)

Out of thirty-two such post-operative cases, thirteen were associated fairly definitely with tonsillectomy. Six of the thirty-two cases were regarded as accidental, that is, operation was a chance factor and the patients would have contracted scarlet fever in the normal course of events. Excluding these, the remaining twenty-six cases are classified as follows :—

(*a*) Operations in the nasopharynx and associated cavities—nineteen cases ; thirteen following tonsillectomy, two after mastoidectomy and one following resection of nasal septum, one after antrostomy, and one after a plastic operation on the nose and extensive teeth extraction.

(*b*) Abdominal operations, six cases.

(*c*) One case followed operation for empyema.

In group (*a*) the author assumes a direct causative relation between operation and scarlet fever. The fact that the operation is carried out in the normal habitat of the hæmolytic streptococcus is in itself presumptive evidence of the relationship. The interval between operation and the onset of scarlet fever was from two to ten days. This is regarded as almost conclusive evidence of the part played by operation in determining the onset, and scarlet fever must therefore be regarded as a definite risk after operation in the nasopharynx. Three possibilities are mentioned in discussing the mechanism of infection. The first is the possibility of implantation of the causative organism as a contact infection soon after operation. Secondly it is possible that where perfect asepsis has not been secured the organism may be introduced at operation. The author however, agrees with Washbourn's view that the virus was present in the throat at the time of operation and that it gained entrance through the cut surface and he suggests that in the majority of these cases the infection is endogenous. Patients about to undergo operations in the nasopharynx should be Dick-tested beforehand and those who react positively passively immunised before operation.

R. R. SIMPSON.

A Case of Anomaly of the Hyoid Apparatus. BRONISLAS PUCHOWSKI. (*Acta Oto-laryngologica*, xviii., fasc. 4.)

"The human hyoid apparatus is composed of four segments: (1) The styloid process. (2) The styloid ligament. (3) The lesser cornu of the hyoid bone and (4) The hyoid bone."

The case which the author describes was characterised by almost total ossification of the hyoid apparatus and in consequence there resulted immobilisation of this structure in the direction of its movements towards the base of the skull.

The patient had been œsophagoscoped after a diagnosis of pharyngeal diverticulum by X-rays, but succumbed ten days later to an inflammatory complication.

At the *post mortem* examination at the medico-legal institute at Wilno a post-cricoid œsophageal tear was discovered, but no diverticulum was found. On further examination, however, there was discovered ossification and fixation of the connections of the hyoid bone to the styloid process. As there was also bone formation connecting the greater cornu of the hyoid with the posterior horn of the thyroid cartilage, the difficulty in swallowing experienced by the patient which caused him to seek medical advice appeared to be adequately explained.

Two interesting photographs are shown.

H. V. FORSTER.

Miscellaneous

Studies in Asthma. FRANCIS L. WEILLE. (*Jour. A.M.A.*, January 28th, 1933.)

The studies were made in the anaphylaxis clinic of the Massachusetts General Hospital and in the Massachusetts Eye and Ear Infirmary. From several hundred asthmatic patients, forty, over twelve years of age, were selected for treatment by means of sinus surgery. Thirty-two patients had intrinsic asthma, six had extrinsic —one unclassified and one reflex. Sinus disease was diagnosed by clinical examination and by routine Röntgenograms. Operations were done in patients with recurring head colds precipitating asthmatic attacks and obvious sinus disease, especially when removal of polypi and sinus irrigation yielded temporary relief. As far as the nose is concerned 75 per cent. of these operations were successful while the other 25 per cent. were more or less failures. In all fifty-seven operations were performed, varying from the most conservative to the most radical external fronto-ethmoidal operation. One patient died of post-operative meningitis, two died of intercurrent disease two years after operation. All patients were followed up from six months to three years. The longer the duration of the follow-up the less favourable the report seemed to be. Five patients reported as cured were followed from two to three years. 55 per cent. of the patients were improved or cured, while 45 per cent. were more or less failures. No extrinsic, unclassified or reflex asthma case derived any benefit. The most favourable cases were those with polypi in the nose and sinuses. Patients with purulent sinusitis without polypi or patients with thickened membrane or cysts in the sinuses were less favourable.

ANGUS A. CAMPBELL.

Chronic Sinus Disease. FERRIS SMITH. (*Jour. A.M.A.*, February 11th, 1933.)

The writer describes his method of managing chronic sinus disease which has resisted intranasal treatment and in which pathological changes are so advanced that the tissues cannot return to normal. No operator, however skilful, can completely exenterate the ethmoid or drain the frontal sinus thoroughly by intranasal methods. The general management follows that described by Sewall and his predecessors.

Under local anæsthesia an external, curved incision, three quarters of an inch long, is made, beginning immediately below the eyebrow and carried downwards around the inner canthus of the eye. The periosteum is elevated and the lachrymal sac is dislocated downwards. The separation is continued into the orbit as far as the posterior ethmoidal vessels. An opening is made into the nose and enlarged to include the lamina papyracea. The remaining

ethmoidal cells, including the middle turbinate, are punched away without tearing or tugging. The sphenoidal sinus is widely opened and the membrane carefully removed. The entire floor of the frontal sinus is removed and the lining similarly treated. The antrum is managed by a modification of Denker's technique. All the cavities and the cribriform plate are carefully denuded of mucous membrane, and any adherent shreds are freed by sponging with a 5 per cent. solution of trinitrophenol in 35 per cent. acetone. A 5/8 inch soft rubber tube is placed from the frontal sinus to a point near the floor of the nose. This tube is surrounded with Thiersch graft and the wound closed. No intranasal dressings are applied and the tube is removed about the fifth day. In over 500 of these operations there were five deaths, three of which the writer feels cannot properly be attributed to the operation. Post-operative headaches and diplopia are frequently noted, but quickly clear up. On the whole the writer claims very satisfactory clinical results.

The article is illustrated and has a bibliography.

ANGUS A. CAMPBELL.

Permanent Enlargement of the Lips and Face. GORDON B. NEW and WALTER A. KIRCH. (*Jour. A.M.A.*, April 22nd, 1933.)

In the last twenty-two years, sixty-seven patients presented themselves at the clinic with chronic permanent enlargement of the lips and face. The condition came on suddenly, similarly to angioneurotic œdema, except that there was no swelling in any other part of the body. During attacks the maximum enlargement developed within two days and then gradually subsided. They recurred from three weeks to six months. After the second or third attack a soft, smooth, non-pitting permanent enlargement remained. Temporary facial paralysis developed in thirteen patients, in three of whom it was bilateral. In some of the cases, tests for allergy and metabolic rates were made with negative results. Biopsy was carried out in a few cases, but nothing was found except œdematous tissue containing lymphocytes. Lymphangitis and recurring erysipelas were excluded. The treatment consisted of the injection of boiling water into the involved parts and radium radiation externally over the face. Four or five treatments were necessary. In obstinate cases the superfluous tissue was excised, but it is thought wise to wait six months after the recurring swelling has subsided before doing this.

The article is freely illustrated.

ANGUS A. CAMPBELL.