surgical procedure ; in eye surgery, cataracts were removed long before intracapsular extraction was known.

The most general, and apparently severe, criticism against surgical treatment may probably be expressed as follows : How are these modern sanguinary procedures to be reconciled with the old pathological and therapeutical theories of otosclerosis—with the *noli me tangere* of the classics ? I do not hesitate to answer that, on account of the positive and successful results at which we have arrived, those old theories should be reconsidered.

Fifty years ago, Politzer expressed the opinion that bony lesions of the labyrinthine capsule were the substratum, if not the cause, of auditory troubles. Since Bárány's report in 1910, surgery has taught us that the pathology and therapeutics of otosclerosis depend chiefly on labyrinthine hydrostatics. I am pleased to be able to point out here that, after Toynbee had made the first anatomical observations on this question, G. J. Jenkins, a Fellow of the Royal Society of Medicine, was in 1913 the first to make clear the same idea and thus to suggest the lines of our subsequent researches.

ABSTRACTS

EAR

The Organic Findings in Hereditary Deafness. E. MÜLLER. (*Arch. Ohr-, u.s.w., Heilk*, 1937, cxliii, 376-81.)

The question of sterilizing people affected with congenital deafness has made the diagnosis of the inheritance factor in deafness an important problem. Langenbeck's so-called " Symmetrie-gesetz " states that an affection of the two ears to an equal extent with an intact vestibular organ makes the diagnosis of heredity certain, even with a negative family history. In such cases one would be justified in proposing legal sterilization. Apparently in acquired deafness the ears are never affected to exactly the same extent.

The author examined 106 deaf persons from this point of view and gives his results in tabular form. In order to decide whether clinical examination alone is able to furnish proof of an inheritance of the defect, he compared the findings in cases in which inheritance was certain from the family history with cases in which the defect was acquired.

As regards the vestibular reactions to which Langenbeck attributes such a great importance, the author found that among persons with inherited deafness, 40 per cent. showed disturbances of the vestibular function, a much larger percentage than previous observers had noted, against 70 per cent. among the cases of acquired deafness. Therefore this particular criterion is not reliable enough to be able to dispense with an investigation of the family history. Further,

twenty-two people in this series with an acquired defect had hearing losses to an equal degree on the two sides. On the other hand, among nineteen cases of acquired deafness with an intact vestibule, there was not a single instance of an equal loss on the right and left sides. The combination of the two signs appears to have some value in the diagnosis of inheritance, but not so definite that one could lay down an absolute rule in the matter.

J. A. KEEN.

A Case of Otitic Meningitis. A. BOWEN-DAVIES. (*Lancet*, 1937, ii, 1195.)

The author reports the case of a girl aged eleven, admitted to hospital with meningitis. Treatment was by conservative mastoidectomy and continuous lumbar puncture drainage. She had had a discharge from the right ear for ten days before admission. At the mastoid operation, granulations were seen over the lower part of the lateral sinus, over an area about the size of a threepenny piece. There was improvement for four days after the lumbar puncture drainage, and a fresh puncture was performed, as the drainage needle had become blocked. Prontosil was also administered, apparently with good effect. The patient recovered.

MACLEOD YEARSLEY.

Contribution to the Experimental Study of the Genesis of Cholesteatoma. T. MILSTEIN (Leningrad). (*Acta Oto-Laryngologica*, July-August 1937, xxv, 4.)

The formation of cholesteatoma is preceded by several prodromal signs, partly an exaggerated energy of growth in the epithelium itself and partly the presence of agents provoking or, rather, stimulating this growth. These latter are generally inflammatory processes, such as otitis, or depend upon the particular disposition of each organism to react more or less against all irritation provoking an intense development of the epithelium.

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

Pathology and treatment of old age deafness. ARNO SAXELL (Helsingfors). (*Acta Oto-Laryngologica*, 1937, xxiii.)

Old age alterations in the auditory organ are two forms of disease of characteristic anatomy and pathogenesis, both fairly common; these are the senile atrophy of the spiral ganglion, and the angeiosclerotic degeneration of the internal ear. The former is often an independent and self-contained disease, the latter rarely so, and nearly always combined with senile atrophy of the spiral ganglion.

Senile atrophy of the spiral ganglion must be regarded as an illness of degeneration peculiar to old age, in which the alterations, atrophy of the ganglion cells and the nerve fibrils, chiefly affect the proximal parts of the cochlea. The epithelial parts of the cochlear

duct, especially the organ of Corti with its sensory cells, are not included in the process, neither are alterations in the blood vessels of the inner ear characteristic of this disease.

The angeiosclerotic degeneration of the internal ear is a consequence of sclerosis in the corresponding blood vessels. A general toxic influence mostly traceable to a genuine, angeiosclerotic shrunken kidney, which very often accompanies this form of illness, may also be an ætiological factor. Histologically the process begins as a blood vessel affection, whereafter the changes appear as a regressive metamorphosis of the epithelial part of the ductus cochlearis. Especially when the secretory epithelium in the stria vascularis or on the surface of the prominentia spiralis is badly injured, one finds marked states of collapse in the cochlear duct, apart from a degeneration of the organ of Corti. In more advanced cases the supporting tissue is also included in the pathological process, which is evidenced in this case by sclerosis, or homogeneization of the connective tissue and rarefaction of the bone tissue.

In these two diseases the changes in the tissue of the middle-ear spaces and in the static labyrinth entirely pass into the background. When anomalies in the vestibular reflexes occur they develop on a central basis.

The trunk of the auditory nerve is never first attacked by the disease and the changes occurring therein are of secondary order only.

Histologically the atrophy of the nerve elements in the cochlea corresponds to the clinical picture of presbyacusis. The angeiosclerotic degeneration of the internal ear alone does not, however, provoke any important functional disturbances in the acoustic apparatus, the auditory faculty, for instance, being well preserved in fairly advanced cases, and even normal when studied with the aid of our standard methods.

Clinically we can deduce the presence of an angeiosclerotic degeneration of the internal ear, or its combination with a senile atrophy of the spiral ganglion, from the disturbed bone conduction, provided that we are able to eliminate causes derived from the middle ear or other parts of the auditory organ acting in the same direction. This symptom is chiefly due to disturbances in the production of endolymph as well as to the collapse of the cochlear duct.

Presbyacusis may also have as its origin lesions in the central acoustic paths and centres which perhaps develop in old people, as a rule, on an arteriosclerotic basis. These lesions, however, are very seldom the sole reason for the defect in hearing, being in most cases combined also with a senile atrophy of the spiral ganglion. The possibility of central causes in the auditory defect should be taken into consideration in cases in which, in addition to the clinical

picture of presbyacusis, a considerable raising of the lower tone limit and relatively lower appreciation in the lower part of the scale is found.

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

Clinical and Experimental Researches on the Effects of Salicylates and Quinine on the Ear. I. F. HANSEN. (*Monatsschrift für Ohrenheilkunde*, 1937, lxxi, 1055.)

In a series of experiments, recorded in tabular form, the effects of salicylates and quinine have been studied. A search of the literature produced little information on poisoning by these substances.

Salicylates were administered to forty-one people, of whom thirty-three showed ear symptoms, while eight were unaffected. Dosage varied from 2 to 8 gm. per day with a total of 10 to 225 gm. Tinnitus was usually the first symptom to appear, followed by deafness which was often discovered only on testing. In a few cases, the patients complained of a feeling of tension in the ear.

Of the vestibular symptoms which occurred, ten cases of spontaneous nystagmus were seen. Vertigo was experienced in many instances.

The symptoms continued with the administration of the drug, but passed off several days after its withdrawal.

Quinine sulphate in doses of 80 to 150 cg. was administered to twenty-one people. The effects on the ear were more constant than those due to salicylates. All reacted in a far greater or lesser degree. Tinnitus, deafness, feeling of pressure in the ear, sweating, tremor and headache were experienced. Of the twenty-two cases, eight suffered from giddiness and some showed spontaneous nystagmus. Patients with ears damaged by past attacks of otitis media, reacted far more strongly.

No changes in the appearance of the tympanic membrane were noticed in the course of the experiments.

Increased water intake produced similar reactions in one case. It was assumed that these disturbances resembling the symptoms of Ménière's disease, produced in the experiments, resulted from a disturbance of the capillaries and a transient œdema of the inner ear. DEREK BROWN KELLY.

The Effects of Chemical Substances upon the Electrical Responses of the Cochlea. 1. *The Application of Sodium Chloride to the Round Window Membrane.* ERNEST GLEN WEVER and CHARLES W. BRAY (Princeton). (*Annals of O.R.L.*, 1937, xlvi, 291.)

A series of twenty experiments on guinea pigs dealt with the effects of sodium chloride upon the electrical responses of the

cochlea. The magnitude of responses was determined in absolute units for stimulating tones of known intensity, both before and after the application of sodium chloride. In most of the experiments the substance was applied to the round window membrane; in certain others it was applied through an opening at the apex of the cochlea.

Results are given to show the course of changes in the responses for different frequencies subsequent to the application of sodium chloride. Typically, there was an initial augmentation, followed by an early rapid loss and then by a protracted decline of more moderate rate. The early loss occurred in about the same degree for all frequencies. The secondary loss was usually differentiated with regard to frequency, with high tones commonly suffering more than low tones. In some cases there were partial recoveries.

A study of the functional relations between intensity of stimulation and magnitude of responses showed little alteration in form or slope of functions for high tones, and slight reductions of slope for low tones.

Concurrent observations from the round window and apex showed a difference in the effects of sodium chloride, as recorded from the two positions: the impairment of response was greater from the electrode in the region where the substance was applied.

Several processes are suggested in explanation of the results. The early, rapid loss, which involved all frequencies, is attributed to some general process such as a disturbance of pressure relations within the cochlea. The secondary decline, in which high tones were usually more severely involved than low tones, is regarded as consistent with Fowler and Forbes' theory of a progressive impairment of hair cells.

Three features of the action of sodium chloride are discussed in relation to the problem of cochlear localization. These are the low degree of specificity as regards stimulus frequency, the differences in the observations at base and apex of the cochlea, and the greater reduction in slope of the intensity functions for low than for high tones. It is suggested that these facts indicate broad rather than specific localization of tones in the cochlea.

[Author's summary.]

GILROY GLASS.

NOSE

Remarks on a Case of Neuro-epithelioma of the Nasal Fossae. ANDRÉ MASSIER and JACQUES DUGUET. (*Annales d'Oto-Laryngologie*, September 1937.)

Neoplasms of neural origin are seldom met with in the nasal fossae. Those reported have nearly all occurred in young children due to faulty development at the time of the closure of the cranial

vault. The case described in great detail in this article occurred in a soldier of 22 years of age. A biopsy of the tumour had revealed its nature, and the manner in which it " melted " away with deep X-ray therapy was truly remarkable and showed the extreme radio sensitivity of these tumours. Another feature of this case was the complete absence of symptoms. The man came under observation only because his friends had observed an increasing unilateral exophthalmos. Although the upper part of the nasal fossa on the affected side was filled with growth, the patient did not complain of nasal obstruction and complained of no pain. There was no doubt in this case that the tumour arose from the anterior part of the olfactory cleft and invaded the orbital fossa only at a later date. Details of treatment are included in the article.

M. VLASTO.

Asthma after too complete removal of the Inferior Turbinates. Dr. HATSUICHI IKEDA (Formosa). *Oto-Rhino-Laryngologia*, x, 8, 701.)

A man, aged 39, had excessive patency for breathing through the nose, dryness of the pharynx and attacks of asthma from the time when he was submitted to removal of the inferior turbinated bodies on two occasions. Rhinoscopy revealed extreme atrophy of the inferior turbinates on both sides. The writer carried out intranasal plastic operations in two stages: (1) on the left side, the hypertrophied part of the anterior end of the septum being detached and transplanted into the stump of the inferior turbinate. Paraffin injections were made in the inferior meatus, the septum and the inferior turbinate. (2) On the right side, five months later, the writer detached the mucous membrane of the septum with the perichondrium and with it made a U-shaped flap. After folding and stitching this flap there remained a bulging on the surface of the inferior meatus resembling a turbinate, opposite the septum. The asthma was cured.

JAMES DUNDAS-GRANT.

TONSIL

Hitherto unrecorded severe Complications following the use of Bosviel's Compressor in Post-operative Tonsillar Hæmorrhages. G. GOUFAS (Athens). (*Annales d'Oto-Laryngologie*, August 1937.)

Bosviel's " compressor " is little known in this country because it is a pre-war type and has been considerably improved upon since then. The author's remarks may, however, be taken as referring to other instruments used for a similar purpose. Tonsillar hæmorrhages may be recognized as belonging to three types (1) The " spouters ", (2) diffuse hæmorrhage, (3) cataclysmal

hæmorrhage. In the first case, the author's practice is to complete the enucleation as soon as possible so as to have a greater freedom to work in, and next to use compression with gauze. Although the author may have to seize the bleeding point with Spencer-Wells forceps, he does not attempt to ligature it, partly because the technical difficulty is great, and partly because the ligature may not hold. He prefers to allow the patient to return to bed with the forceps *in situ* for a period of about eighteen hours. The second type of hæmorrhage is due to an insidious arterio-venous capillary ooze which is slowly swallowed by the patient until his condition is parlous and a copious hæmatemesis reveals the cause. The writer never sutures the pillars in this type of case, but makes use of the tonsil compressor. A detailed description is given of the manner of its use. The complication to be feared from a prolonged use of this compressor is a "gangrene of the pharynx". This gangrene he ascribes to the obliteration of the capillaries of the superficial planes of tissue of the tonsillar fossa and is both mechanical and aseptic. The abstractor gathers that there is a veritable perforation of the soft tissues, with a sinus leading through into the neck through which saliva and particles of food pass. The prognosis appears excellent. The gangrene never spreads and there are no constitutional ill effects. Nevertheless, the author has had cases in which compression of the tonsillar fossa or fossae has been associated with suppression of urine which has caused anxiety. It is suggested that this might be due to direct pressure on the sympathetic exerted by the outer blade of the compressor.

M. VLASTO.

LARYNX

On Endolaryngeal Laryngofissure. J. MIODONSKI. (*Monatsschrift für Ohrenheilkunde*, 1937, lxxi, 1161.)

The author describes an operation which he employs for the treatment of stenosis or atresia of the larynx in children. It is a development of the method evolved by Langenbeck and Uchermann.

Excision of scar tissue is carried out under visual control through the Haslinger directoscope which has been modified to carry a proximal lighting system. After introduction of this instrument, a sickle-shaped herniatome is introduced through the tracheotomy wound, and the scar tissue pierced so that the point of the instrument appears near the posterior laryngeal wall. Under visual control the scar tissue is cut through in a forward direction as far as the commissure. When necessary a three-cornered dilator is introduced from above or Trousseau's dilator from below. Finally Thost's instrument is inserted and the directoscope removed. The article is illustrated with three diagrams.

DEREK BROWN KELLY.

Abstracts

TRACHEA

Laryngo-Tracheal Stenosis caused by Goitres. Prof. VAN DEN WILDENBERG. (*Annales d'Oto-Laryngologie*, September 1937.)

Many patients and doctors alike are unaware of the dangers attendant on a slowly progressive compression of the laryngo-tracheal canal. The author is not referring to recurrent nerve pressure or to the damage to the recurrent caused by operation, but to the danger of complacently observing a stenosis of the upper respiratory tract with the impression in mind that a tracheotomy can always be resorted to if the stenosis increases to a dangerous degree. Apart from the fact that under such conditions excision of the goitre becomes a far more dangerous procedure, many cases have been known to have ended fatally owing to such trivial causes as a catarrhal condition or even an emotional congestion. It is essential to bear in mind that no form of treatment should be undertaken, e.g. prolonged irradiation, which might prejudice the success of surgical interference. Several cases are quoted to illustrate his arguments.

M. VLASTO.

Laryngeal Diphtheria and Tracheotomy. W. NAPIER (Glasgow). (*The Lancet*, September 18th, 1937, ccxxxiii, 5951.)

A review of 2,528 cases of diphtheria treated at the City of Glasgow Fever Hospital during the past eleven years showed that 220, or 8·7 per cent., were laryngeal cases. In 145 patients, or 65 per cent. of the laryngeal cases, croup was the only clinical manifestation of diphtheria, while in 75, or 34 per cent., it was accompanied by a pharyngeal infection. In 55 cases, or 25 per cent., of laryngeal diphtheria, tracheotomy was performed and this series forms the subject of the present paper.

The age incidence varies from 4 months to 9 years and there were fourteen deaths. The mortality rate is lowest when the larynx alone is involved (16 per cent.), is higher when the fauces are also affected (29 per cent.) and is greatest when the infection has spread to the nasopharynx. Tracheotomy is more frequently essential in the last two forms of the disease.

The routine treatment of laryngeal diphtheria consists of the steam tent, light poultices to the neck and chest and stimulants if necessary. Serum is given intramuscularly in doses of 8,000 to 12,000 units; larger doses may aggravate obstruction by causing too rapid separation of membrane. In the advanced case, tracheotomy must be performed early, as a rule within a few hours of admission to hospital. Anæsthesia is seldom required under the age of three years; older children may be given a little chloroform. Immediate improvement follows operation. The tube should be

withdrawn within a week in favourable cases. In children over four years, laryngeal spasm may demand prolonged need for the tube. Periodical blocking of the tube prior to its removal may assist, and sometimes it is advisable to leave a tape tied round the neck so as to lead the child to think that he is still wearing a tube.

Unfavourable late results, such as pulmonary disease, stenosis, etc., have been reported. One case of pulmonary tuberculosis was found in the present series of cases, but there was no evidence to trace the origin to the previous tracheotomy.

In the fourteen fatal cases, the cause of death was tracheo-bronchial diphtheria in four cases, broncho-pneumonia in four cases, and toxæmia in six cases. Laryngeal diphtheria is usually regarded as a very serious condition and death rates of 20 per cent. (Ker), 12 per cent. (Benson), and 13 per cent. (Litchfield and Herdman) have been reported. Each of these observers relies on intubation. In the present series the death rate from laryngeal diphtheria (all cases) over the whole period, was 6·8 per cent., and for all types of diphtheria, 4·9 per cent. The mortality rate in cases treated by tracheotomy was 25 per cent. This figure compares favourably with the records of the above-mentioned observers who relied upon intubation, apparently reserving tracheotomy for the severest cases. Their figures vary from 28 to 44 per cent. Aspiration of the membrane by a suction apparatus is still on trial and there is as yet no conclusive evidence of its advantages. The writer is of opinion that tracheotomy gives better results than intubation in the treatment of laryngeal diphtheria.

DOUGLAS GUTHRIE.

BRONCHUS

Anatomy of the Bronchial Tree and its Clinical Application. J. HARDIE NEIL, W. GILMOUR, F. J. GWYNNE, WALACE MAIN and W. A. FAIRCLOUGH of Auckland, New Zealand. (*Annals of O.R.L.*, 1937, xlvi, 338.)

The constant bronchi of the main stem of the bronchial tree are the upper lobe and middle lobe, and of the lower lobe, the apical, the mesial, the anterolateral and the terminal paravertebral and posterolateral. All these segments, with the exception of the mesial, have surfaces in contact with the chest wall, and are therefore accessible to surgery.

In lung abscesses the suppurative process makes its way towards the periphery, setting up an adhesive pleurisy which effects adhesion to the chest wall permitting an operation with safety if the affected segment be known.

Further investigation has revealed one or two bronchi which are not constant, and are found in varying position between the apical

bronchus above and the terminating bronchi below. The most important is the subapical.

The recognition of the bronchus affected is of the greatest clinical importance, both from the point of view of endoscopic treatment and of surgery. Once the cavity has been emptied by suction it is possible to carry out lavage by passing a catheter into the cavity and using a drop apparatus at the rate of one drop in two seconds. By this means antiseptics in aqueous solution can be introduced in amounts varying from 30 to 500 c.c. "Metaphen," an organic mercury compound, in strengths of 1-10,000, is apparently innocuous, and is one of the most potent destroyers of the hæmolytic streptococci known.

[The article is illustrated by drawings of the segments and their surface markings.]

GILROY GLASS.

A New Method of Radium Application in Cancer of the Bronchus. JOEL J. PRESSMAN and CLYDE K. EMERY (Los Angeles). (*Annals of O.R.L.*, 1937, xlvi, 314.)

Bronchial carcinoma occurs most frequently in the region of the main stem bronchi, and is therefore inaccessible to surgery. Diathermy, whilst of palliative value, gives little hope of a cure, and the insertion of radium is therefore perhaps the best means available of treating these cases.

It is essential that the area radiated shall extend well above and below the tumour. The method which the author describes is to enclose the radium element in metal containers of varying lengths up to four inches. One form of tube container consists of struts, supported by thick, circular bands of metal, which cause no obstruction to the breathing while *in situ*. This is the most suitable type for use where the position of the tube might cause obstruction. A simple type of applicator is a rubber catheter with the radium containers placed therein. In general a dosage of 4,000 to 6,000 r, at a depth of 3 to 4 mm. from the applicator, is correct.

The retention of so large a foreign body in the bronchus for so long a period of time must cause obstruction to the inflow of air with consequent collapse of the lung. The effects of this can be eliminated, to some extent, by a primary pneumothorax, allowing the lung to expand after an interval of from two to six weeks. This procedure has further advantages in that a greater area of the lung tissue is brought into the field of effective radiation and also, as no air enters the lung, no effective cough can be produced which might dislodge the radium and its container.

A thread attached to the radium container and brought out through the larynx is an advantage, but is not an essential. During

the post-operative period the patient is kept under the influence of morphia, while the radium is *in situ*, and the fluid and caloric intake is maintained by intravenous glucose.

Little is said of the results of treatment except to state that, in adequate dosage, complete disappearance of the growth may be expected.

GILROY GLASS.

ŒSOPHAGUS AND ENDOSCOPY

Benign Strictures of the Œsophagus: New Method of Gradual Dilatation. CARL L. HOAG (San Francisco). (*Annals of O.R.L.*, 1937, xlvi, 327.)

To achieve success, the treatment of traumatic strictures of the œsophagus must be begun at the earliest possible moment. In those cases in which the patient has swallowed a corrosive solution a thread should be swallowed at the earliest possible opportunity and left *in situ* until such time as dilatation can be undertaken. Gastrostomy is to be avoided as long as possible and this operation can frequently be delayed, or even rendered unnecessary by giving large quantities of glucose saline intravenously.

The ordinary methods of intermittent dilatation leave much to be desired, and as an alternative the author suggests the use of a Levine duodenal tube, passed through the stricture and left in position over a prolonged period. This serves the double purpose of continuous dilatation and a means of feeding the patient. The first tube must generally be passed by means of a stylet, but subsequent tubes, each wider in diameter than the preceding one, can generally be swallowed without difficulty. The treatment must be carried out over many months.

Clinical notes of two cases treated by this method are given. In one case there was symptomatic cure, but in the other death from pneumonia occurred at a stage when the dilatation was promising ultimate success.

MISCELLANEOUS

A Case of Syphilis of the Submaxillary Glands. M. I. GARCHINE (Odessa). (*Acta Oto-Laryngologica*, 1937, xxv, 4.)

After reminding the reader of the many morbid processes affecting the lymph glands of the neck the author gives an account of a case of syphilis in the submaxillary lymph glands which is of interest on account of its rarity and difficulty in differential diagnosis.

A thirteen year old boy was admitted with suppurating and ulcerated submaxillary glands which he had had for three years. X-ray showed glands at the roots of the lungs. The ear, nose and

throat and internal organs were normal. Pirquet test negative; Wassermann reaction + + + +.

Complete cure followed fifteen injections of biochinol.

[Author's summary.]

H. V. FORSTER.

On the Vital Staining of the Central Nervous System. TORSTEN SKOOG (Lund). (*Acta Oto-Laryngologica*, 1937, XXV, 4.)

The author has injected rabbit serum, hæmolytic to sheep's blood, into the carotid artery of guinea pigs in different directions to study the effect on the nervous system from the point of view of the hæmo-encephalic barrier to acid dyes which have an affinity for living tissues.

When these injections are made centripetally towards the aorta, the liquid is diverted by the blood stream (which opposes it) into the subclavian artery, then into the vertebral artery and so to the cerebral peduncles. In each case there were constantly produced symptoms recalling Ménière's syndrome (carotid syndrome of Forssman). If an intravenous injection of acid vital staining dyes, such as bromo-phenol blue or Trypan blue is then given, the injection regularly produces an intense vital colouring of the nerve tissue within a territory which is limited to the segment formed by the medulla oblongata and the pons.

When the injections are made in a centrifugal direction, towards the brain, the injected fluid reaches the cerebral hemisphere of the same side. In this case, it does not produce any cerebral symptoms even after strong doses of serum and there is no vital staining of the nerve tissue. The results of these researches indicate in the animals used in the work, a biological difference in the capillary system of a segment formed by the pons and the medulla and suggest an exaggeration of sensibility under the influence of the allergic reaction provided in the experiments. The author thinks it not unreasonable to assume that differences in the biological character of the human capillaries within a similar limited cerebral area may exist. Should this be the case our clinical experience of the great susceptibility of this area and the frequency of vestibular symptoms in diverse patho-anatomical processes in the central nervous system would be given an explanation which we have hitherto been unable to supply.

H. V. FORSTER.

Carcinoma of the Cheek. NORMAN PATTERSON. (*British Journal of Surgery*, 1937, XXV, 98.)

The method of diathermy excision of malignant tumours of the cheek by an entirely buccal approach has proved unsatisfactory owing to the varying thickness of the soft tissues involved. The

skin is apt to slough, causing a troublesome fistula, and incomplete operation will certainly be followed by recurrence. To overcome these difficulties the writer makes a skin-deep incision from the lower edge of the pinna to the symphysis menti and reflects the skin flap forwards by careful dissection until the area of reflected skin is greater than the area affected by the tumour. He then ligatures the facial artery and vein and, if necessary, removes a portion of the masseter muscle and ascending ramus of the jaw. Having protected the skin flap by packing beneath it a quantity of ribbon gauze, he then proceeds to perform a diathermy excision of the tumour by way of the mouth, which is gagged widely open and illuminated by a head lamp. Finally, he replaces the skin-flap and sutures the wound. If the skin is involved in the growth, the technique is modified to suit the case. Ten cases are described in detail, six of the patients being women. There was no operative mortality and seven of the patients still enjoy good health, three of them having survived operation for over ten years. Two patients died of pneumonia which was in no way related to the operation, and one died of recurrence at the base of the skull a year after operation. The paper is clearly illustrated by a series of drawings and photographs.

DOUGLAS GUTHRIE.

Remarks on Post-diphtheritic Paralysis of the Soft Palate. W. MULLER-DOS-REIS (Rio de Janeiro). (*Les Annales d'Oto-laryngologie,* August 1937.)

The most frequent complication of diphtheria is undoubtedly a paresis of the soft palate. The paresis usually appears between the second and fourth week after the illness is over. It lasts approximately from four to sixty days, although the more severe cases may last six months. The concensus of opinion is that the presence of paresis of the soft palate is a sure indication of a preceding diptheritic infection although it may have been so slight as to have remained undiagnosed. The subject matter of the article is introduced by a summary of the views of a number of observers on theoretical considerations of the subject. There appears to be a considerable difference of opinion as to whether or not serum therapy is of value once the paresis is established. Indeed, it would appear that some contend that the administration of anti-diptheritic serum has had little if any effect on post-diptheritic velum palati paresis. The author then quotes details of five cases of his own with appropriate comments. He attributes his good results to protein therapy and advises it in the form of protinjectol.

M. VLASTO.