ABSTRACTS

EAR

On the Pathology of Secretory Middle-Ear Catarrh. K. LOWE. (*Monatsschrift für Ohrenheilkunde*, 1938, lxxii, 40.)

In fifteen cases of middle-ear catarrh, exudate, obtained by puncture from the tympanum, was examined and compared with the blood serum. In each case the patient's blood group was easily demonstrated by examination of the exudate. This could not be done with the discharge of purulent otitis which is rich in leucocytes.

The similarity between the blood serum and the exudate from the middle ear is discussed.

Observations were carried out on a patient who suffered from severe attacks of vasomotor rhinitis followed by secretory catarrh of the middle ear. The rhinorrhœa was so profuse that in the course of the morning she could easily half-fill a reagent glass with nasal secretion. This fluid was compared with that obtained from the middle ear.

The nasal secretion was colourless, and slightly flocculent with a protein content of 4 per cent. Blood grouping could not be determined by simple agglutination.

The tympanic exudate was yellow and clear, with a protein content of 7 per cent. In a dilution of 1 in 8, the blood group was easily recognized.

In the first case the active cells of the nasal mucosa act as a barrier between the blood and the secretion. In the second, the exudate is little altered from the blood serum, no similar barrier evidently being present.

Serous otitis media is apparently accompanied by increase in permeability of the capillaries. The fluid is extravasated into the mucosa of the middle ear, and passes through the epithelium into the tympanum. It retains the essential qualities of the blood serum. The investigations suggest that the exudate is not produced by the mucosa of the middle ear itself.

DEREK BROWN KELLY.

Treatment of Thrombosis of the Lateral Sinus, without ligation of the Internal Jugular Vein. MATTHEW S. ERSNER, M.D., and DAVID MYERS, M.D. (Philadelphia). (*Jour. A.M.A.*, September 18th, 1937, cix, 12.)

A thrombus is a physiological protective mechanism having a pathological basis for its formation and is nature's response to

an irritant—mechanical, bacterial or toxic. Since the extension of infection is retrograde rather than downward, ligation of the jugular vein is superfluous because it does not completely eliminate collateral circulation or prevent retrograde infection. In fatal cases of lateral sinus phlebitis with septicæmia, there is no attempt at thrombus formation.

Transfusions of whole blood daily or on alternate days, Dick's antiscarlatinal serum and sulphanilamide are strongly recommended. When symptoms suggesting sepsis are present, immediate eradication of the focus should be completed and the lateral sinus exposed for further observation. Should the symptoms persist, the sinus is packed above and below and then incised. The vein is occluded by packing and the patient treated expectantly. It is not essential to remove the thrombus or to excise the wall of the sinus. If the septic symptoms still continue and physical signs show involvement of the internal jugular vein, the vein is exposed, incised and drained, but not ligated or resected.

ANGUS A. CAMPBELL.

Mastoid Operations. WALTER HOWARTH and GEOFFREY BATEMAN. (*B.M.J.*, November 13th, 1937.)

The object of this paper is to discuss the several different mastoid operations in common use in order to estimate the value of and the indications for each. After analysing the results in cases submitted to the conservative mastoid and the modified radical operations, the authors have worked out a scheme for the treatment of chronic otorrhœa.

The patient when first seen is thoroughly examined, and any focus of sepsis in the nose or nasopharynx is dealt with. Conservative treatment for the ear is instituted and any polypi or granulations are cauterized weekly with silver nitrate. At the end of six weeks the cases are reviewed and those not making satisfactory progress are recommended for operation. Those with a central perforation, fairly good hearing, and a discharge which does not smell offensive are selected for a conservative mastoid operation. These patients may expect to have a healed wound, a dry ear, and an ear that will require no further attention, four weeks after operation.

Cases with polypi but fairly good hearing are chosen for either a conservative or a modified radical operation. At the time of operation the first step is the removal of the polypi and inspection of the middle ear. If the perforation is not marginal a conservative mastoid operation is performed, but if the perforation is marginal, and particularly if the discharge is offensive even after six weeks' treatment, the choice is a modified radical.

Abstracts

Those cases with cholesteatoma, marginal perforations, an offensive discharge, or excessive granulations are treated by a modified radical operation, even if the hearing is bad, whilst the radical mastoid is reserved for cases with gross destruction of the tympanic membrane and ossicles and those with such complications as facial paralysis or extradural abscess, when complete drainage must be established.

R. R. SIMPSON.

Otitis Externa: "Hot-Weather Ear". An Investigation of One Hundred Cases and a Method of Treatment. GEORGE MORLEY. (*B.M.J.*, February 19th, 1938.)

1. A series of one hundred cases of otitis externa occurring chiefly during the hot humid seasons of Aden was investigated, and a representative number of cases were found to be infected with *B. pyocyaneus* in pure culture.

2. The influence of sea-bathing and a sandy atmosphere as ætiological factors is discussed and discredited; whilst the seasonal incidence is held to justify the term "hot-weather ear".

3. A routine method of treatment with facility of application is described, based upon boro-iodine therapy. The use of cotton-wool plugs in the meatus is discouraged. Prophylaxis and after-treatment are described.

4. The results of this form of treatment as applied to sixty-six cases are given, and are compared as far as possible with those of some recently-published methods.

R. R. SIMPSON.

Non-Suppurative Intracranial Complications of Otitis Media. ADAMS A. MCCONNELL. (*B.M.J.*, October 2nd, 1937.)

When symptoms and signs of increased intracranial pressure develop in the course of otitis media and clinical methods fail to establish a definite diagnosis, ventricular puncture is safer and more informative than lumbar puncture and should be used first. If a communicating hydrocephalus be found, lumbar puncture may then be used for treatment.

R. R. SIMPSON.

An Estimate of the Incidence of Defective Hearing in England and Wales. ARTHUR G. WELLS. (*B.M.J.*, July 3rd, 1937.)

1. A rough estimate has been made (*a*) of the total number of persons with defective hearing in England and Wales, (*b*) of the number of persons who would come within the scope of a Deaf Persons Act, on the lines of the Blind Persons Act.

2. No method of investigation of any kind would furnish an accurate figure.

3. The method employed in this investigation was that of applying the incidence found in "samples" of various sections of the population to the whole population of these sections.

4. Many adjustments were required, especially in estimating the number under (*b*), and while some of the most important ones have been made in the investigation others have had to be disregarded owing to the lack of data—for example, the incidence of severe deafness in persons in State mental institutions.

5. The estimate shows that about one in every six persons in England and Wales has defective hearing in one or both ears.

6. The number of persons who would be covered by a Deaf Persons Act and partake of its privileges would probably be in the neighbourhood of 150,000.

R. R. SIMPSON.

NOSE

A Case of extra large Pyocele (Mucocele) of both Ethmoids with Exposure of Dura and Evidence of Cerebral Irritation. Recovery after External Operation. B. KNECHT. (*Wiener Laryngo-Rhino Gesell. Monatsschrift für Ohrenheilkunde*, 1938, lxxii, 113.)

An asthmatic patient, aged 59, was admitted on account of headache, fever, and swelling over the root of the nose and in the vicinity of both tear sacs.

The ethmoidal bulla was opened on the left side, releasing a large quantity of stinking pus. As the pus appeared to be pulsating, an extradural abscess was suspected.

An external operation was therefore carried out. The frontal sinuses appeared normal, but a huge cavity was found replacing both ethmoids, exposing the dura, and extending back to the sphenoidal sinus. The walls of the cavity were covered with dirty-looking membrane.

Free communication with the nose was established, and gauze soaked in iodipin packed into the cavity. Radiological examination confirmed the fact that the dura was exposed.

Transient signs of cerebral irritation occurred (an attack of Jacksonian epilepsy and left papillœdema), this was followed by rapid recovery.

DEREK BROWN KELLY.

MISCELLANEOUS

Diphtheria Immunization with finely atomized Formol Toxoid. GUY BOUSFIELD and W. W. KING-BROWN. (*Lancet*, 1938, ii, 491.)

The authors discuss the intranasal application of diphtheria toxoid as an efficient secondary stimulus in diphtheria prophylaxis,

one objection to which is the alarm it entails in small children. The writers and five other adults tried the effect of inhaling by nose and mouth the air of a room filled with finely atomized diphtheria formol toxoid. From the immunological aspect the results exceeded expectations, but unfortunately there was a sequel. In one case, with a family history of asthma, the experiment caused tightness of the chest, pains in the back and spine and some difficulty of breathing for a day or two, as well as frontal headache. With this exception, all who were sprayed twice suffered from allergic symptoms but produced the largest amounts of blood antitoxin content. It is possible that the experiment was overdone and a more gentle procedure might have been better. What was overlooked was the possible effect of the application of minute amounts of toxoid to a very large area of mucosa, in relation to the production of a state of sensitivity. From the immunological aspect the large area involved had been regarded as one of the most hopeful aspects of the prospected method. The writers think that children might stand a modification of the treatment quite well. Smaller dosage and shorter exposure would be indicated, and it would be necessary for an adult to be in attendance. The latter would be liable to be sensitized.

MACLEOD YEARSLEY.

Cultures of Human Marrow. Studies on the Mode of Action of Sulphanilamide. EDWIN E. GOOD, M.D., and INEZ E. BROWNLEE, B.A. (*Jour. A.M.A.*, January 29th, 1938, CX, 5.)

All experiments on which this article is based are from infections with the beta hæmolytic streptococcus. Human marrow cultures were made and inoculated with the desired amount of the culture from this organism. The mixture was divided equally among four to six vials, half of which contained marrow cells from which the supernatant medium had been removed after centrifugation.

The major action of sulphanilamide on this organism seems to be a neutralization of the toxins. Either because of this action or incidentally it also decreases the rate of cell division. It does not appear to kill the organisms directly though it does permit the bactericidal properties of human serum and to some extent phagocytosis by leucocytes to kill organisms which they otherwise would be unable to kill. It has no direct effect on phagocytosis.

The effective concentration of sulphanilamide appears to be about one in one hundred thousand, or about one-tenth of that now ordinarily maintained in the blood stream during treatment. Although further knowledge is required before it is justifiable to apply smaller doses in dangerously ill patients, sulphanilamide in concentrations even greater than those generally employed clinically

does not appear to have any direct toxic action on the nucleated cells of the majority of bloods and marrows. This does not exclude the occurrence of an occasional idiosyncrasy in the reaction of these cells such as is known to occur in other benzene ring drugs.

The article is rather lengthy, is illustrated and has a bibliography.

ANGUS A. CAMPBELL.

Fracture of the Skull involving the Paranasal Sinuses and Mastoids. C. C. COLEMAN, M.D. (Richmond, Va.). (*Jour. A.M.A.*, November 13th, 1937, cix, 20.)

The two main objectives of surgical treatment of head trauma are the prevention of infection and the removal of intracranial hæmatomas. Consideration of the sinus fracture in serious cases of head trauma must, at times, be postponed in favour of a management which gives the patient the best chance to withstand the primary effects of his injury.

X-ray examination has its limitations and diagnosis must usually depend on such signs as bleeding from the cranial orifices, leaking of cerebrospinal fluid, ecchymoses and palsy of the cranial nerves. Unless there is good reason to believe that an accessible dural laceration exists, with communication between the bony sinuses and the meningeal spaces, operation is not advisable. The dangers of fracture of the paranasal sinuses depend almost entirely on the laceration of its dural covering, and the only positive signs of such laceration are a cerebrospinal fluid leak or pneumocephalus.

Local applications to the nasal passages, packings, etc., are not only futile but harmful. Depressed fracture of the outer wall of the sinus often requires no other treatment than disinfection, excision and suture. If the depression is deep, operation is required to elevate the bone and permit inspection of the sinus. It is only in the exceptional case that operation is required to close a cerebrospinal fluid leak presumably from a fractured ethmoid, but the operation may be entirely successful and should be undertaken if the leak persists for more than three days. The discovery of intradural air should lead to repeated X-ray examinations. If it is increasing or is stationary for four or five days and cerebrospinal fluid is escaping, surgical intervention for closure of the dural laceration is indicated.

Hæmorrhage from the ear is rarely profuse and no treatment is required except covering the ear with a sterile dressing. Early surgical treatment for mastoiditis secondary to fracture, is of the greatest importance.

Blindness of one eye, extra-ocular palsy and anosmia are common in fracture of the anterior fossa. Unilateral blindness and deafness are usually permanent while facial paralysis is usually temporary.

ANGUS A. CAMPBELL.

Abstracts

Triple Primary Carcinoma in Oto-Laryngology. J. C. DROOKER, M.D. (Boston). (*Jour. A.M.A.*, October 9th, 1937, cix, 15.)

The writer reports a case of triple primary carcinoma which meets the requirements laid down by Billroth in 1860. This patient, aged 62, was treated at the Massachusetts Eye and Ear Infirmary for three primary carcinomas, all situated above the thorax. The first lesion was a basal celled carcinoma of the right temporal region which was removed by radium in 1931. In 1932 he had a laryngectomy and block dissection of the neck for an epidermoid carcinoma, grade four, involving the left side of the larynx and cervical nodes. In 1936 he had a modified right Moure operation and radium treatment for on adenocarcinoma of the right ethmoidal area. It is claimed that this is the only such case reported in the field of oto-laryngology.

The article is freely illustrated, and has a bibliography.

ANGUS A. CAMPBELL.

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