their association with ethmoidal cell suppuration, whether occurring alone or as a complication of other sinus inflammation, is evident from the cases quoted.

(11) That the recent cases of uncomplicated antral suppuration, as contrasted with those of a chronic type, respond more readily to treatment by lavage.

The value of subcutaneous injection of paraffin for the relief of certain nasal deformities has been emphasised by many writers. Its fate after injection has been the subject of an interesting study by Broeckaert (*Rev. Hebd.*, August 19, 1905), who shows that the various changes that take place depend upon two separate factors. If paraffin of a high melting power be used, the injected mass becomes gradually encysted. If, however, the melting point be a low one, the injected mass becomes gradually tunnelled by small blood-vessels and by a network of connective tissue.

Subcutaneous injections of paraffin have also been employed in the treatment of ozæna, as also have high-frequency currents. No real step in advance has, however, been made in the treatment of this troublesome pathological condition. Its possible relationship to accessory sinus disease, to tubercle, and to diphtheria has been discussed time after time without any tangible result.

RETROSPECT OF OTOLOGY.

By Dundas Grant, M.D., F.R.C.S., and Chichele Nourse, F.R.C.S.Edin.

Although the past year has not been characterised by any very sensational additions, there has been evidence of activity and progress during the whole time. The meeting of the British Medical Association at Leicester gave occasion for a very valuable discussion on the subject of acute suppuration of the middle ear. In the Otological Section of the New York Academy of Medicine a memorable symposium was held, in which the subject of suppurative inflammation of the middle ear in children was specially discussed, as regards the anatomy, pathology, etiology, and surgery.

The Otological Society of the United Kingdom has not been behindhand. A very memorable meeting was held at Manchester. There Professor Stirling reviewed the development of the organ of hearing from the lowest orders of animals up to that of man.

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Professor Young brought forward, with Dr. Milligan, some anatomical observations on the relation of the accessory cavities of the middle ear, which have important bearings upon the treatment of median otitis, and important papers were read by Professor Yonge, Dr. Milligan, Dr. Dundas Grant, and Dr. Gordon.

The reports of the meetings of the French and Belgian Societies will be found to be full of interest, even though no very striking revolutionary departures have been made.

Acute suppuration of the middle ear, as we have said, received attention at the meeting of the British Medical Association at Leicester. One of the best of the cleverly selected subjects for discussion was the consideration of the line of treatment in preventing acute middle-ear suppuration from becoming chronic. Every conscientious aurist must have been struck by the number of chronic cases coming under his notice, and have asked himself whether they are not preventible, and how they are to be prevented. Dr. Milligan (511), founding on his clinical observations as well as on the anatomical researches carried out by him in conjunction with Professor Young of Manchester (459), considers that propagation of disease along the aditus into the antrum and mastoid cells is easily brought about by inflation of the middle ear through the Eustachian tube, the tympanic orifice of the latter being in direct line with that of the aditus. The more vital factors in the treatment were early paracentesis, evacuation by suction applied to the meatus, and the insertion of strips of cyanide or iodoform gauze. The paracentesis perforation might require re-opening from time to time, and many joined in advising the earlier resort to operative opening of the mastoid cells. The obstinacy of scarlatinal cases was explained by the virulence of the infection and the depressed state of the patient. So unfavourable are these cases that in Dr. Gordon's (511) experience the opening of the mastoid cells has proved insufficient, and he now resorts to the radical mastoid operation.

The study of ear-diseases in children constitutes a special and very important chapter of otology, and the discussion on them, in which Drs. Jacobi (616), Wiener, McKernon (617), Dench (615), and other American *confrères* took part, deserves to be read with care. Drs. Wiener (617) displayed a trust in "conservative" measures which was not generally shared, but which cannot be passed over without consideration.

In the American Laryngological, Rhinological, and Otological Society an interesting discussion followed a paper by Dr. John

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H. McCollom (542) on "Nose and Ear Complications in Diphtheria, Scarlatina, and Measles." Dr. Dench insisted on the value of early operation on the mastoid, even if only for the preservation of hearing. Dr. Sprague (547) narrated his experience in scarlatina and Dr. Day and others (551) in typhoid. The necessity for watching the ears during these diseases was rendered very evident, and the room for "missionary" work among practitioners was referred to by more than one speaker.

The subject of vertigo was dealt with by the Otological Society of the United Kingdom, the discussion being opened by Sir Victor Horsley and Dr. Risien Russell. The whole discussion received consideration in an editorial article (403), in which the arguments and conclusions were briefly summarised; but the original communications (403 and 409), as well as the contributions to the discussion by the President (433), Dr. Dundas Grant (433), Mr. Richard Lake (436), Professor Pritchard (437), Dr. William Hill (437), Dr. Tilley (438), Mr. Waggett (439), Mr. Hunter Tod (439), and Mr. Hugh Jones (440), may be read with benefit *in extenso*. The otological aspect of the subject received the fullest attention from Dr. Dundas Grant (433). The whole discussion tended to show that though many cases were clear to the neurologist, and many others to the aurist, there remained some in which the co-operation of both was required. Mr. Lake's (257) and Dr. Milligan's (105) cases of deliberate evisceration of the labyrinth are among the most striking additions to the treatment. Dr. Clarence Blake (675) gives his views on aural vertigo (675), considering it primarily as the result of pressure on the semicircular canals.

Anatomy and physiology.—The theories of hearing formed the subject of a lecture by Gray (298). Mongardi (675) wrote upon the transmission and reception of sound by the ear. Various points in the anatomy of the ear and petrous bone have been studied by Mouret (112), Yearsley (351), Shambaugh (506), and Alterton (350). Cheatle (264) noted a membranous septum in the lateral sinus, and showed sections of temporal bones (150) at the Otological Society. Young and Milligan studied the development of the middle ear in relation to Otitis media (459).

The ear in childhood.—Abstracts of papers relating to its anatomy, diseases, and operative treatment by Bryant (506), King (620), Kenefick (506), Laurens (399), and Dench (615) will be found at the pages indicated.

Auricle.—A case of congenital malformation of the auricle (264),

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and also (263) a case of neoplasm of the auricle, caused apparently by wearing an ear-ring, were shown at the Otological Society by Wingrave. At the same Society Yearsley showed a case of angeiolipoma of the auricle and meatus (256). Two cases of malignant growth of the auricle were recorded by Szenes, one a melanotic sarcoma, the other an epithelioma (617); and a specially interesting case by Viollet (315), in which epithelioma appeared in a patch of lupus on the helix.

Meatus.—At the Otological Society Kelson (151) showed a case of congenital atresia of the auditory meatus, which had been explored by operation; Waggett (151) showed a case of endothelioma of the auditory meatus, and Macnaughton-Jones (262) a case of atresia. A case of necrosis of the wall of the meatus was recorded by Ferran (352) and a case of osteoma lying free in the meatus by Szenes. At the British Laryngological, Rhinological, and Otological Association Grant (41) showed a case from which he had removed an exostosis. Oxygenated water was successfully used by Guarnacia (53) in the treatment of otomycosis.

Membrane and ossicles.—The employment of collodion in relaxation of the membrane was the subject of a paper by Chavanne (112), and also one by Bryant (354). Cases showing curious conditions of the membrane were shown at the Otological Society by Lawrence (urticaria of the drum) (149), and Whitehead (emphysema of the membrana) (255). A case of cysts of the tympanic membrane was recorded by Haug (168). At the Otological Society Macnaughton-Jones (157) showed a drawing of a traumatic perforation of the membrane.

Chronic non-suppurative catarrh of the middle ear.—At the meeting of the British Medical Association, Bronner (102) discussed the value of treatment by compressed air and nebulisers in certain forms of this affection.

Otosclerosis.—Möller (619) recorded a case, with autopsy, and Hammerschlag (673) has demonstrated the influence of heredity in this affection.

Chronic suppurative inflammation of the middle ear.—At the British Laryngological, Rhinological, and Otological Association Collier (443) showed a case following fracture of the base. Hubbard (473) considers that obstruction of the Eustachian tube is a factor in its production.

Facial paralysis.—The technique of the operation for anastomosis of the nerve was described by Villar (56).

Mastoid diseases.—At the American Laryngological, Rhino-

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logical, and Otological Society, Duel (27) read a paper upon cases illustrating difficulties in the diagnosis of mastoid complications, and McCaw (27) one upon mastoiditis.

At the Otological Society, Tod (265) showed a case of mastoid fistula; Lawrence read notes of a case of mastoid abscess following measles (163), and Turner showed three temporal bones from cases of chronic middle-ear suppuration.

Pugnat (168) recorded a case of periostitis of the temporal bone with subperiosteal abscess, Brandegee (674) a case of double mastoiditis with involvement of the zygomatic cells, and Braislin (564) a case of mastoiditis with a large sequestrum in an infant.

Mastoid operation.—Waggett contributes a useful note upon skin-grafting (363). Moure and Brindel tabulated five hundred cases of mastoid operation (351). Braislin has placed on record (564) two anatomical anomalies encountered during mastoid operations. Harland (674) described an interesting case of secondary anæsthesia, hemiplegia following the mastoid operation. At the American Laryngological, Rhinological, and Otological Society, Sprague (466) showed a case of radical mastoid operation in which healing under blood-clot had occurred. At the Otological Society Heath (84) described his method of performing the radical mastoid operation.

New instruments.—At the Otological Society Lake showed an oto-masseur driven by a turbine (82). An instrument for the application of suction to the ear has been invented by Sondermann.

Miscellaneous.—Besides the foregoing, the year's work has produced a quantity of interesting material which cannot be classified. At the British Medical Association, Syme described a case (159) of congenital word-deafness. Milligan showed a number of cases at the Manchester meeting (500) illustrating the results of operation in various types of aural and nasal disease. On the same occasion Sewell (557) gave an interesting statistical report of 5000 cases of ear disease. "Local Anæsthesia for Aural Operations by Neumann's Method" was the title of papers by Seymour Jones (423) and Stoddart Barr (430). Pinder (498) recorded a case of vascular intra-tympanic growth. Hennebert (620) has written upon oto-ocular reflexes. Goris (674) described some cases of intervertebro-digastric abscess in connection with ear disease. Tinnitus aurium has been studied at the American Laryngological, Rhinological, and Otological Society by Bryant (485), who discussed its relations to auditory hallucinations, and in another paper the treatment of tinnitus (16). At the Otological

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Society McBride (420) described a case of cephalic bruit and deafness of sudden onset.

Numerous other interesting communications will be found in the index to the volume under their appropriate headings.

SOME NEW INSTRUMENTS FOR REMOVING FOREIGN BODIES FROM THE BRONCHI BY DIRECT BRONCHOSCOPY.

By Wm. Cuthbert Morton, M.A., M.B., Ch.B.Edin.

In the course of special study in Germany during the last year it was my good fortune to be in Freiburg visiting Professor Killian's clinic, when there was sent in for treatment a case, of which, as Professor Killian will be publishing it in due course, I give only the following brief summary: The patient was a boy, aged ten, who was found to have a collar-stud lying in the left bronchus, with the plate uppermost. In addition to this extremely unfortunate position of the stud, the mucosa on the near side of the plate was much swollen.

Although the ordinary hook, the instrument best adapted to the case in hand, slipped with comparative ease between the edge of the plate and the wall of the bronchus, yet, if the least upward pressure were applied, it glided off with a distinctly audible sound. After an hour's unceasing effort, all hope of being able to remove the stud through the mouth was given up, and, tracheotomy having been performed, the attempt was renewed through this wound, but with no better result, so that the operation had to be abandoned. On the following day the temperature was down, and the child was given time to recover his strength. On the morning of the second day, the condition again becoming urgent, he was again anæsthetised, and a further effort made to recover the stud. For some time it could not be dislodged from its position; ultimately it was removed, not, however, before it had slipped off the hook into the right bronchus, and again into the trachea just at the level of the wound. The tracheotomy tube was taken out the same evening, and after a week the patient was discharged from the clinic.

That so much could be done with the hook was striking, but the thought was inevitable whether an instrument could not be devised by which a stud in such a position might be firmly grasped and safely drawn through the stricture and up through the air-passages. I laid a model of such an instrument before Professor Killian, who at once asked me to work it out at the expense of the

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