RETROSPECT OF OTOLOGY.

By Dundas Grant and Atwood Thorne.

In the following retrospect are reviewed the contributions to otology contained in the last volume of the Journal of Laryngology, either in the form of abstracts or original articles. The reference numbers indicate the page in that volume to which the reader may refer for fuller details.

External Ear.—Lermoyez (450) gives a full description of the prophylaxis of *Eczema of the Ear*, whether attacking the auricle or meatus alone or both together. Liaras (451) summarizes all that is known of *Lupus of the Ear*, and describes several cases of *Lupus of the Middle Ear* which has spread along the Eustachian tube from the naso-pharynx. Cheatle (316) showed at a meeting of the Otological Society a patient who had suffered from *Adeno-carcinoma of the External Ear and Meatus* where much of the auricle and all the meatus had been removed. Guranowski (402) described a case of *Serous Cyst of the Auricle*, and discusses the differential diagnosis of these cysts and *Hæmatoma*. Gruber (324) showed a model of a *Frost-bitten Auricle* showing all the stages.

Meatus.—Guranowski (402) showed a case in which the cartilaginous meatus was duplicated, and in which there was a normal tympanic membrane. Gerrad (109) gives a description of *Otitis Externa Tropica*, a disease which appears to be fairly common in Singapore and the Malay States. It is somewhat similar to *Furunculosis*, though it may be painless. Macaskie (673) shows the difficulty there may be in removing *foreign bodies* from the ear, and describes a case where, a piece of indiarubber having got into the ear, attempts at removal in the ordinary way proving futile, it was removed with the assistance of seccotine and a teased-out piece of string. Kaufmann (323) found it necessary in one case to open the mastoid in order to remove a *foreign body*. Bing (324) described a *concretion* in the meatus consisting of a nucleus of cotton-wool surrounded by a crust composed of fatty acids, with lime-salts. Cheatle (316) showed a case of *Epithelioma of the Meatus* which had invaded the middle ear and parotid regions, and Hennebert (206) describes a case of *Cavernous Angioma of the Meatus*. Kelson (666) showed a case of *Exostosis* in a man fond of aquatic exercises. Schwartze (674) gives at full length the treatment of *Acquired Atresia and Stricture of the Meatus*. Urban Pritchard (123) read a paper on the *Antiseptic Purification of the Meatus and Adjacent Parts*, both for operations

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and as a treatment in chronic middle-ear suppuration, chiefly by means of the Listerian strong carbolic solution.

The Membrana Tympani and Ossicles.—Gruber (109) discusses the *Pathology of Relaxation of the Membrane*. Overacker (57) relates a case of *Multiple Perforation of the Membrane from Injury*, with remarkable symptoms; and Marx (323) showed a girl of seventeen with a *Heart-shaped Perforation of the Membrane*, through which the *Carotid Artery* could be seen. Stetter (113) discusses *Chronic Dry Myringitis*, but the cases described seem to have many of the characteristics of chronic non-suppurative catarrh of the middle ear. Lake (621) analyzes many of his cases of *Complete Ossiculectomy*, and shows the great success of the operation both in improving hearing and in curing discharge. Fagge (316) showed a case in which discharge had existed for eighteen years and was cured after *ossiculectomy*. Obraszoff (568) describes a case of *Eclampsia due to Paracentesis;* and Dundas Grant (316) a case of *Old-standing Perforation healed by the Application of Trichlor-acetic Acid*. Politzer (66) discusses the *Extraction of the Stapes* in its various aspects; and Dench (108) describes in detail *Synechiotomy of the Stapes*. Faraci (68) read a paper on the *Possibility of Re-opening the Fenestra Ovalis in Cases of Osseous Ankylosis of the Stapedo-vestibular Articulation*.

Chronic Non-Suppurative Catarrh of the Middle Ear.—Roy (673) gives some observations in the prognosis and treatment of so-called *Catarrhal Deafness*. Nuvoli (70) gives the results of his experiments on the *Pneumatic Treatment of Diseases of the Ear*.

Acute Suppuration of the Middle Ear.—Nadoleczny (673) gives details of the *Bacteriological Examination* of these cases. Heine (672) shows the especial danger of this trouble in old people. Fullerton (226) lays stress on the importance of *early paracentesis* in some of these cases. Miot (453) advocates the employment of *Bleeding and Refrigerants* in the treatment of this disease, especially in young children.

Chronic Suppuration of the Middle Ear.—*Otitis Media Neonatorum* is thought by Aschoff (223) to be caused by the presence of foreign bodies due to the organization of normal or accidental contents of the amniotic fluid. Hammerschlag (109) showed a case of this disease where both ears *healed spontaneously:* the left after the manner of a Stacke's operation, and the right like a typical radical operation.

Dangerous Sequelæ of Suppurative Inflammation of the Middle-Ear Meningitis.—The *various forms of meningitis*, otitic or otherwise, including the important serous forms, are described

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by Dana (342), who insists on the important diagnostic value of lumbar puncture. Numerous typical cases are narrated by Grunert and Zeroni (412, 413, 415, 418, 420, 424). One (415) was remarkable from the absence of pyrexia, the symptoms simulating those of cerebral abscess; another (417) was occasioned by carcinoma of the petrous bone; two (421, 423) were complications or results of temporo-sphenoidal abscess; one (424) arose from labyrinthitis; two (416, 420) were independent of otitic disease, and were correctly diagnosed as cases of tuberculous meningitis.

Cholesteatoma.—Urban Pritchard (143) showed a case in which he had removed a *Cholesteatoma* through the meatus. Tilley (144) showed a similar case; the *Cholesteatoma* in this case had given rise to a very marked reflex cough.

Internal Ear.—*Menière's Disease.*—Urban Pritchard (457) read a paper on this subject at the International Congress in Paris. Oppenheim (454) discusses the same subject, as does also Moll (562). *Cases of Hysterical Deafness* are described by Taptas (454), Courtade (286), Hammerschlag (228), and Lannois and Marc Hardirer (430). Courtade (91) gives a means of detecting *Simulated Unilateral Deafness.* Urbantschitsch strongly urges the importance of *Methodical Acoustic Exercises for Deaf-mutes.* Huth (446) gives a careful account of all that is known in relation to *Consanguineous Marriage and Deaf-mutism.* Pollak (112) relates a case of *Complete Deafness* following a railway collision.

Malignant Disease.—Melzi (27) describes a case of *Fibro-angioma of the External Meatus;* Alt (229) a case of *Sarcoma growing from the Middle Ear* of a boy aged five; and Ballance (315) an *Alveolar Sarcoma of the Petrous Bone.*

General Diseases.—Schwabach (454) describes a case of *Pernicious Anæmia with Hæmorrhage into the Middle Ear,* the internal ear being free. Gomperz (324) showed a temporal bone from a case of *Leukæmia,* in which there was an encapsuled exudation in the antrum; the fluid contained cholesterin and fat cells. Weber and Lake (248) describe a case of *Acute Menière's Symptoms in Spleno-medullary Leucocythæmia,* with special reference to the anatomical changes found in acute leucocythæmic affections of the ear. Gaudier (57) describes a case of *Acute Tuberculosis of the Middle Ear,* which rapidly proved fatal.

Tests for Hearing.—All workers in the specialty would hail with delight a universal notation of *Acoumetry,* but it is difficult to settle on one code. Schippers (556) and Hartmann (558) each suggest a different system. Bonnier (90) shows the *Inaccuracies*

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of the Tuning-fork as frequently used, and wishes an optical standard of the movements of the fork. Gray (220) objects to the use of *Galton's Whistle* and similar instruments in testing for high tones, on account of the necessary adventitious sounds, and proposes that short brass bars, vibrated by means of a bow, should be used. Breitung (446) and Bing (342) discuss *Gelle's Test.*

Anatomy and Physiology. — Cheatle (13) gave a detailed account of the *Petro-synamosal Sinus*, a sinus which has important connections with the tympanum, both anatomically and pathologically. Joyce (23) gives an illustrated account of the *Topography of the Facial Nerve* in its relations to mastoid operations. Aldren Turner (131), at the International Otological Congress, gave a lantern demonstration of the *Central Connections of the Auditory Nerve.*

Notes on Remedies.—Gray (619), finding aqueous solutions of *Cocaine and Eucaine* unsatisfactory as local anæsthetics of the ear, found that the following is a useful prescription :

Cocaine hydrochlorate - -	5 or 10 parts.
Rectified spirits - - -	50 parts.
Anilin oil - - - -	50 parts.

Gomperz (324) finds *Argonin* (casein-silver) a useful powder to insufflate cases of *Eczema of the Ear.* Vacher (58) extols *Formal* in the treatment of *Acute and Chronic Suppurative Otitis.*

Notes on Instruments.—Boenninghaus (224) shows the advantages of a *Magnifying Lens* for the examination of the tympanic membrane.

Intra-cranial Abscesses.—Jobson Horne (293) describes the post-mortem appearances in a case of death from *Aural Meningitis.* There was an abscess between the layers of the dura mater and a spot corresponding to the saccus endolymphaticus, the pus or the pyogenic organisms having passed from the labyrinth through the aqueductus vestibuli. Numerous interesting cases of *Cerebellar Abscess* have been recorded, including Rimini's (58), in which sudden death took place, and one of Hansberg's (110), in which operation was abandoned on account of dyspnœa. Interference with respiration was considered an indication for rapid prosecution of the operation, in a case of Dieulafoi's (567), one of Waggett's (144), and one of Milligan's (137). Another case of Hansberg's (110) was successfully operated on. In Bonain's case (445) death took place, but the cause seems to have been septicæmia. In Waggett's case (144) the cochlea subsequently underwent exfoliation. In Milligan's case (137) a return of the symptoms led to a second operation for the evacuation of a second abscess, which

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had apparently formed in the interval. In this case the disease in the ear was so slight that Ballance suggested that the abscess might be independent of it, and in reality influenzal. Among *Cerebral Abscesses* are reported some following on acute otitis—Blake (613) and Seligmann (230). In the latter lumbar puncture was used for the purpose of excluding meningitis, and the abscess on the brain appeared to be developing a second discharge, taking place at an interval after the first. Two abscesses occurred in the temporal lobe in Lindt's case (451). Heimann (402) reports the occurrence of an abscess in the occipital lobe, cured by operation. *Abscess round the Sigmoid Sinus* occurred in a case of acute otitis and mastoiditis under Politzer's care (322). There was double optic neuritis and pyæmic fever. He urges examination of the sinus should the temperature rise in spite of mastoid operation.

The Complications of Suppurative Inflammation of the Middle Ear.—Some valuable statistics from the reports of Prussian hospitals are brought forward by Teichmann (231); MacCallum (452) gives a general account of the complications, and Milligan (110) reviews the modern methods of treating them. Hessler (672), in a paper on *Middle-ear Suppuration and Brain Tumours*, discusses the differential diagnosis between brain tumour, brain abscess, hydrocephalus, and hysteria. *Auricular Septicæmia due to Bacillus Coli and Bacillus Perfringens* occurred in a case reported by Baup and Stanculéanu (455); the micro-organisms were found to be harmless separately, but toxic when combined. *The Complications of Acute and Chronic Middle-ear Suppuration* are studied from the bacteriological and clinical points of view by Leutert-Konigsberg (451).

Mastoid Diseases.—Eulenstein (402) discusses the value of *Percussion* in the diagnosis of mastoid disease, and Ostino (344) describes a method of *Auscultation* by means of a tuning-fork on the vertex while differential stethoscopes are applied to the mastoid simultaneously. *Bezold's Mastoiditis* occurred in a case of Waggett's (551), and in one of Lermoyez (90), in which the patient was an infant two and a half months old, whose mastoid was of the pneumatic type. In a case of Urbano Melzi's (25) the pus burrowed so as to form a *Retro-pharyngeal Abscess*, containing bacteria the same as those present in the ear. Weissmann (114) describes the pointing of an acute mastoiditis into the external ear, the swelling resembling a furuncle, the diagnosis from which he discusses very fully. In an interesting case of Eschweiller's (402) the mastoid cavity, when opened, was found to be occupied by a *Fibro-myxoma*, apparently a polypus which had undergone myxomatous degenera-

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tion. *A Case of Large Subperiosteal Abscess over the Base of the Mastoid Process* is narrated by Hasslauer (403), who details the various routes by which suppuration may extend from the tympanum to the surface of the mastoid.

Operations on the Mastoid.—Manasse and Wintermantel (217) describe seventy-seven radical operations, out of which forty were cured, twenty-one remained still under treatment, and the average duration of after-treatment was 17·8 weeks. Ballance (185) describes his method of lining the post-operative cavity by means of a large Tirsch graft. The details form a masterpiece of surgical elaboration. Dalby and Cumberbatch discuss on the same occasion the indications for operating on the mastoid, and numerous metropolitan and provincial aurists gave utterance to their respective views. Percy Jakins (447) gives a valuable statistical account of eighty consecutive Stacke operations. Botey (342), in discussing the question of suturing the post-mastoid wound, expresses a preference for the method of leaving the middle part open and plugged for some days, closing it afterwards by means of sutures.

Otitic Pyæmia.—One of the most valuable contributions is the paper by Grunert and Zeroni (409-424), which includes numerous cases of thrombo-phlebitis, which must be read in detail. Out of fifteen cases in which the jugular vein was ligatured recovery took place in ten, and death in five, while out of the six in which the vein was not ligatured there were five deaths. As a rule, ligature is to be recommended, but Cheatle (224), Politzer (228), Grant (143), report cases in which this was omitted with good result, operative interference being confined to the sigmoid sinus; while Levy (110) records one in which recovery followed the simple mastoid operation. On the other hand, Biehl (101) had a case in which, although the sinus was slit up till solid thrombus was left, transference of coagulated material to the opposite sinus took place. Lodge (493) narrates two interesting cases of lateral sinus thrombosis, one being obviously otitic, the other apparently independent of suppurative aural disease, but with a history pointing to thrombosis of cerebral sinuses fifteen years previous. A similar case in which the tympanic membrane was entire is recorded by Horne (310), who considers that infection probably took place through the petro-squamosal sinus. Barr and Nicoll (223) described two cases successfully treated, one due to chronic and the other to acute disease of the ear. In the case of MacCallum (452) sinus phlebitis was complicated with meningitis. Knapp (449) gives detailed histories of two important cases in which the jugular vein was not tied, death taking place in one and recovery in the

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other; in both there was "choked disc." As a new symptom of obstructing thrombosis, Voss (233) mentions the absence of the murmur normally present when the stethoscope is pressed on the jugular vein.

MISCELLANEOUS.—Ballance, in Clifford Allbutt's "System of Medicine" (172), writes on *Certain Affections of the Ear: Observations on the Recognition of Aural Diseases in Medical Practice.* This paper will most amply repay careful perusal. A discussion on *Intranasal Treatment in Ear Disease*, opened by McBride, Baber, and Dundas Grant, will be found at p. 471. McKeown (498) speaks of the *Auditory Results of Removal of Post-nasal Adenoids.* A case of *Menstruation through the Right Ear* is recorded by Lermoyez (404). Lucae (452) relates a case of *Profuse Escape of Cerebro-spinal Fluid without Cerebral Symptoms.* Mouret (453) discusses *Noises in the Ear due to Spasmodic Contraction of the Tensor Tympani or of the Dilators of the Eustachian Tube.* Ricard (454) relates a case of *Aural Reflexes in a Hysterical Girl;* and Sarremone (286) cases of *Facial Neuralgia due to Eczema of the Ear.* Gaglio (540 and 569) describes his *Experiments on Anæsthesia of the Semicircular Canals.* Yearsley (425) relates an *Anomalous Case of Central Hæmorrhage, connected with Increased Pressure in the Ear, due to Violent Coughing.* Suttler (229) gives a *Contribution to the Surgery of the Temporal Bone.* Dioniso (56) gives a *Method of Augmenting the Efficacy of Catheterization and of Facilitating the Injection of Liquids into the Middle Ear.* Ballance (314) shows a case of *Epithelial Grafting of the Labyrinth after Removal of the Semicircular Canals.* Muller (228) discusses the *Effect of Artillery Practice on the Ears.* Körner (672) describes the *Surgical Treatment of Suppuration in the Labyrinth.* Siebenmann (560) and Botey (561) discuss the *Surgical Treatment of Aural Sclerosis.* Haike (672) gives a *Contribution to the Pathology and Pathological Anatomy of the Middle Ear and Labyrinth.* Wilson (674) describes a case of *Mastoid Disease and Acute Otitis Media following an Injury.*

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