time membrane is present on the pharynx or fauces, a drachm of a 1·1000 solution being used every three hours. In nasal cases, first a boracic douche and then the mercuric spray were used.

Intubation: The author can point to a record of 40 per cent. recoveries, and refers to the fact that, be it tracheotomy or intubation, the main cause of death is extension of membrane downwards; extensive ulceration of the larynx after intubation is quite exceptional. Intubation is not recommended for diphtheria arising in the course of measles or scarlet fever. Intubation is indicated at ages under two years. It is contra-indicated by inexperience and where the pharynx or naso-pharynx are involved.

Wm. Robertson.

Poppert (Giessen).—*Extirpation of the Larynx.* "Deutsche Med. Woch.," 1893, No. 35.

A PATIENT, sixty-eight years old, was operated upon in August, 1892, and up to now (July, 1893) has been without recurrence. *Michael.*

Stickler, J. W. (Orange, N.J.)—*The Trachea opened longitudinally from a point just below the Isthmus of the Thyroid to its Bifurcation, and a Foreign Body removed from the Left Bronchus.* "Med. Rec.," April 29, 1893.

AFTER low tracheotomy in a child with croup a pledget of iodoform gauze became detached from the probang to which it had been tied for the purpose of cleansing the trachea. It slipped down into a bronchus, and caused great distress and cyanosis. Dr. Stickler then exposed the trachea down to the sternum, securing all bleeding vessels on the way, and, with the forefinger as a director, slit the anterior wall down to the bifurcation. He passed the blades of angular forceps into the bronchi, and after several attempts removed the gauze from the left one. Complete relief followed, the tracheal and superficial incisions were brought together with sutures, the tube was re-inserted, and recovery took place.

Dundas Grant.

EAR.

Dennert (Berlin). — *The Significance of Quantity of Tone in Testing the Hearing.* "Archiv für Ohrenheilk.," Band 34, Heft 3.

BY this is meant, in addition to the intensity of the sound, the length of time it has to last in order to be perceived by the patient. It is measured in practice by passing a vibrating tuning-fork to and fro in front of the meatus at stated intervals, say once a second. The writer makes use of this principle, and professes to get more rapid and accurate statements from the patient than by merely allowing a fork held in position to die out in the usual way. *Dundas Grant.*

Jankau, Ludwig. — *On the Differential Diagnosis of Middle-Ear and Labyrinthine Diseases.* "Archiv für Ohrenheilk.," Band 34, Heft 3.

THE author holds that when two otoscopes connect the ears of the patient with those of the observer, while a tuning-fork in vibration is

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placed on the vertex of the patient's cranium, the sound reaches the observer more loudly from the side on which the patient has middle-ear disease, and less loudly from that on which he has labyrinthine disease.

According to his observations, he found "Rinne" negative in fifty-six and positive in forty-four per cent. of cases of middle-ear affection; negative in sixty and positive in forty per cent. of cases of labyrinthine affection. On the other hand, he found by his own method the sound better heard through the affected ear in one hundred per cent. of cases of middle-ear disease, and through the less affected ear in one hundred per cent. of cases of disease of the sound-perceiving apparatus, including sclerosis, with beginning nerve-disease. [The writer calculates his percentage in nerve-affections from three cases only, these being bilateral, and giving a "negative Rinne" formula. The deduction is made, therefore, from too few and too doubtful cases to be of value.—ED.] Very important experiments on the heads of recently-killed animals are described. [The method calls for further trial.—ED.] *Dundas Grant.*

Katz, L. (Berlin).—*On a Method of rendering Macroscopical Preparations of the Organ of Hearing Transparent.* "Archiv für Ohrenheilk.," Band 34, Heft 3.

HE uses temporal bones which have been preserved partly in alcohol, partly in one-half per cent. of chromic acid, or one-half per cent. of chrom-osmium acid, the latter having the advantage of staining the nerves black. The preparations thus hardened are decalcified in thirty per cent. of hydrochloric acid solution, with one per cent. of chloride of palladium (the process, with repeated changing of the solution, taking from eight to fourteen days), then washed, and placed in ninety per cent. of alcohol. After a few days they are cut into the desired segments, which may be as thick as three-quarters of a centimètre, placed in absolute alcohol for twenty-four hours, then cleared in xylol or oil of cloves, and, lastly, embedded in Canada balsam, where in twenty-four hours they become perfectly transparent, and can be kept for inspection in glass cells, covered with thin glass plates. The human labyrinth, that of the white mouse, the membrana tympani, with its bony framework, including malleus, incus and attic, the promontory, with fenestræ and stapes, &c., are among the objects of greatest interest when thus prepared.

Dundas Grant.

Green, Orme (New York).—*A Series of Cases of New Growths of the Ear.* "Arch. of Otol.," July, 1893.

Epithelioma of the Auricle—Amputation—Recovery. The patient was sixty years of age. The epithelioma began two years before as a wart on the anthelix. Amputation was considered advisable from the firm adhesion of the growth to the cartilage.

Epithelioma of the Meatus—Removal of the Cartilaginous Meatus—Recurrence—Death. A woman, aged eighty, had otorrhœa for two years, with a sense of fulness in the ear and pain in the parietal region. The meatus was filled with a firm growth. Relief followed its removal. Its structure consisted of fibrous tissue and round cells. It soon recurred. The auricle was turned forwards, and the cartilaginous meatus removed by operation. It was found to be epitheliomatous. Lastly, after further

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recurrence, for which the whole auricle and tragus were removed, glandular enlargement took place, and extension to the brain with hemiplegia, resulting in death.

Primary Sarcoma of the Meatus—Removal—Recovery. After three weeks of ear-ache, preceded by a discharge of uncertain duration, there was found a round fleshy tumour on the anterior wall of the meatus of a girl of seventeen. The surrounding tissue was infiltrated, and the growth bled very freely on probing. It was removed and its site was cauterized, but recurrence took place. Again it was freely curetted away after the local subcutaneous injection of cocaine, which checked the hæmorrhage, and did not recur. Its histological characters were those of giant-celled sarcoma of the teleangiectatic form.

Cavernous Angioma of the Auricle—Ligation of the External Carotid—Removal—Recovery. A very extreme case of pulsating angioma, diminished by the ligation. Amputation was advised on account of hæmorrhage, and no return took place.

Angioma of the Tympanum. No signs till two years before coming under observation, when symptoms of inflammation called for paracentesis, which was followed by tremendous hæmorrhage. Pressure by means of plugs in the meatus was practised. All of the membrane, except the anterior and upper quadrant, projected slightly and was of a reddish colour, deeper in some spots than in others. No landmarks were visible, but the light reflexes were seen to pulsate. This pulsation could be checked by compression of the carotid. Under compression by plugs for several hours a day, the pulsation diminished considerably for some time, giving every promise that a continuance of it might obliterate the circulation and produce a cure. The patient was forty years of age.

Angioma of Tragus. Following typhoid, a slight but gradually increasing discharge of blood from the ear was traced to an angiomatous spot on the inner surface of the tragus. It was removed by dissection, and the part healed readily. *Dundas Grant.*

Kupp, Adolph (New York).—*A Contribution to the Pathology of Garotting: A Case in which the External Auditory Canal was injured.* "Med. Rec.," June 17, 1893.

THE ear injured was the *right* one, in which "a small gouged-out ulcer, "about one quarter of an inch long, and half that in width, could be seen "located just a little diagonally on the antero-inferior wall of the external "auditory canal, and about two-fifths of an inch from the meatic (*sic*) "orifice." This was attributed to violence inflicted by a nail of the garotter's *left* hand when his left arm was, as usual, flung round the victim's neck *from behind.* *Dundas Grant.*

Cheatle, Arthur (London).—*Hypertrophic Condition of the Tympanic Mucous Membrane in an Infant.* "Arch. of Otol.," July, 1893.

IN a child aged eight months, who died of croup, the tympanum was examined, and the mucous membrane was found to be much thickened. Microscopically, the submucous tissue immediately below the lining epithelium was simply a mass of young granulation tissue, the lining

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epithelium remaining in many places intact, the deeper layer retaining its fibrous appearance, with round cells scattered throughout. The writer considers this case one of "early hypertrophic catarrh, commencing *de novo* in the ears, as the condition of the naso-pharynx was comparatively healthy; if all the new tissues had subsequently become organized and contracted, complete deafness and deaf-mutism must have resulted."

Dundas Grant.

Wagenhäuser (Tübingen).—*Condition of the Labyrinth in a Case of Leuchæmic Deafness.* "Archiv für Ohrenheilk.," Band 34, Heft 3.

THE ear had not been examined during life, but the history was that the patient began to suffer from abdominal trouble in April, 1889, and became perfectly deaf in both ears after a "cold water cure" in October, 1890. The other signs of leuchæmia, blood extravasations, &c., were present, and she died in May, 1891. On *post-mortem* examination, the outer and middle ears were normal, the outer wall of the labyrinth showing only slight congestion. On section of the decalcified cochlea, the knife struck a kernel of hard bone, which resisted all reasonable attempts at further decalcification. The scala vestibuli was in its upper part filled with an extravasation, showing red and white corpuscles, in its lower part with masses of granular material, which filled also the whole of the scala tympani, and in great part the cochlear duct. Corti's cells and Reissner's membrane were mostly well-preserved. There was considerable exudation in the middle coil of the ganglionic canal. In the utricle there was free exudation and new-formed connective tissue between it and the inner wall of the labyrinth, the periosteum of which was much thickened. The cisterna and the inferior ampulla were filled with exudation. In the semicircular canals the peri-lymphatic channels were filled with new connective tissue, and in some parts with new osseous formations. The membranous canals were only slightly invaded.

The primary occurrence is believed by Wagenhäuser to be a hæmorrhagic extravasation, leading secondarily to inflammatory changes.

Dundas Grant.

Vadakin.—*Rheumatism as a Cause of Partial Deafness with Tinnitus.* "New York Med. Journ.," July 15, 1893.

THE patient was apparently rheumatic, and was in other ways ill, but when the writer tells us that he found the external auditory meatus filled with a dark, thick, tar-like substance, and that after this was removed she heard better, we are inclined to believe that we have heard of, and even seen, cases of deafness from a like cause without the rheumatism—in fact, we do not look on it as a case of *sincere* rheumatism.

B. J. Baron.

Ostmann (Königsberg).—*The Importance of the Fatty Layer in the Lateral Wall of the Eustachian Tube. A Contribution to the Question of Autophony.* "Archiv für Ohrenheilk.," Band 34, Heft 3.

IN the lateral wall of the normal Eustachian tube there is a cushion of fat of about one and a half millimètres in thickness, which thins off towards

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the cartilaginous "hook." This diminishes under circumstances leading to general emaciation, and, other things being equal, the Eustachian tube is then abnormally patent. In a very few cases of autophony (the patient hearing his own voice with abnormal and distressing loudness) this cushion has been found to have atrophied, and the lumen of the tube to be opened to an unmistakably abnormal degree, as shown in the illustration of an actual section. The comparative rarity of autophony in the numerous cases of even extreme emaciation is accounted for by the relative concomitant weakness of the patient's voice, and by the inactivity of the weakened tube-opening muscles. The fatty cushion probably acts as a protection to the middle ear, and when it is wasted, as in the later stages of the more protracted fevers, micrococcus invasion from the pharynx is facilitated, and the occurrence of median otitis at such periods is explained. *Dundas Grant.*

Blomfield, James E.—*Otitis Media Purulenta; Pyæmia; Recovery.* "Lancet," Aug. 19, 1893.

THE patient, a pale girl, aged eleven, was first seen by the author in September of last year. She was suffering from purulent otitis media of long standing, on both sides. Treatment was undertaken, and the discharge rapidly dried up. In November she returned, complaining of pain in the left ear and left temporal region. A small quantity of foul-smelling discharge was found in the meatus. The right ear was dry. The following day she was very sick and had three rigors. The next day the pupils were found dilated, and reacting slowly to light. There was no tenderness or redness over the mastoid process. On November 10th the sickness had stopped, but she had two rigors. The pupils were still dilated, and did not react to light, and both optic discs were found blurred. From this date she grew steadily worse. There were three or four rigors in the twenty-four hours, and the tongue became dry and red. There was also constant pain in the left arm. Upon November 21st there was some œdema and redness behind the ear, and upon the 25th an incision was made over the mastoid process, exposing bare bone and a quantity of fœtid pus. After this it was possible to syringe lotion from the incision through the meatus. The same evening another rigor took place, and the following day another, with a temperature of 105.2°. It was now noticed that a swelling had occurred in the neck, commencing at the angle of the jaw and extending down to the clavicle. Further operative interference was suggested but declined. The course of the disease ran on much as before, until December 4th, when a distinct change for the better took place. During the preceding night there had been a copious discharge of foul-smelling pus from the ear. From this date she began to improve, and made a complete recovery.

W. Milligan.

Love, J. Kerr (Glasgow).—*The Pathology of Deaf-Mutism.* "Arch. of Otol., July, 1893.

EXAMINATION of one hundred and seventy-five children in the Institution for the Deaf and Dumb at Glasgow gave the following results :—

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		Totally deaf.	Heard loud noises.	Distinguished voices.	Too young for testing.	Dumb, not deaf.
Congenital...	72	7	32	10	22	1
Acquired ...	81	2	36	20	21	2
Doubtful ...	22	—	13	3	6	—
	175	9	81	33	49	3

The congenital cases thus showed a larger percentage of extreme deafness.

The CAUSES of congenital deaf-mutism are not dealt with, but those of the *acquired* were :—

Meningitis and brain fever	13	One half of the total number of cases of which the cause is specified.
Convulsions, fits, and teething	7	
Falls and injuries to head	11	
Measles	10	The greater destructiveness of measles than of scarlet fever is remarkable.
Scarlet fever	3	
Whooping cough	1	
Other fevers	3	
Ear affections proper (suppurative)	8	
Syphilis	2	
Cold	2	
Inflammation of lungs	1	
Fright	1	
Unknown or unspecified	19	
	81	

The CONDITION OF THE EARS in the various classes of cases is shown below :—

	Membranes Normal.	Chronic suppurative inflammation.	Chronic non-suppurative catarrh.	Unexamined.	Meatus too narrow for examination.
Congenital	*26*	*11*	*33*	—	*2*
Acquired	*28*	*18*	*34*	*1*	—
Meningitis and brain affections	10	2	7	1	—
Falls and head injuries	5	1	5	—	—
Measles	4	4	2	—	—
Scarlet fever	1	1	1	—	—
Ear affections proper	—	4	4	—	—
Doubtful	*7*	*3*	*11*	*1*	—

Dr. Love thinks that some of the meningitic and "brain" cases were probably cases of primary labyrinthitis rather than of recoveries from brain disease, and that, though most of the exanthematic cases were tympanic, with secondary involvement of the internal ear, the latter was in some of them directly infected without the mediation of the middle ear. There was no case of malformation of the auricle. Distinct pharyngeal disease was present in about seventy per cent. of all the cases.

Dundas Grant.

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Mygind, Holger (Copenhagen).—*Short Description of the Temporal Bones of Deaf-Mutes belonging to the Pathological Museum of the Copenhagen University.* "Arch. of Otol.," July, 1893.

THIS interesting collection contains one hundred and ten specimens from fifty-five deaf-mutes, and was presented by the authorities of the Deaf-Mute Institution to the University in 1844. Dr. Mygind has re-examined them and revised the descriptions, which are given in his paper. Thirty specimens were from fifteen cases of acquired deaf-mutism, sixty-six from thirty-three congenital cases, and fourteen from seven uncertain ones. In more than one-half of the cases the osseous parts showed no abnormality, and the presumption is that too little attention was paid to the soft parts (the examinations were made between 1824 and 1837), and that the lesions were situated in the latter, especially as there is no report of the presence of such abnormalities as atrophy or degeneration of the auditory nerve, absence or other abnormality of the membranous labyrinth or anchylosis of the stapes; all of frequent occurrence in deaf-mutes. This is most notable in the congenital cases, in which it must be allowed the changes found are known to be less in extent and severity than in the acquired. Only exceptionally were the congenital lesions due to arrest of development, being traceable to fœtal inflammation causing partial destruction of the internal osseous structure of the labyrinth and often formation of osseous tissue. In the acquired cases there was frequently deposition of osseous tissue in the natural cavities. [This paper is an interesting addition to Dr. Mygind's valuable studies of deaf-mutism, which have become classical.—ED.] *Dundas Grant.*

Caldwell.—*Transiliumination of the Mastoid Cells as a Means of Diagnosis of Mastoiditis Interna Suppurativa.* "New York Med. Journ.," July 15, 1893.

THE apparatus to be used consists of a small electric lamp of two or three candle power, protected by thin rubber tubing fenestrated at one side and made to fit snugly at the meatus by a washer of larger tubing.

This lamp is inserted well into the ear with the fenestra directed backwards. If the mastoid be healthy, a ruddy glow extends from the apex to the lateral sinus. If pus be present in any part, that part will be dull. Various authors are quoted as having described cases in which no *external* signs were present, when considerable mischief existed in the mastoid cells. If the meatus be small or swollen, the lamp can be placed against the outside of the mastoid, and the light observed shining into the auditory canal. *B. J. Baron.*

Green, Orme (New York).—*Osteoma of the Mastoid.* "Arch. of Otol.," July, 1893.

TWO cases of young male adults, who had been somewhat deaf in one ear for several years without ever having ear-ache or discharge. In each, after some signs of inflammation for about ten days, a growth was found blocking the meatus, impervious to a needle and susceptible of a very slight amount of movement. The symptoms getting worse, the auricle was displaced forwards, and at once a bony growth could be easily enucleated from the front of the mastoid, where it lay bathed in pus.

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imbedded in a cavity with carious walls. The tumours were, in their centre at least, composed of well-developed bone. Dr. Orme Green considers them "true neoplasms of slow, non-inflammatory growths, and possibly of fœtal origin," and, from their structure, the name "osteoma" seems most appropriate. *Dundas Grant.*

Max Thorner.—*Caries of the Entire Pyramid of the Temporal Bone.* "The Cincinnati Lancet Clinic," June 10, 1893.

THE case is that of a child who comes of phthisical stock. She had a discharge from the ear one month after birth, and when two years old the auditory canal was found to be full of polypoid granulations. On removing these with a snare an opening in the posterior and upper wall of the auditory canal leading into a cavity filled with necrotic bone was found. The probe did not enter the cavity from the cavum tympani. The upper plate of the mastoid process was removed along with the whole pyramid. No tubercle bacilli were found. A year afterwards complete healing had taken place. It is worthy of note that no reaction followed the thorough scraping, etc., of the parts, and that cure followed when the prognosis was so unfavourable. *B. J. Baron.*

Schroeder, S. P. (Hoyleton, Ill., U.S.A.)—*Mastoid Abscess.* "Med. News," Feb. 25, 1893.

THE signs of extension of mastoid disease in an outward, inward, upward, downward, backward, or forward direction are enumerated. The writer strongly opposes the use of hot injections into the meatus, or of poultices over the ear, or of plugging of the ear with boric acid. He objects to hydrogen peroxide as thickening the pus, preventing its free exit. On the other hand, existing fistulous openings should be enlarged if too small for free drainage, and in their absence the antrum should be opened. He thinks chiselling will supersede drilling operations. *Dundas Grant.*

Sheppard, J. E. (Brooklyn).—*Three Cases of Unintentional Opening of the Lateral Sinus.* "Arch. of Otol.," July, 1893.

IN one case, while the cavity exposed by the removal of the cortex of the mastoid was being curetted, there was a sudden large flow of venous blood, which soon ceased with pressure, and allowed the curetting to be carefully finished. In the second, plugging with iodoform gauze was successfully practised. The third was one of post-influenzal mastoiditis, in which pus was found immediately under the cortex, and while a communication with the antrum was being made the hæmorrhage took place and required plugging. In none was there any subsequent trouble, excellent recoveries taking place. Dr. Sheppard draws attention to his third case as answering to Politzer's description of post-influenzal subcortical mastoid abscess, and thinks it would have been well to have stopped short after opening the superficial cells. In all probability the sinus was penetrated by a splinter of bone. *Dundas Grant.*

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