ABSTRACTS

EAR

The Artificial Middle Ear. MAX EDWARD POHLMAN (Los Angeles). *Ann. Otol., Rhin. and Laryng.*, 1947, lvi, 647.

Deafness resulting from chronic suppurative otitis media, with defects of the membrane, is due to the absent or defective middle-ear apparatus alone. The majority of these patients have an intact functioning cochlea.

The author has attempted to replace the damaged structures by an artificial ear, imitating the structure of that of a bird where the ossicular chain is represented by a single sticklike ossicle—the columella.

Suitable cases were chosen by means of an instrument which the author calls the acoustic probe, consisting of a celluloid diaphragm with a fine bamboo probe fused to it. By touching the inner tympanic wall with the probe it was found that in certain situations, notably the regions of the foramen ovale and foramen rotundum, a marked increase in hearing was obtained.

The " artificial middle ear " consists of a small plastic cylinder moulded to the meatus and covered over at the inner end by a tense diaphragm of fish skin. A fine flexible nylon rod tipped with stent is fed through a reinforced hole in the diaphragm and brought in contact with the critical spot on the inner tympanic wall.

The author claims the prothesis has little effect on the hearing of low frequencies, but gives an improvement of up to 30 to 35 decibels at the 1024/2048 c.p.s. levels. While admitting that " The proper fitting of the diaphragm rod prothesis is not as simple as it seems " the author later states that the patient is taught to introduce, remove and repair the insert. No detail of how the patient is taught is given.

The audiograms of eleven cases so treated are recorded.

E. J. GILROY GLASS.

Tolerance for Pure Tones and Speech in Normal and Defective Hearing. S. R. SILVERMAN (St. Louis). *Ann. Otol., Rhin. and Laryng.*, 1947, lvi, 658.

In the course of a series of experiments to determine the tolerance level of speech and pure tone, it was found that there were three distinct thresholds of tolerance in both the normal subject and in the hard of hearing: the " discomfort " threshold, the " tickle " threshold, and the " pain " threshold. The first is rather difficult to determine, but the pure tone thresholds for " pain " and " tickle " were found to be in the level of 140 and 133 decibels respectively for all levels between 250 and 5600 c.p.s. in subjects with normal hearing. In a hard of hearing group the levels were rather lower—130 and 130 decibels.

Subsequent experiments on this same subject revealed that the tolerance levels rose systematically and significantly with successive test sessions at daily or weekly intervals to a limiting value after several sessions. This increased

tolerance was almost entirely retained for a week, after which it gradually decreased but more than half of the increase was retained for as long as twenty-six weeks in normal subjects, and thirty-two weeks in hard of hearing. Increased tolerance so produced in one ear does not increase the corresponding tolerance of the opposite ear, and repeated exposure sufficient to produce maximum elevation of tolerance threshold causes at the most a small transient rise in the threshold acuity.

The data indicate that 130 decibels would appear to be the greatest useful maximum output for an electrical hearing aid. There seems to be some ground, however, for assuming that the threshold of discomfort can be raised sufficiently to make comfortable hearing possible at a level initially below the threshold of discomfort, and in selection of hearing aids, allowance should be made for this fact.

E. J. Gilroy Glass.

NOSE

Osteomyelitis of the Basisphenoid and Basiocciput with Meningitis and Cranial Nerve Palsies as a complication of Nasopharyngeal packing for control of Epistaxis. Report of a case with Recovery. Arthur A. Spar, M.D., Henry L. Williams, M.D. (Rochester, Minn.). *Arch. Otolaryng.*, 1947, xlvi, 473-477.

The purpose in reporting this case is to call attention to the serious complications which may follow the use of nasopharyngeal packing for control of epistaxis. In this instance an abscess of the nasopharyngeal vault occurred and led to osteomyelitis of the basisphenoid and basiocciput, meningitis and cranial nerve palsies. The reporters believe this is the first such case reported in which recovery occurred.

R. B. Lumsden.

LARYNX

Pathology of the Larynx. A Photographic Analysis. Paul H. Holinger, Albert H. Andrews, George C. Anison and Kenneth C. Johnston (Chicago). *Ann. Otol., Rhin. and Laryng.*, September, 1947, lvi, 583.

The purpose of this paper is to present a photographic record of some of the more common types of laryngeal pathology, as seen either by the laryngeal mirror or by a direct laryngoscopy.

A detailed description of the camera, the laryngoscope and the technique used is given. The paper is illustrated by a unique series of photographs of the larynx obtained by this method, and in some cases accompanying micro-photographs.

Contact Ulcer of the Larynx: II. The Role of Vocal Re-education. Georgiana Peacher, Ph.D. (Philadelphia), Paul Holinger, M.D. (Chicago). *Arch. Otolaryng.*, 1947, xlvi, 617-623. 48 yr Bk p 430.

The following conclusions are drawn:

1. Vocal abuse seemed to be the most consistent ætiologic factor of contact ulcer of the larynx.

2. Vocal abuse seemed to be the chief perpetuating factor of contact ulcer.

3. Contact ulcer was treated by vocal re-education with apparently better results than can be obtained by surgical excision of the ulcer and silence.

R. B. Lumsden.

Abstracts

TRACHEA AND BRONCHI

Adenoma of the Bronchus. GEORGE S. MCREYNOLDS (Galveston, Texas) and ROBERT E. PARRISH (San Antonio, Texas), *Ann. Otol., Rhin and Laryng.*, September, 1947, lvi, 766.

A case of benign adenoma occurring in an eight-year-old female is reported. From the history it seems reasonable to suppose that this tumour had been present since the age of three, causing symptoms of partial bronchial obstruction initially and erroneously diagnosed as allergic.

E. J. GILROY GLASS.

Primary Carcinoma of the Trachea Removed by Bronchoscopic Procedure. ARTHUR Q. PENTA (Schenectady, New York). *Ann. Otol., Rhin. and Laryng.*, September, 1947, lvi, 790.

A case of primary carcinoma of the trachea is presented in which a mistaken diagnosis of bronchial asthma was made. The pedunculated tumour mass located in the lower one third of the trachea caused an expiratory obstruction to the egress of air. This expiratory check valve resulted in bilateral emphysema and the symptoms and physical findings which followed were not unlike those commonly found in bronchial asthma. The knowledge gained from this case clearly proves the often repeated statement of Chevalier Jackson that: " All that wheezes is not asthma."

The tumour was removed bronchoscopically and the base destroyed by fulguration, after which a course of deep X-ray therapy was given. The tumour was removed in June, 1942, and at the time of writing (presumably the summer of 1947) she was in perfect health.

E. J. GILROY GLASS.

ŒSOPHAGUS

Congenital Atresia of the Esophagus with Tracheo-esophageal Fistula: A Report of Six Cases. JOSEPH A. PERRONE, M.D., WILLIAM H. FLEMING, M.D. THEODORE R. WHITAKER, M.D. (Pittsburgh). *Arch. Otolaryng.*, 1947, xlvi, 5, 608-616.

Congenital atresia of the œsophagus with tracheo-œsophageal fistula is no longer a hopeless anomaly but rather one which is rapidly becoming more and more amenable to surgical correction, since methods have been devised to prevent early death of the patient.

A remarkably constant symptom-complex is present in these cases, which should make the obstetrician or the pediatrician suspect this defect and verify the diagnosis at an early age.

Delay in attempting surgical correction is generally fatal because of complications arising when foreign material is aspirated into the lungs and because of rapid starvation.

Six cases on record at Mercy Hospital have been reviewed all of which terminated fatally.

R. B. LUMSDEN.