

# ABSTRACTS

## EAR

*Action of Dimenhydrinate (Dramamine) and other Drugs on Vestibular Function.*  
LEONARD B. GUTNER, WILBUR J. GOULD, and ROBERT C. BATTERMAN,  
New York. *Archives of Otolaryngology*, 1951, liii, 308.

A technique for studying vestibular function, utilizing the cold microcaloric and galvanic stimulation methods, was employed to evaluate the various drugs advocated for the treatment and prevention of motion sickness. Dimenhydrinate produced a marked and reversible depression of vestibular response which was attained by none of the other drugs investigated. The pharmacological actions of dimenhydrinate on vestibular function were dependent on the whole chemical entity, since neither of its components, diphenhydramine or 8-chlorotheophylline, when administered separately or in combination, produced any significant diminution in labyrinthine response.

R. B. LUMSDEN.

*Lymph Vessels in the Wall of the Endolymphatic Sac.* JÖRGEN ARNVIG, Copenhagen. *Archives of Otolaryngology*, 1951, liii, 290.

Lymph vessels have been demonstrated in the connective tissue surrounding the endolymphatic sac. They are found in that part of the structure where the anatomic conditions for absorption are the most favourable. This observation supports the view that the endolymph is absorbed by the endolymphatic sac. Histological signs of precipitated protein and numerous white blood cells have been found in the lymph vessels. Four microphotographs are presented.

R. B. LUMSDEN.

*Neurotoxicity of Dihydrostreptomycin: Effects of Longer Term Therapy.*  
J. B. O'CONNOR, F. J. CHRISTIE, and S. H. KIRBY Jr., Shelton, Conn.  
*American Review of Tuberculosis*, 1951, lxiii, 312.

This paper compares the auditory and vestibular disturbances resulting from the use of streptomycin or dihydrostreptomycin in 22 patients treated for three months, and in 33 patients treated for six months or longer. For testing labyrinthine function a modified Kobrak caloric test was performed before and upon completion of treatment. Air conduction audiograms were made before, during, and upon completion of treatment. A significant auditory loss was deemed to have occurred when post-treatment audiograms demonstrated a loss of 20 decibels or greater in at least two different frequencies as compared to the pre-treatment audiogram. All the patients received para-aminosalicylic acid in addition to the antibiotic concerned.

Only one of 11 patients who received dihydrostreptomycin for three months

## Abstracts

had any diminution in the caloric response, whereas 7 of 11 patients who had streptomycin for a similar period had a diminished or absent caloric response at the end of treatment. Among 16 patients treated for six months or longer with dihydrostreptomycin, 6 had altered caloric responses at the end of treatment, whereas 10 of 12 patients given streptomycin for a similar period had changed caloric reactions.

Of the 11 patients who received dihydrostreptomycin for only three months, none had evidence of auditory impairment at the end of treatment but three months after the completion of the therapy 3 showed significant auditory impairment. Sixteen of the 21 patients receiving dihydrostreptomycin for six months had significant auditory impairment. In contrast no patient in the two groups who received streptomycin had impairment of auditory acuity. To date, the impairment of hearing has been permanent in all of the affected patients. Two of the patients are "stone" deaf. As compensation for loss of labyrinthine function has usually been satisfactory, streptomycin is now preferred to dihydrostreptomycin in patients for whom a prolonged course of combined chemo- and bio-therapy is contemplated.

E. BOYES KORKIS.

*A Study of Long Term Hearing Results in Fenestration Surgery.* LOUIS E. ADIN, Dallas, Texas, and GEORGE E. SHAMBAUGH, Chicago. *Archives of Otolaryngology*, 1951, liii, 243.

In a series of 390 fenestration operations with five to ten years' follow-up observation, 70 per cent. of the patients received a significant hearing improvement and have maintained it. The remaining 30 per cent. are divided roughly into 20 per cent. who lost a part of their initial gain but who may still have a usable level of hearing, 5 per cent. who had no hearing improvement at all, and 5 per cent. who were considered to have probable bony closures. Attention is directed to the paucity of probable closures occurring during the last two years of the five-year period (0.6 per cent.) when most of the features of the "improved Northwestern University technique" were being employed. Symptoms of inner ear disturbances, suggesting labyrinthine hydrops, were noted in more than 10 per cent. of the patients post-operatively. Pregnancy following the fenestration operation does not seem to result in further cochlear nerve damage. Progressive post-operative cochlear nerve degeneration was noted considerably more frequently in ears not operated on than in ears operated on. The fenestration operation thus affords at least partial protection to an ear against future cochlear nerve degeneration. The mechanism of this protection is not known. (Authors' Summary.)

## ŒSOPHAGUS

*Carcinoma of Œsophagus and Cardia.* JOHN H. GIBBON, FRANK F. ALLBRITTEN, and JOHN Y. TEMPLETON, Philadelphia. *Journ. Amer. Med. Assoc.*, 1951, cxlv, 1035.

The authors report 89 cases of patients with cancer of the œsophagus and cardia of the stomach. The disease predominantly affects males between the

## Miscellaneous

ages of 50 and 70 years. The commonest symptom is difficulty in swallowing and pain beneath the sternum. The diagnosis is readily made by roentgenograph and œsophagoscopy. Sixteen of the patients were inoperable, 21 were explored but not resected, and of the remainder 17 died in hospital and 35 left the hospital alive. The highest mortality occurred among the patients in whom the anastomosis was made in the thorax above the aortic arch. Adequate exposure to the upper portion of the thorax and to the stomach can be obtained through the bed of the VIth rib alone. The three-year survival rate of all patients in whom the œsophagus is resected is in the neighbourhood of 30 per cent. and the three-year survival rate of patients who survive the operation and leave the hospital is in the neighbourhood of 40 per cent. The article has 8 figures, 5 tables and a bibliography.

ANGUS A. CAMPBELL.

### MISCELLANEOUS

*Herpangina.* R. J. HUEBNER, ROGER M. COLE, EDWARD A. BEEMAN, JOSEPH A. BELL, and JAMES H. PEERS, Bethesda, Maryland. *Journ. Amer. Med. Assoc.*, 1951, cxlv, 628.

The authors describe ætiological studies on this specific, infectious, summer childhood disease, first described and named by Zahorsky in 1920. The disease is characterized by sudden fever, short duration and sore throat. Small, painless, punched-out ulcers with greyish bases and red areolas form on the pillars of the fauces and base of the tongue. Studies in 37 cases resulted in the isolation of viruses falling within the A group of Coxsackie virus. These viruses were classified in at least four immunological groups and designated as H.1, H.2, H.3, and H.4. The viruses in these groups were found in nearly all the patients with frank herpangina and in many exposed persons. No herpes virus or other known pathogens were demonstrated and the writers feel that H. viruses are the cause of this disease. The article has 4 tables and a bibliography.

ANGUS A. CAMPBELL.

*Complicated Fractures of the Maxilla.* DAVID L. MURPHY, EDWARD S. MURPHY, and WILLIAM A. McNICHOLS, Dixon, Ill. *Journ. Amer. Med. Assoc.*, 1951, cxlv, 614.

The annual accident rate is and will continue to be high, but with plasma, blood banks and penicillin many more seriously injured persons may be expected to survive. Injuries to the head and neck can be most capably handled by the oto-laryngologist because of his knowledge of the anatomy of this region, or he may team up with the oral surgeon and general surgeon. Diagnosis can be made by inspection, palpation and roentgenograms; the surgeon must examine and interpret the films himself. Early, careful and adequate treatment gives the best surgical and cosmetic result. Patients with compound fractures of the maxilla should be considered to have skull fractures until it is proved otherwise. These maxillary fractures are best treated through a radical sinusotomy where the orbital floor and the malar bone may be inspected,

## Abstracts

repaired and fixed in position. Dental compound is better than dental wiring. Loose fragments are sewed together. Coat hangers buried in a plaster head-band are quite satisfactory. Condylar fragments should be treated by external pinning. Owing to the danger of ankylosis an open operation should only be done when the fragments are small. No attention is paid to the internal maxillary artery, but great respect is paid to the facial nerve. The article has 7 case reports, is freely illustrated and has a bibliography.

ANGUS A. CAMPBELL.