

## ABSTRACTS

### EAR

*Industrial Aspects of Ear, Nose and Throat Practice.*

HAROLD A. FLETCHER, M.D. (San Francisco). (*Jour. A.M.A.*,  
August 17th, 1940, cxv, 7.)

The surgeon doing industrial work should never take sides and allow prejudice to creep in. He should always keep in mind the injured patient, the insurance carrier and lastly, the industrial accident commission which determines the responsibility and fixes the compensation. He should ask himself certain definite and fundamental questions such as: Is there a pathological condition present? Is the cause industrial? Is there a disability? Are there pre-existing non-industrial factors? Can the patient be helped? Is the lesion stationary? And what is the permanent disability?

Complete examinations should be made as soon as possible after the injury and nothing should be taken for granted. X-ray and laboratory tests often require to be rechecked.

Under normal conditions even a fairly marked fracture of the wall of the maxillary, frontal or ethmoid does not cause sinus infection, but, pre-existing chronic sinus infections may be lighted up by injury over the sinus.

The question of the loss of hearing is one of the most difficult problems to analyse and if dizziness and vertigo are combined with the deafness the problems are overlapping. Partial inner ear deafness and partial disturbance of the labyrinthine function can, and not uncommonly do occur in various head injuries. Vestibular examinations are of the greatest importance. Repeated careful observations should be made on spontaneous nystagmus, past pointing and postural imbalance. Spontaneous reactions may be of even greater importance than induced reactions. The various tests of turning head movement and caloric stimulation must be carefully made. The writer frequently uses binaural mass irrigations simultaneously in the two ears which often brings out an imbalance in the different canals which would otherwise be overlooked. Induced reactions will decide the difference between functional and organic disturbance. If the patient has normal labyrinthine reactions the writer feels he has no organic cause for his vertigo. If he has a marked hypo-irritable labyrinth on one side and a normal or hyper active labyrinth on the other, there is a peripheral partial

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destruction of one labyrinth, and these patients are much more incapacitated for a longer time than if there was complete destruction on one side. If the patient presents signs such as spontaneous nystagmus, perverted induced reactions of nystagmus, marked reduction in the normal general reactions of nausea, pallor, sweating and the like, the lesion is central in origin.

In complete destruction of one labyrinth only, the symptoms clear up in a few weeks. Dizzy attacks are far more disabling than loss of hearing. The presence of a markedly shortened bone conduction is suggestive of skull fracture in any location. Hearing defects in head injuries are more often unilateral than bilateral. Bilateral loss of hearing does occur but rarely to the same degree in the two ears. Malingering is frequently encountered and the easiest to detect is one claiming complete unilateral deafness. Stenger's test is the most conclusive for malingering.

ANGUS A. CAMPBELL.

### MISCELLANEOUS

*The Use of Histamine in the Treatment of Specific Types of Headaches.*

BAYARD T. HORTON, M.D. (Rochester, Minn.) (*Jour. A.M.A.*, February 1st, 1941, cxvi, 5.)

The writer has studied seventy-two cases to illustrate a new syndrome which he calls "histaminic cephalgia". This type of headache need not be confused with the classic migraine because, in this type there are frequent short attacks of pain usually measured in terms of minutes or hours which usually come on suddenly and disappear in a like manner. The attacks come on later in life, are not associated with nausea, vomiting or visual disturbances, often occurring at night and having no hereditary background. They must not be confused with trigeminal neuralgia because there are no trigger zones and the pain is not confined to the anatomical distribution of any cranial nerve. Attacks can be induced at will with given amounts of histamine and can be eradicated by desensitization with histamine.

Histamine diphosphate is the drug employed for desensitization and given subcutaneously. Small doses of .05 mgs. are given twice daily and increased slowly to .275 mgs. by the twentieth dose. A maintenance dose of .1 mgs. of histamine is usually necessary twice weekly to prevent recurrence.

Five typical cases are reported in detail in whom striking results were obtained.

ANGUS A. CAMPBELL.

*Types of Buried Grafts used to Repair Deep Depressions in the Skull.*

LYNDON A. PEER, M.D. (Newark, N.J.) (*Jour. A.M.A.*, August 3rd, 1940, cxv, 5.)

This paper embodies the clinical experience obtained from plastic operations on fourteen patients. Nine cases had large depressions

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of the frontal region, due to removal of the bony brow, one or both frontal sinuses, or an adjacent area of frontal bone.

In none of the infected cases were depressions repaired until the wound had remained completely healed for at least two years. A covering of skin is provided by first carefully dissecting the thin layer of epidermis from the underlying scar tissue covering the brain. The retracted scalp skin at the margin of the wound is then widely undermined and sutured to cover the defect completely. In a few cases it was necessary to form flaps of the scalp skin in order to obtain proper relaxation.

Dermal grafts including the underlying fat and fascia lata taken from the thigh were used to repair the defects in the skull. When reconstructing the bony brow, pickled cadaver cartilage was used, but the author prefers living autogenous cartilage taken from the patient's chest.

The article is freely illustrated and has a bibliography.

ANGUS A. CAMPBELL.

*Composition of Diphtheria Antitoxic Serum.* Messrs. KEKWICK, KNIGHT, MACFARLANE and RECORD. (*Lancet*, 1941, i, 594.)

The authors draw attention to certain new facts concerning the composition of diphtheria antitoxic sera bearing upon its efficacy. Of the three separable globulin contents of diphtheria antitoxic horse sera, two, the  $\gamma$  and  $\beta$  fractions, have antitoxic activity. Both are specific antibodies to the classical diphtheria antitoxin prepared by the use of a Parker Williams 8 strain, in that they neutralize this toxin in the usual animal test for potency (L+) and flocculate with the toxin in a balanced mixture (Lf).

The striking differences between the two antitoxins are shown by the flocculation times, the in vivo-in vitro (L+/Lf) ratios, and the empirical composition of the floccules.

The relative and absolute amounts of the  $\beta$  and  $\gamma$  antitoxins altered during the course of immunization in horses. It is suggested that there may be a correlation between the avidity of the serum and the relative proportion of antitoxin present.

The  $\gamma$  globulin (containing the  $\gamma$  antitoxin) is precipitated at lower salt concentrations than the  $\beta$  globulin and thus tends to be precipitated in the "euglobulin" fraction in the salting-out method of serum concentration. Further, the  $\gamma$  antitoxin seems largely to be lost in the pepsin process of serum concentration, the product there being probably a modified  $\beta$  globulin.

It is possible that the relative and absolute amounts of the two antibodies in any given sample of serum may have a bearing on its therapeutic efficiency.

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*"Substance B" of Diphtheria Toxin and Diffusing Factor.*

DOUGLAS McCLEAN. (*Lancet*, 1941, i, 595.)

The author points out that no evidence is obtainable of any association between diffusing factor or hyaluronidase and substance B postulated by O'Meara to be present in toxic diphtheria filtrates. Only a small proportion of strains of *C. diphtheriae* of any type produce detectable amounts of diffusing factor, and saline extracts of those strains producing this enzyme in broth culture show little or no diffusing activity. The capacity to produce this enzyme is not confined to gravis strains but can be detected in broth cultures of a few intermediate and mitis strains.

The amount of this enzyme produced by any strain is very small compared with that found in cultures of organisms of the gangrene group, streptococci, pneumococci or staphylococci. Consequently, and with the small proportion of strains from which the enzyme can be obtained at all, it is doubtful whether an enzyme of this nature makes any material contribution to the symptom-complex of diphtheria.

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*Diphtheria Bacilli in Floor Dust.* W. E. CROSBIE and H. D. WRIGHT.

(*Lancet*, 1941, ii, 656.)

The authors point out that diphtheria bacilli can be isolated in large numbers and in virulent condition from floor dust in the neighbourhood of diphtheria patients. They may persist fully virulent in such dust for at least fourteen weeks in vitro and five weeks on the floor. Disturbance of such dust permits the diphtheria bacilli to rise into the air. Treatment of the floors with spindle oil reduces, and may entirely eliminate, air contamination from this source. Current disinfection procedures commonly fail to destroy the diphtheria bacilli in floor dust; for this purpose relatively strong antiseptic solutions appear to be necessary. Dust probably plays an important part in the aerial dissemination of respiratory infections.

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