

parts and worked in the way which had been described in the opening paper. By removing the anterior cells one found oneself in a large cavity (the frontal sinus), and free drainage was provided from the lower end of that cavity. If there was much bleeding, and one put in strips of gauze moistened with cocaine and adrenalin, it was surprising how much one could see.

In answer to Mr. Hope, he did not bother about the depth of the sinus in the intranasal operation. On the contrary, with the external operation one would have a deep sinus and scar, and possibly a dead space, which could not be obliterated. In that kind of case the intranasal operation was a great advantage. The external operation implied disfigurement, and some six weeks' treatment, with dressing every day. These considerations had done much to determine his preference for the interior operation. Two days ago in London he operated upon a man by the intranasal method; he had double frontal sinus suppuration. That day he went to wash him out, and he asked whether he could go out within the week (three days after the operation), as he had now no headaches. Such an event was unthinkable with the old operation.

With regard to Mr. Low's combined operation he had had no experience of it.

Concerning the danger of the intranasal operation suggested by Dr. Cathcart, unfortunate cases were sure to be heard of, but the intending operator by this method should be well up in the anatomy of the part, and practise the operation on a few skulls first.

With reference to the necrosis of the frontal sinus walls, for two years he had not had such a case, and in such an event it would be recognisable by external symptoms. If such were present he would do the external operation, or for ocular or meningeal symptoms, or the escape of pus into the orbit. He thought that the majority of cases of chronic frontal sinus suppuration with polypi in the nose would be satisfactorily dealt with in the future by the intranasal method, while a minority would have to be treated by the external operation—*i. e.*, a reversal of the old procedure.

Abstracts.

NOSE.

Simpson, W. Likely.—A Method of Closing Perforations of the Septum of Nose. "Journal of the American Medical Association," July 4, 1914.

For the closure of a perforation of the septum Simpson advises a submucous operation with a transplantation of cartilage or bone, or both, to the site of the perforation, and a sewing of the overlying flaps. The transplant gives a support in place of attachment for the flaps of mucous membrane, thus avoiding contraction, which would otherwise occur.

His technique is as follows: Elevate the mucous membrane, as in an ordinary submucous operation, from the cartilage and bone, both anteriorly and posteriorly to the perforation, the edges of which must be pared. The bone and cartilage are then resected and placed in normal salt solution till required. The larger the transplant the better, and if a suitable piece cannot be obtained from the patient, one may transplant from another deflected septum, on which a submucous operation is being

done. The flaps of mucous membrane are thus fashioned according to Hazletine's method, and the largest possible piece of cartilage or bone placed between them, and the sutures inserted. Both nostrils are then packed very carefully, and not distended for two or three days. Following this an ointment is used to prevent drying of the flaps. The all important point in the operation is to get as large a piece of cartilage or bone as possible, so that the whole perforated area will be filled in by the transplant.

Birkett (Rogers).

Thomson, Sir StClair.—Some of the Symptoms and Complications of Sinusitis. "The Practitioner," June, 1914.

A useful summary, especially for the general practitioner. Symptoms and complications are discussed under four heads: those in neighbouring regions; those in more distant organs; those of interference with general health; and intra-cranial complications.

Macleod Yearsley.

PHARYNX.

Woody, Samuel S. (Philadelphia).—The Use of Antitoxin in Diphtheria. "Journal of the American Medical Association," September 4, 1914.

Diphtheria antitoxin has been abundantly proved to be a specific for diphtheria, and a cure when used in correct doses at the proper time. But there has been devised no way, except empirically, of estimating the number of units needed by a particular person suffering from diphtheria. From personal observation of over 10,000 cases of diphtheria to the Philadelphia Hospital for Contagious Diseases, Dr. Woody is entirely satisfied that antitoxin, as generally used, is given in doses far too small. The object in giving antitoxin is the rapid and complete neutralisation of the diphtheria toxin by a single dose. Most cases treated are given numerous small doses, and in a good percentage of cases the patients finally recover. The endeavour should be to give at once an initial dose of such an amount of antitoxin that neutralisation will be accomplished without delay, and that possibly there will be an excess of antitoxin still in the system to combat toxins later elaborated. Too small a dose invites disaster, whereas too large a dose can do no harm and may be a safeguard for the future.

The following table indicates the large doses that the author is accustomed to give. No case of diphtheria, however mild, should receive less than 10,000 units.

Both tonsils, well covered with exudate of one or two days' duration, from 30,000 to 60,000 units.

Both tonsils, well covered with exudate, with palate, uvula and nose involved, of three or more days' duration, from 150,000 to 300,000 units.

Nasal cases, 20,000 units, if with marked symptoms of toxæmia, from 50,000 to 150,000 units.

Laryngeal cases, from 30,000 to 45,000 units.

The objections to such large doses are: (1) Danger to the patient, which is disproved by actual experience—untoward results have followed the use of moderate or even small doses just as often as after the use of large ones. Indeed, it has been shown that such a result is not due to the antitoxin bodies themselves, but to the serum alone. (2) Anaphylaxis. Its occurrence is of such great rarity that it cannot be allowed to influence us in the least. Too many lives are lost by too little antitoxin being given to allow a theoretical possibility to keep us from making a

cure. (3) Local sloughing is very rare, and will be avoided entirely by further concentration. (4) Serum sickness and serum rashes are not a bar to the use of a large dose.

With the use of large doses the mortality has been reduced to 6·02 per cent. The advantages of large doses of antitoxin are: (1) Prompter local cure; (2) quicker improvement in the patient's general condition; (3) permanence of curative action; (4) avoidance of complications; (5) reduction of mortality; (6) avoidance of pain and discomfort of repeated small doses; (7) harmlessness of large doses. *Birkett (Rogers).*

E.A.R.

Horne, Jobson.—**Gun Deafness and its Prevention.** "The Lancet," August 15, 1914, p. 462.

With the outbreak of war must come certain cases of rupture of the membrana tympani and labyrinthine concussion from the effect of explosions, especially in naval warfare. The author has endeavoured to meet the possible want of knowledge of these conditions by this article. He gives a *resumé* of present knowledge and advises as to prevention.

Macleod Yearsley.

Boot, G. W.—**Caisson Workers' Deafness.** "Annals of Otology etc.," vol. xxii, p. 1121.

Gives the results of an examination of thirteen workers in compressed air. From a consideration of these cases he considers that the results of caisson working on the ear are of three kinds: (1) Tubal tympanic catarrh, principally in those who are predisposed thereto by nasal conditions. (2) Symptoms referable to the vestibular system, either in its central mechanism, in course of the vestibular nerve, or in the terminal end-organs. Complete recovery is the rule. The third and most characteristic result of working under compressed air is a loss of a considerable portion of the upper range of hearing, with marked loss of bone conduction. In a few cases the whole organ of Corti was apparently destroyed suddenly after coming out of the air-lock. As a rule, the loss is gradual, and is comparable to that in boilermakers' deafness.

Macleod Yearsley.

BOOKS RECEIVED.

The Tonsils, Faucial, Lingual and Pharyngeal, with some Account of the Posterior and Lateral Pharyngeal Nodules. By *Harry A. Barnes, M.D.*, Instructor in Laryngology, Harvard Medical School. Illustrated. London: Henry Kimpton, 263, High Holborn, W.C.; Glasgow: Alex. Stenhouse, 40 and 42, University Avenue. Price 12s. 6d. net.

Operative Surgery of the Nose, Throat, and Ear, for Laryngologists, Rhinologists, Otologists and Surgeons. By *Hanau W. Loeb, A.M., M.D.* In two volumes. Vol. I, Illustrated. London: Henry Kimpton; Glasgow: Alexander Stenhouse, 1914. Cash price (2 vols.) £2 10s.

Diseases of the Labyrinth. By *Dr. Erich Ruttin*, Privatdocent in the Otological Clinic, University of Vienna. Authorised translation by *Horace Newhart, A.B., M.D.*, Instructor in Otology, University of Minnesota. Illustrated. London: William Heinemann. Price 8s. 6d. net.