

could exist only in the tympanum, and then only from interruption of the normal equilibrium by closure of the Eustachian tube and absorption of the air in the tympanum.

Mr. Stuart-Low rightly says that none of the obstructions mentioned has a permanently injurious effect on the hearing until there is retention of secretion in the nose or its accessory sinuses and septic or other changes occur in the secretion. As to the causation of otosclerosis, the analogy with the occurrence of chronic rheumatic arthritis in sequence to chronic nasopharyngeal inflammations will doubtless suggest itself to many.

The removal of spurs is not likely to have any effect on chronic otosclerosis, but spurs are often removed while gross obstructions at the chondro-vomer junction, for instance, are neglected. Where there is marked septal deformity, its correction is to be preferred to the removal of functionally active turbinates. Each case must, however, be treated according to its individual features.

Sir STCLAIR THOMSON: This association of ear pain with sphenoidal sinus disease does occur, and I have carried its proof through to the bitter end in a case in which I did a *post-mortem* examination. It is published in my paper, "Cerebral and Ophthalmic Complications in Sphenoidal Sinusitis."¹ The complaint was simply of pain in the ear, and the patient was sent to me at an ear hospital, but nothing aural was found wrong. He died of suppuration of the sphenoidal sinus with meningitis. At the *post-mortem* examination the ear was found intact.

The PRESIDENT: The thanks of the Section are due to Dr. Hill for the way he opened the discussion. All the speakers seem to be agreed that catarrhal conditions resulting from nasal obstruction do cause or contribute to the possibility of aural affections, and that in these cases the treatment is obvious. We see such cases every day, and we know that this is true; but whether middle-ear deafness can be relieved or its progress arrested by nasal treatment for real or apparent obstruction when catarrh is non-existent has not been decided at this meeting. Some cases seem to improve—others do not. The question can only be settled by quoting or publishing accurate statistics of cases extending over a period of years, and in order that a definite decision be arrived at by our Section this should be done.

Abstracts.

PHARYNX.

Tonsillectomy in the Tuberculous.—Frank L. Dennis. "The Laryngoscope," November, 1917, p. 805.

Dennis has operated on thirty-four cases, but has only observed the patients after operation in twenty-two instances. Of the latter the results are distinctly good in seventeen, poor in three, and of no effect in one. Five of the patients had laryngeal tuberculosis, one tuberculosis of

¹ *Trans. Med. Soc. Lond.*, 1906, xxix, pp. 12-71.

the pharynx, and one middle-ear tuberculosis. Ether was the anæsthetic in five cases, local anæsthesia being used in the others. Two of the five "ether" cases did badly afterwards. Dennis holds that a time should be chosen for operation when the general condition is favourable and the lungs are relatively quiescent. The post-operative care of the wound is important. Tincture of iodine should be applied once or twice daily until cicatrization is complete. The indications for operation are practically the same as for non-tubercular cases.

J. S. Fraser.

Operative Technique in Circumcision of the Tonsil.—Frank G. Murphy.
 "The Laryngoscope," September, 1917, p. 672.

Murphy holds that in normal tonsils the plica triangularis—the "foreskin" of the tonsil—has practically disappeared before birth, and that the mucous glands of the faucial region rarely become infected when the plica has shrunk to normal. Where there is a persistent plica neither the tonsillar crypts nor the peritonsillar space drain normally. Murphy gives three excellent diagrams showing the technique of his operation for removal of the plica triangularis. He says that, in the normal tonsil and in those where the circumcision operation has been properly carried out, the tonsil should be easily forced between the pillars by the superior constrictor muscle when the patient retches or gags and also during deglutition. When there is a persistent plica the anterior and superior fossæ become culture-beds for pathogenic bacteria which infect the mucous glands. Further, the anterior pillars "ride the tonsil" in deglutition, preventing drainage of the crypts. (The diagrams in this paper should be studied.—*Abs.*)

J. S. Fraser.

E. A. R.

Carcinoma of the External Ear, with the Report of a Case.—F. Warner.
 "Annals of Otology," xxvi, p. 950.

The case is one of a male, aged seventy-seven, and the report is interesting for the conclusions, which are as follows: (1) Cancer of the external ear is of infrequent occurrence. (2) Three-fourths of the cases occur in the pinna. (3) Cancer generally attacks the posterior surface, less frequently the anterior, occasionally some part of the rim, and in one case the lobe of the ear. (4) Epitheliomata of the external ear occur in males in 78½ per cent. of the cases. (5) The condition occurs only in advanced life or in those well into the middle period, when nutritional disturbances of a degenerative character are usually present. (6) Irritative influences are responsible for its initiation—eczema, spectacle bows and sailor's skin. (7) The epidermoid type prevails over that of the hair-matrix or rodent ulcer forms. (8) Insufficient removal (due to fear of a mutilating operation) is responsible for many of the recurrences. (9) After removal, the surface of the wound should be gone over with the actual cautery. (10) If the surface is broadly infiltrated, the operation should be followed up with the use of radium. (11) Glandular involvement is unusual and a late complication when it occurs. Out of twenty-seven cases it occurred four times (Mayo), and in none which had not been in existence four years. (12) In cases of supposed eczema of the external ear occurring in advanced life, one should be thoroughly alert

for cancer; if found, operate early enough to be a real service to the patient.

Macleod Yearsley.

Acute Mastoiditis as a Complication of Infectious Diseases.—Geo. H. Lathrope. "Journ. Amer. Med. Assoc.," August 10, 1918.

During the past winter the camps in the Southern States were invaded by a wide-spread streptococcal infection, involving mainly the lung and pleura, and having a high mortality. The organism in most instances was the *Streptococcus hæmolyticus*. In Camp Shelby, however, the *S. viridans* was in the majority of instances the causal organism. In this camp, moreover, severe pulmonary infections were not so common as in other camps. One of the characteristic features of the epidemic in this camp was an outbreak of acute mastoiditis. In all 123 soldiers developed acute mastoiditis of one or both sides. Invariably there was a preceding middle-ear involvement, though in several cases the invasion of the middle ear and mastoid had the appearance of being synchronous, so rapidly did the infection mature. Frequently at the operation, within forty-eight or seventy-two hours from the appearance of the first symptoms, an extensive mastoiditis with necrosis of bone and formation of thick pus were found.

As regards the ætiology of the epidemic, an antecedent epidemic of measles played a very important part, being responsible for 36 per cent. of the cases. In some cases the mastoiditis followed almost immediately, while other patients had a continued cough or cold till the mastoiditis developed.

Of the 123 acute mastoids, cultures were taken at the operation from the pus in the mastoid cells in 81 cases. Of these 81 cases the streptococcus was present in 73 per cent., *Staphylococcus aureus* in 16 per cent., and miscellaneous organisms in 11 per cent. Thirty-four of the 59 streptococci were in pure culture. Five of these were *S. hæmolyticus* and 29 *S. viridans*.

The cultural characteristics of *S. viridans* are somewhat similar to those of *S. mucosus*.

There were 12 deaths, all from streptococcal meningitis, proved bacteriologically. Of these 12, 8 had had measles recently. From this the conclusion was made that "when measles is abroad streptococcal infections are to be expected, and conversely, that all complications of measles are likely to be more severe than similar complications of other infections."

J. K. Milne Dickie.

Migration of a Round-Worm into the Ear.—H. Coussien. "Revue de Laryngologie, etc." (Noted in the "Lancet," 1919, vol. i, p 28.)

Girl, aged four. Pain right ear for eight hours. Pain was paroxysmal and did not succumb to remedies. No mastoid pain, no fever. Tympanic membrane red and bulging in the posterior half. Nasal and pharyngeal examination negative. Instillations of hot carbolised glycerine and hot compresses prescribed. Twenty-four hours later: No relief. Membrane redder and more bulging. Paracentesis under local anæsthesia; no pus. Pain grew worse. At night attack of syncope, crises of nystagmus, general convulsions. Meatus blocked by a vermicular body. This was seized, and a living male ascaris 15 cm. long removed. Child slept most of the day, the tympanic incision healed, and recovery was complete. No history of passing of worms.

Macleod Yearsley.

MISCELLANEOUS.

Radium in Diseases of the Upper Air-passages.—Bryson Delavan.
"Laryngoscope," October, 1917, p. 776.

Delavan presents a summary of 184 cases treated with radium out of a total of 422 cases of cancer of the upper air-passages treated at the Memorial Hospital in New York City. The best results were obtained by the prompt treatment of early cases—a state of affairs which applies also to the surgery of cancer.

Bryson Delavan states that in the treatment of nasopharyngeal fibroma the use of radium has proved encouraging. In the treatment of non-malignant intralaryngeal growths many tumours of various histological structure have disappeared in a number of cases with complete restoration of the singing voice. The treatment of papilloma of the larynx is particularly promising, in view of the success already attained with this form of growth, as well as with warty growths in general in other parts of the body. Freudenthal reports a case of fibrosarcoma of the right maxillary sinus which was cured, and a case of sarcoma of the tonsil in which the growth disappeared and remained in abeyance for six years, when it recurred and the patient died. The question of cure should be dealt with very carefully. In cavities like the nose and nasopharynx tumour tissue may still be present, though not visible by ordinary methods of examination. Delavan reports on two cases of epithelial cancer involving the left side of the pharynx, the base of the tongue, tonsil and interior of the larynx. Radium caused complete cessation of the abnormal secretions and fetor. Ulceration rapidly diminished, and in one case disappeared. The infiltrated tissues became soft, the voice clearer, and both patients were able to swallow without pain. Though the disease terminated fatally the relief obtained well repaid the patients for any inconvenience that the radium had caused. The failure to gain uniformly reliable results is probably due to imperfect knowledge of the methods by which the radiations can be controlled, of the amount of radium which should be used, and of the correct duration of the exposures.

Richardson, in discussing Delavan's communication, stated that he had had very unfortunate results after the use of radium in four cases of cancer of the tonsil and in one of cancer of the cheek. All died in the usual course, but the radium gave wonderful relief from all the disagreeable symptoms. There was very little odour, and the patients were fairly free from pain. Lynch reported on four laryngeal cases, one of which had had no recurrence for eighteen months. This patient received no benefit until the radium was put into the laryngeal cavity through a tracheotomy tube. He had previously had a recurrence of the growth after operation by suspension laryngoscopy. A second case, after a third occurrence, was thought to be inoperable. Applications of radium caused complete subsidence, and after six months there was no indication of further recurrence. Shurly had operated three times on one case which involved the soft palate, the upper jaw and the antrum, and after each operation there was a very slow recurrence. For the past three years radium has been used at intervals of from three to six months. Harmon Smith believed that the good results that are obtained from radium are due to the fact that all tumour growths vary in their virulence. Cases benefited by radium are the less virulent ones. Smith had sent a

number of inoperable cases for radium treatment after a preliminary tracheotomy. All of these went progressively on to death. Coffin and Pierce had had discouraging results from radium treatment, and Beck had had similar experience in the case of deep-seated growths. One speaker drew attention to the severe burns which may follow the applications. It is difficult to screen the radium properly when placed in the mouth. He emphasised the late appearance of the burns in some cases.

Jackson described the technique adopted in the treatment of carcinoma. Tracheotomy is performed, and the capsule containing the radium, anchored to the cannula, is pushed upwards into the larynx. The capsule is composed of gold, on to which a coating of hard rubber is vulcanised. The threads from the radium capsule are tied to the shield of the cannula.

Delavan, in closing the discussion, stated that of the 184 cases treated by radium, 22 are believed to have fairly retrogressed. Seventy-nine cases had improved. Delavan holds that we do not get the true statistics of the surgery of laryngeal cancer, and that, if we did get them, we should have a pretty ghastly record.

J. S. Fraser.

Mycosis Fungoides.¹—**Jos. C. Verco.** "Medical Journal of Australia," April 20, 1918.

A man, aged forty-five, had right upper maxilla removed for a growth which filled up the cavity of the antrum, and extended through its outer and back walls and down through the alveolus. Laboratory examination reported it a round-celled sarcoma. At the time of operation a round red spot was noticed on the skin of the back. It looked like ringworm. Later other blotches appeared on the trunk, which were diagnosed by a skin specialist as "the pre-mycotic stage of mycosis fungoides." The history of the case is continued for two years. Up till the time of the man's death there were eruptions on various parts of the body, but no recurrence of the growth at site of operation. Four months after the jaw operation a large mass was removed from the foot. Histological appearance was identical with that of growth from superior maxilla. The question arises, "What was the nature of the maxillary growth?" Clinically and histologically it resembled a round-celled sarcoma, but the histologist recognised a difference between its structure and that of typical sarcomata: the cells were not quite the same as those found in malignant disease. As the tumour on the foot was without question a growth in a typical case of mycosis fungoides, the tumour in the jaw was unquestionably mycosis fungoides too. The maxillary growth and the cutaneous disease cannot be regarded as merely coincident, and otherwise unrelated. Mere coincidence is disproved by identity in structure of the maxillary and cutaneous tumours. The two must be regarded as having some causal connection with each other. If the time relation signifies anything, the skin disease was secondary and due to the maxillary disease. A common precedent cause can be conceived for both conditions, so that they are fraternally, not paternally related. Was it possible that the infective agent in the jaw tumour during operation was absorbed by lymphatics, entered wounded blood-vessels, or was swallowed, and thus infected the cutaneous tissues? A detailed report by the histologist is appended to Verco's paper.

A. J. Brady.

¹ Mycosis fungoides is a rare and fatal skin disease characterised by the appearance of multiple fungating tumours, probably granulomatous. Cause unknown.—Ed. J.L.R.O.

Relation of the Glands of Internal Secretion to Otolaryngology.—
Joseph C. Beck. "Laryngoscope," May, 1917, p. 422.

Beck considers the thyroid, thymus, hypophysis, and adrenals in their relation to otolaryngology. The hypophysis and adrenals are known to have a specific influence on the growth of bone, while the thymus influences the nutrition of bone.

According to Beck, there is in *atrophic rhinitis* a chronic focus of infection in the intestine, tonsil, teeth, nasal sinuses, etc. This focal infection produces changes in some of the glands of internal secretion and disturbs their harmonic action. This results in rarification of the bony framework of the nose, and is followed by a secondary degenerative change in the mucous membrane with metaplasia of the epithelium. Finally, we have a low-grade infection by a great variety of organisms among which we find the so-called specific foetid bacillus of ozena. Beck treats his patients with glandular extract by mouth or hypodermically for a period of one to six months, and after a time repeats the treatment. He finds that in some cases he gets no change, but at other times he obtains striking results.

Hyperplastic Ethmoiditis or Non-suppurative Sinusitis.—Beck believes that non-suppurative sinusitis is invariably associated with cases of so-called bronchial asthma. Nasal polypi are always present in the later stages. He holds that these conditions are due to a hyposecretion or disharmony of the endocrine glands, and that the underlying cause is a focal infection, most frequently from the intestinal tract. These patients are sensitised particularly to protein or albumen, and their attacks are a true anaphylaxis. Treatment consists in removing the original cause—the focus of infection—and the administration of glandular extract. The middle turbinal and ethmoid must also be attended to. Beck states that permanent cure cannot be obtained by operative procedures alone.

Otosclerosis.—Beck has been struck by the similarity of the spongyfication in otosclerosis to that seen in osteomalakia, arthritis deformans, and in the bones in early pregnancy. He treats otosclerosis by means of adrenalin for the most part, but in many cases he combines it with extract of the thymus and pituitary. He does not claim to have cured a case or even to have improved the hearing, but he does claim to arrest the progress. He gives injections of from 1 to 15 minims of adrenalin in gradually increasing doses. The treatment is carried out every second or third day for a period of six weeks to three months, and is controlled by measurement of the blood-pressure. Treatment is then interrupted for the same period and then resumed for the same period and then stopped.

J. S. Fraser.