MINNESOTA ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

SECTION OF OTO-LARYNGOLOGY.

Meeting of Dec. 13, 1935.

(Continued from March Issue.)

DR. HORACE NEWHART gave some remarks on acoustics as related to otology.

Dr. Horace Newhart, introductory to the presentation of two sound films, "Sound Waves and Their Sources" and "Fundamentals of Acoustics," furnished by the Department of Visual Education, made the statement that a lack of familiarity with the fundamentals of acoustics has materially retarded otological progress.

In practice the fact has largely been overlooked that no accurate test of hearing can be made in the presence of a noise. He pointed out the importance of detecting relatively slight degrees of hearing impairment as indicative of the presence of beginning pathology of the ear, both in the young, when most frequently the capacity to hear lower tones is affected, and in adults, when loss of the acuity of hearing for the high tones is frequently overlooked until well advanced.

The methods which have been employed in the past have been too crude to disclose the slight losses, and we have failed to exclude sufficiently the ordinary noises which mask the test sounds of slight intensity.

The remedy consists in excluding the noises which ordinarily mask the sounds employed in making the tests and in using a satisfactory audiometer. The telephone receiver of the audiometer itself excludes some of the extraneous noises which interfere with accuracy.

The prevailing noise level found in a downtown office or school building for practical purposes can be reduced by using an acoustically-treated booth, so as largely to exclude masking or distracting noises. This can be constructed at a moderate cost.

In response to a rapidly growing need among otologists and distributors of hearing devices, which has been stimulated by an increased demand for modern hearing devices, many new audiometers are now in process of development. Some of them, when tested in the acoustic laboratory, as is now being done at the University of Minnesota under the direction of Dr. Henry E. Hartig, are still in the developmental stage and, in their performance, leave much to be desired. They already offer several improvements over older models, as greater range of operation, increased portability, greater ease of operation, and lower cost and upkeep.

An audiometer to meet the minimum requirements of an otologist must be capable of producing tones of a high degree of purity over a range of from 64 d.v. to 8192 d.v. at intervals of not less than one octave and having an operating range from the threshold of normal hearing up to practically the threshold of feeling. It should be free from internal noises; have a satisfactory, standardized bone conduction receiver; should be readily portable; of reliable construction, and be sold at a moderate price.

Such an instrument will be a most useful part of the equipment of every physician practicing otology and will save him the embarrassment of not being as well equipped as the "audiometrist" who is selling hearing devices.

DR. FRANK L. BRYANT, (by invitation) reported a group of 28 external fronto-ethmo-sphenoidectomies done in the Department of Oto-Rhinology at the University of Minnesota.

Abstract: The technic used was that suggested by Lynch, Sewall and Ferris Smith. Patients who showed a third or fourth degree chronic sinus infection were operated by this method. Both nonallergic and allergic types were considered.

a. In the non-allergic group the chief complaints in order of frequency were: 1. Purulent discharge almost continuous. 2. Nasal obstruction, usually complete; not influenced by intranasal medication, and those operated upon by intranasal methods were reoccurring. 3. Headache, a variable complaint, usually occurred during and following an acute exacerbation.

b. In the allergic group asthma was the outstanding complaint, with the afore-mentioned other occurring in the same order.

No patient who had a temperature of over 99.6° was operated. All operations were performed under local anesthesia.

Pathologic Findings: Surgery as a rule showed more extensive changes than clinical and X-ray findings would indicate. Histologic studies showed leukocytic infiltration and marked fibrosis.

Postoperative: Patients were instructed to refrain from blowing the nose. This minimized orbital edema; they were not allowed to used their eyes for reading for at least 20 days. No diplopia or epiphora were encountered in those who followed this order. Postoperative discomfort was usually relieved by codein, ½ gr. Only one patient showed a postoperative febrile reaction of 101°. Others had temperatures ranging from normal to 100.3°. Hospitalization period averaged from five to six days.

Results: There were no deaths. There were no complications. Only one patient had a slight epistaxis on the seventh day. Scar from incision was neglible — most of them were not visible after six weeks.

Results from chief complaints: All purulent discharge and nasal obstructions were markedly improved to clinically cured. At least seven of those who had headache or neuralgia were much improved. One who previously required morphin is now free of all discomfort. In the allergic group two have had no asthma since the last surgical procedure. One has asthma after acute rhinitis. The others have antrum surgery to be done.

DISCUSSION.

DR. H. L. WILLIAMS stated this paper is so clearly presented there is little to say in additional discussion of this type of operation. The techniques are somewhat variable but all follow the operation of Jansen. Dr. Williams felt the important thing is the selection of cases. He felt it is not applicable to early sinus disease, but where there is sclerosis of the bone and in cases which have had repeated operations, this operation is best because in that type of case the intranasal operation is virtually impossible.