SOME OBSERVATIONS BEARING ON THE TREATMENT OF NASAL AND MIDDLE-EAR AFFECTIONS.

BY ALBERT H. TUTTLE, M.D., CAMBRIDGE, MASS.

It is possible to voluntarily open the Eustachian tube without the act of swallowing. This usually occurs in the act of gaping and yawning. When the tube is open a trembling sensation is produced, which is probably due to the vibrations of the drum instead of the contraction of muscles. This sensation is mixed, consisting partly of sound and pressure, and indicates a patent Eustachian tube with entrance of air into the tympanum. When the cheeks are inflated in the act of blowing, it is possible to voluntarily open the Eustachian tube and produce this sensation. It can also be produced when the mouth and nostrils are both open, but apparently there is an exaggerated inspiration or expiration at the same time. The simple act of blowing with the mouth and nostrils closed, does not open the tube, or produce the sensation in the ear.

By attempting forced expiration or inspiration with the mouth and nostrils closed the middle-ear can be inflated or aspirated, the membrana tympani expressed or retracted, and the reflex light made to appear or disappear. This is easily produced voluntarily by the patient while the physician is inspecting the drum by the usual means.

When there is a patent Eustachian tube and a perforation in the drum-head, air may be blown through the middle-ear and external meatus by a forced expiration if the mouth is kept shut and the nostrils closed with the fingers. This is apparently facilitated by the simultaneous act of swallowing. If there are any fluid secretions in the tympanum, a series of rapidly forming and bursting bubbles will be formed, which are visible through a speculum and distinctly audible. If under the above circumstances an oily substance, like benzoinol, is inserted into the meatus, it will be blown out in great bubbles so as to spatter on the cheek of the patient. (A simple test for perforation of the meatus.) If oil is inserted into the meatus of an ear with a perforated drum and patent Eustachian tube, aspiration of the tympanum by a forced inspiration while the mouth and nostrils are closed will not suck the oil rapidly into the throat, but it will be detected in minute quantities by the taste.

If a spray of oil is directed into the mouth or nostrils, during a forced expiration, and the mouth and nostrils maintained closed at the same time, the spray will pass into the middle-ear; and if there is a perforation of the drum-head, it may be seen emerging from the opening; this is facilitated by the simultaneous act of swallowing. The amount of vapor that passes through the ear is slight, and not what might be expected by the freedom with which air passes through the same route.

By holding the head on one side, inflammatory products gravitate over the perforation, and their removal is facilitated by the act of blowing through the Eustachian tube, at the volition of the patient.

A JOKE FROM "PUNCH." — *Mrs. Sharpley (to the doctor, who has looked in, having heard that her "good man" is ailing):* "No, I thank ye, sir. You see I've heered of you, sir, as you've been 'practising' here for the last three years, and so I'd rather you went 'practising' elsewhere, as I don't want no 'speriments on my old man."

REMARKS ON TWO CASES OF EXCISION OF THE STAPES.¹

BY FREDERICK L. JACK, M.D.

THE two following cases illustrate some of the advantages of a recent surgical procedure, removal of the stapes. This operation is a new departure, a step forward, I believe. It has been now proved, beyond question, that an open fenestra ovalis, with a normal sound-perceiving apparatus in the inner ear, will furnish good hearing for the voice in some cases. Yet, in one of the most recent works on the ear, the author states that "expulsion of the stapes must invariably produce total deafness," but he immediately follows with a description of a case, the only exception to the rule of which he has ever heard.

The operation is not a panacea, and has never been claimed to be, a point which I am afraid some observers lose sight of. In very few cases has there been any appreciable change for high tones, the improvement is almost entirely for the voice. There are difficulties, both in the application of the operation and in its execution, and new features are demonstrated in nearly every case operated upon.

The first essential for success, as emphasized in a recent paper,² is a differential diagnosis. It is not reasonable to look for successful results in cases of disease of the labyrinth or atrophy of the auditory nerve. The condition of this part of the ear, however, cannot always be determined beforehand. As to the obstacles in the operation, in addition to a high position of the oval niche there are pathological changes, such as bony ankylosis of the foot-plate and atrophy of the crura and head which interfere with the removal of the bone.

Success is greatest in those cases where the stapes has become fixed within the oval window by plastic inflammation, thereby causing a mechanical obstruction to sound-waves and possibly making undue pressure on the endolymph.

There are many interesting details in connection with the whole subject which cannot be spoken of now.

The first patient was operated on eight months ago. The ear was discharging at the time, and had refused to heal in spite of continuous treatment. The stapes was removed on account of its carious condition, without thoughts of improving the hearing. The ear ceased discharging one week after the operation, and the patient, as you see, can now hear very well.

The second patient was operated on eight months ago; first the left, and two months afterward, the right ear. The perforation in the drum-membrane rapidly healed, as in all cases almost without exception. I bring this case before you to show the remarkable hearing of this patient without the stapes in either ear. I think you will agree with me that I am warranted in my confidence in this operation for some cases.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY. — The Emperor of Austria (King of Hungary) has consented to be Protector of the Congress of Hygiene and Demography, to be held at Budapest in the first half of September, 1894.

¹ Shown before the Surgical Section of the Suffolk District Medical Society, February 1, 1893.

² Further notes on removal of the stapes, Boston Medical and Surgical Journal, January 5, 1893.