Siegalization with oto-endoscopy

Sir,

Siegalization is integral to a complete otology examination. Traditionally, it is done with Siegel's pneumatic speculum holder (with ×2.5 magnification) with a pneumatic bulb attached or, a pneumatic otoscope (×2.0 magnification).

Recent advances in the form of the oto-endoscope provide the ability to view "close-up" on the tympanic membrane as it allows for "zooming" to the desired magnification and viewed on a monitor. However, testing of the mobility of the tympanic membrane (siegalization) can no longer be done due to the lack of a good seal. To overcome the above difficulty, we suggest the following method.

Equipment required are: (1) An endoscope; (2) an appropriate size ear-tip (used in impedance tympanometry); (3) pneumatic bulb; (4) a custom-made blunted trocar (the trocar may be made out from a metal spinal needle or using the inner metal cannula of a large bore brannula [with the sharp needle-end blunted by lathing]); alternatively, a Schuknecht tip suction catheter, with the "thumb-control" sealed off by taping, can be used. The trocar is then slightly bent at 30° – 45° at the proximal end for ease of attachment of the pneumatic bulb [Figure 1]. It is assembled as shown in Figure 2. These requirements are usually available in a majority of ENT outpatient clinic.

The entire assembly can be safely and comfortably inserted and advanced through the meatus along the external auditory canal. The scope can further be advanced to the desired length of up to 1.5–2.0 cm through the opening of the ear tip to better visualize the "distant" tympanic membrane (any adjustments of the desired length should be done before passing the scope into the canal). The soft-seal "cushion" provided by the ear tip also acts a "steadying" device in keeping the image of the tympanic membrane in the center of the monitor and away from the canal wall.

This assembly allows a tight seal in the ear canal for siegalization, while also providing a magnified view of the tympanic membrane (by using a camera system) on a monitor which allows the entire procedure and finding (s) to be video-recorded. Other benefit includes allowing students, trainees, and patients to visualize the entire examination.

Impedance audiometry ear-tips are user-friendly and are readily available in most ENT set-ups. They are reusable – being easily cleaned and sterilized, and inexpensive.

This assembly can also be used as a training tool for novices and trainees to familiarize themselves in using the oto-endoscope and performing siegalization with it while avoiding trauma to the external ear canal.

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Conflicts of interest
There are no conflicts of interest.

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