

The eustachian tube: a new renaissance

The renewed interest in the eustachian tube has enriched the practice of otolaryngology and is contributing to our patients' wellbeing.

It took over a hundred years for Bartolomeus Eustachius' (circa 1510–1574) work on the tube to be recognised. The work by Valsalva, Toynbee and Politzer in the subsequent three centuries contributed in large measures to our current understanding, and yet the eustachian tube remains an enigma.

Eustachian tube dysfunction is an all-encompassing condition that results mostly from pressure regulation impairment, with annoying symptoms of muffled hearing, earache and popping sensation. It remains a diagnostic and operational challenge.

In the current issue of *The Journal of Laryngology & Otology*, MacKeith and Bottrill¹ report their experience on the effectiveness of polymethylsiloxane elastomer augmentation surgery in the management of a patulous eustachian tube, a condition that causes autophony to voice and respiration. Previous papers include the first published description of using a computed tomography guided, transcutaneous approach to augmentation by silicone elastomer² and the patching of the tympanic membrane to alleviate symptoms of a patulous eustachian tube.³ That a patulous eustachian tube could result from percutaneous balloon microcompression for trigeminal neuralgia⁴ and after surgery for weight loss⁵ adds to the problem.

Poe⁶ reported on the measurements of eustachian tube dilation by video endoscopy and Augustine *et al.*⁷ showed that dynamic slow-motion video endoscopy overestimates eustachian tube function. Tarabichi and Kapadia⁸ described a possible algorithm for the evaluation of eustachian tube obstructive disorders in chronic ear disease, and Mills and Hathorn⁹ considered the role of the eustachian tube in adult otitis media with effusion.

Hwang and colleagues¹⁰ systematic review on balloon dilation for eustachian tube dysfunction, which included over 700 hundred eustachian tube dilations in 474 patients, showed that balloon dilation is safe. Jufas and Patil¹¹ raised the issue of a narrow

evidence base for this procedure in their systematic review. There is potential for improvement in patients' symptoms, but long-term results remain elusive. There is a need for care in the promotion of sales of devices by manufacturers so that this is consistent with the current level of evidence.

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