Laryngology & Otology

cambridge.org/jlo

Editorial

Cite this article: Fisher E, Hussain M, Fishman J. Rhinological interventions for sleep apnoea, patulous Eustachian tube and the demise of the tuning fork? *J Laryngol Otol* 2019;**133**:167. https://doi.org/10.1017/S0022215119000616

Rhinological interventions for sleep apnoea, patulous Eustachian tube and the demise of the tuning fork?

Edward Fisher, Musheer Hussain and Jonathan Fishman

Sleep is currently a topic of great interest in the wider media, occupying many column inches in newspapers, a best-selling book¹ and time on broadcast media. Sleep hygiene is rightly seen as being neglected in our technology driven society. Otorhinolaryngology has much to offer in encouraging the wider understanding of this important subject for physical and mental wellbeing, especially in relation to the common condition of obstructive sleep apnoea syndrome (OSAS). The review and meta-analysis by Sharma *et al.*² confirms the widely held belief that nasal surgery has a role in the management of sleep apnoea and has the potential to increase quality of life even when the sleep apnoea related indices have not improved to a significant degree. However, the matter is far from being a simple one, as OSAS is often multi-level,³ and medical management, which includes continuous positive airway pressure, is important. Not every patient with OSAS and a nasal airway imperfection will necessarily benefit from surgery, and much more work is needed to determine which subgroups are the most likely to benefit. This should inform our patient counselling.

Management of patients who suffer from patulous Eustachian tube syndrome is rarely easy. This issue of the journal contains an article by Alli *et al.*⁴ that describes a decently sized series (often hard to accumulate in this condition), using a method in which computed tomography guidance is used to place a silicone (polydimethylsiloxane) elastomer suspension implant into the Eustachian cushion region. This follows on from a previous case report⁵ using the method, and complements a series from Oxford on silicone injection.⁶ Previous *Journal of Laryngology & Otology* articles and abstracts on this fascinating and difficult topic have addressed: the diagnostic problems and dilemma of determining abnormal blockage versus abnormal patency, and the real potential to make things worse,⁷ as well as simple symptomatic treatments such as paper patching.⁸

Tuning forks have a hallowed place in clinical examination of the ear and have been the topic of *Journal of Laryngology & Otology* articles since the late nineteenth century. ^{9,10} However, even the most ardent supporters have to concede that there are many occasions where no such item is ready to hand. The study in this issue from Cardiff¹¹ uses a smartphone application that enables the device to produce an equivalent vibration. In this preliminary study, a smartphone is shown to be an adequate substitute for a tuning fork, at least for the Weber test. As smartphones are almost universally 'at hand' for all clinicians, this could be a promising way of continuing the tradition of bedside assessment without a long wait while someone looks for a tuning fork, often in vain.

References

- 1 Walker M. Why We Sleep: Unlocking the Power of Sleep and Dreams. New York: Scribner, 2018
- 2 Sharma S, Wormald JCR, Fishman JM, Andrews P, Kotecha BT. Rhinological interventions for obstructive sleep apnoea a systematic review and descriptive meta-analysis. *J Laryngol Otol* 2019;**133**:168–176
- 3 Phua CQ, Yeo WX, Su C, Mok PKH. Multi-level obstruction in obstructive sleep apnoea: prevalence, severity and predictive factors. *J Laryngol Otol* 2017;**131**:982–6
- 4 Alli A, Shukla R, Cook J-L, Waddell A. A novel computed tomography guided, transcutaneous approach to treat refractory autophony in patients with a patulous Eustachian tube a case series. *J Laryngol Otol* 2019;133:201–204
- 5 Rodrigues JC, Waddell A, Cook JL. A novel, computed tomography guided, trans-cutaneous approach to treat refractory autophony in a patient with a patulous Eustachian tube. J Laryngol Otol 2014;128:182–4
- 6 Mackeith S, Bottrill I. Polydimethylsiloxane elastomer injection in the management of the patulous Eustachian tube. *J Laryngol Otol* 2016;**130**:805–10
- 7 Alper C. Obstructed vs patulous Eustachian tube. How to avoid treating the wrong one and making it worse. J Laryngol Otol 2016;130(S3):S1-2
- 8 Boedts M. Paper patching of the tympanic membrane as a symptomatic treatment for patulous Eustachian tube syndrome. *J Laryngol Otol* 2014;**128**:228–35
- 9 Grant D. Remarks on tuning fork tests. J Laryngol Otol 1897;8:455-7
- 10 Browning GG, Swan IRC, Chew KK. Clinical role of informal tests of hearing. J Laryngol Otol 1989;103:7–11
- 11 Hopkins ME, Owens D. Can smartphone vibration provide a valid alternative to tuning forks for use on the ENT ward round? *J Laryngol Otol* 2019;**133**:245–247