The Journal of Laryngology & Otology

cambridge.org/jlo

'Chemically assisted dissection' in cholesteatoma surgery, Eustachian tube balloon dilatation post-irradiation, and coronavirus disease 2019 and the undergraduate curriculum

Jonathan Fishman and Edward W Fisher, Senior Editors

Editorial

Cite this article: Fishman J, Fisher EW. 'Chemically assisted dissection' in cholesteatoma surgery, Eustachian tube balloon dilatation post-irradiation, and coronavirus disease 2019 and the undergraduate curriculum. *J Laryngol Otol* 2021;**135**:659. https://doi.org/10.1017/S0022215121001870

A chemical 'magic bullet' capable of eradicating cholesteatoma has long been sought. Sodium 2-mercaptoethanesulfonate, also known as mesna, a mucolytic agent capable of disrupting disulphide bonds, has recently been proposed as a drug that may facilitate surgical dissection; this is the concept of 'chemically assisted dissection'. In this month's issue, Moffa *et al.* investigate the beneficial effects and safety of the topical application of mesna compared with placebo during the surgical management of cholesteatoma and adhesive otitis media.[1] In their systematic review, data derived from five clinical studies demonstrate that topical mesna administration could represent a potential therapeutic option during surgical dissection performed both through the microscope and with otoendoscopy. Further studies, however, are required to confirm these results, and to identify the optimal administration method and treatment schedule.

Eustachian tube dysfunction following radiotherapy for nasopharyngeal carcinoma is a challenging condition to manage. Invariably this leads to otitis media with effusion, and ventilation tube insertion frequently will result in a persistent perforation and/or chronic otorrhoea. Based on the promising results of previous studies investigating Eustachian tube balloon dilatation in Eustachian tube dysfunction,[2] Wong *et al.*, in this month's issue of *The Journal*, study its safety and efficacy in the post-radiotherapy setting.[3] Despite the small sample size, the 'success rate' (defined by improvements in tympanometry and Eustachian Tube Dysfunction Questionnaire 7 scores) of Eustachian tube balloon dilatation in the post-irradiation group was inferior compared to the non-irradiated group. The authors hypothesise that in post-radiotherapy patients the damaged segment of the Eustachian tube may be fibrosed and stenosed, hence the ineffectiveness of the balloon treatment. Patients were only recruited a minimum of six months after radiotherapy, and it is feasible that earlier intervention, before fibrosis and mature scarring have developed, may be more effective. A more recent study has shown more promising results, at least in the short term.[4]

The coronavirus disease 2019 (Covid-19) pandemic has had a significant impact on undergraduate teaching and education, which has in many cases been replaced with virtual learning. The medical student's experience of ENT teaching during the pandemic is explored in an article by Walker and Stapleton in this month's issue.[5] While virtual learning received good feedback, students still preferred face-to-face teaching sessions. In a complementary article, patients' perspectives of undergraduate clinical placements during the Covid-19 pandemic are explored.[6] In that study, the majority of patients felt comfortable with students' direct participation in their care; thus, face-to-face placements remain viable from a patient's perspective. In addition, patients reported remaining comfortable with a variety of approaches that enabled the ongoing provision of undergraduate placements in ENT. These approaches include direct observation of their appointments, remote observation of consultations and the sharing of anonymised clinical findings with students.

References

1 Moffa A, Fiore V, Sabatino L, Cassano M, Tarabichi M, Kapadia M *et al.* A 'chemical help' in middle-ear surgery? A systematic review on sodium 2-mercaptoethanesulfonate. *J Laryngol Otol* 2021;**135**:660–667
2 McMurran AEL, Hogg GE, Gordon S, Spielmann PM, Jones SE. Balloon Eustachian tuboplasty for Eustachian tube dysfunction: report of long-term outcomes in a UK population. *J Laryngol Otol* 2020;**134**:34–40
3 Wong MSL, Narayanan P. Preliminary results of a pilot study on the safety and efficacy of balloon dilatation of the Eustachian tube for nasopharyngeal cancer patients with chronic Eustachian tube dysfunction post irradiation. *J Laryngol Otol* 2021;**135**:691–694
4 Sun H, Cao C, Qui X, Hu J, Zhang J. Efficacy of balloon dilatation of the Eustachian tube in patients with refractory otitis media with effusion after radiotherapy for nasopharyngeal carcinoma. *Am J Otolaryngol* 2020;**41**:102724
5 Walker, M, Stapleton E. Undergraduate experience of ENT teaching during the coronavirus disease 2019 pandemic: a qualitative study. *J Laryngol Otol* 2021;**135**:741–745
6 Patel B, Gera R, Lozidou A, Hannan SA, Saeed SR. The provision of undergraduate clinical placements in ENT during the coronavirus disease 2019 pandemic – exploring patient perspectives on a variety of approaches. *J Laryngol Otol* 2021;**135**:737–740