



A Call for Improved Otoscopy Training

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Received: 19 February 2020 / Accepted: 24 February 2020 / Published online: 6 March 2020
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We would like to thank Schuster-Bruce et al. for their insightful letter to our manuscript published in the European Archives of Oto-rhino-laryngology on the 7 January 2020 [1]. In our short communication, entitled “Utility of a smartphone-enabled otoscope in the instruction of otoscopy and middle ear anatomy” published in the European Archives of Oto-rhino-laryngology on the 17 July 2019, we proposed that a smartphone-enabled otoscope (SEO) may serve as a useful adjunct to pre-clinical otoscopy education [2]. Specifically, we found that first- and second-year medical students using a SEO were better able to identify middle ear anatomy in live volunteers compared to participants using a conventional otoscope (CO).

We strongly agree with Schuster-Bruce and colleagues that the primary difficulty in assessing proper tympanic membrane visualization using a CO stems from the inability of learners to share their view of the tympanic membrane with the instructor. In their unpublished study, Schuster-Bruce et al. demonstrated that students preferred the SEO over a CO, a finding which correlates well with our results [1].

However, self-reported measures of satisfaction or confidence are themselves weak surrogates of actual achievement. As such, there is a need for a standard objective assessment of otoscopy proficiency on live patients. Schuster-Bruce et al. attempted to address this gap by having students label

a blank eardrum after performing an otoscopic examination. However, the results of such a task are confounded by the students’ ability to recall middle ear anatomy and thus may not be a great surrogate of their technical ability to visualize the middle ear using an otoscope.

Our group is currently investigating novel objective otoscopy assessment techniques using the SEO that expand our preliminary findings. Specifically, we aim to develop a simple and inexpensive method to objectively assess learners’ visualization of the tympanic membrane using the SEO and standardized patients.

The rapid evolution of medical technologies paves the way for advancements in clinical training and education. Although our inaugural use of the SEO for pre-clinical medical education demonstrated promising results, we tacitly recognize that it does not assess all the skills that are required for a comprehensive otoscopic examination. Nevertheless, we hope that the demonstrated efficacy of the SEO will motivate future work to improve otoscopy training.

References

1. Schuster-Bruce J, Davies A, Conchie H et al (2020) A letter in response to the article entitled ‘Utility of a smartphone-enabled otoscope in the instruction of otoscopy and middle ear anatomy’. *Eur Arch Otorhinolaryngol*. <https://doi.org/10.1007/s00405-019-05775-0>
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This reply refers to the comment available online at <https://doi.org/10.1007/s00405-019-05775-0>.

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