

Teaching Epistaxis Management to Emergency Medicine Residents: Online Learning Format

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Introduction

- Emergency medicine (EM) providers are often at the front line of epistaxis management
- Previous studies indicate that EM residents were unable to correctly identify the initial steps required for controlling epistaxis^{1,2}

Objective

- This study aimed to assess EM residents' epistaxis management knowledge and determine the effectiveness of a brief video in increasing their understanding of this topic

Methods

- EM residents and medical students interested in otolaryngology or EM recruited to participate
- Survey included 11 questions on nasal anatomy, initial management of epistaxis, and nasal packing
- The survey was taken twice, both before and after a video made by an otolaryngology resident

Methods

- The survey study was posted on the EM research student doctor network page, otomatch.com, and the EM match spreadsheet
- Emails containing the survey were sent out to EM residents, residency program coordinators and directors to be distributed to residents and/or students

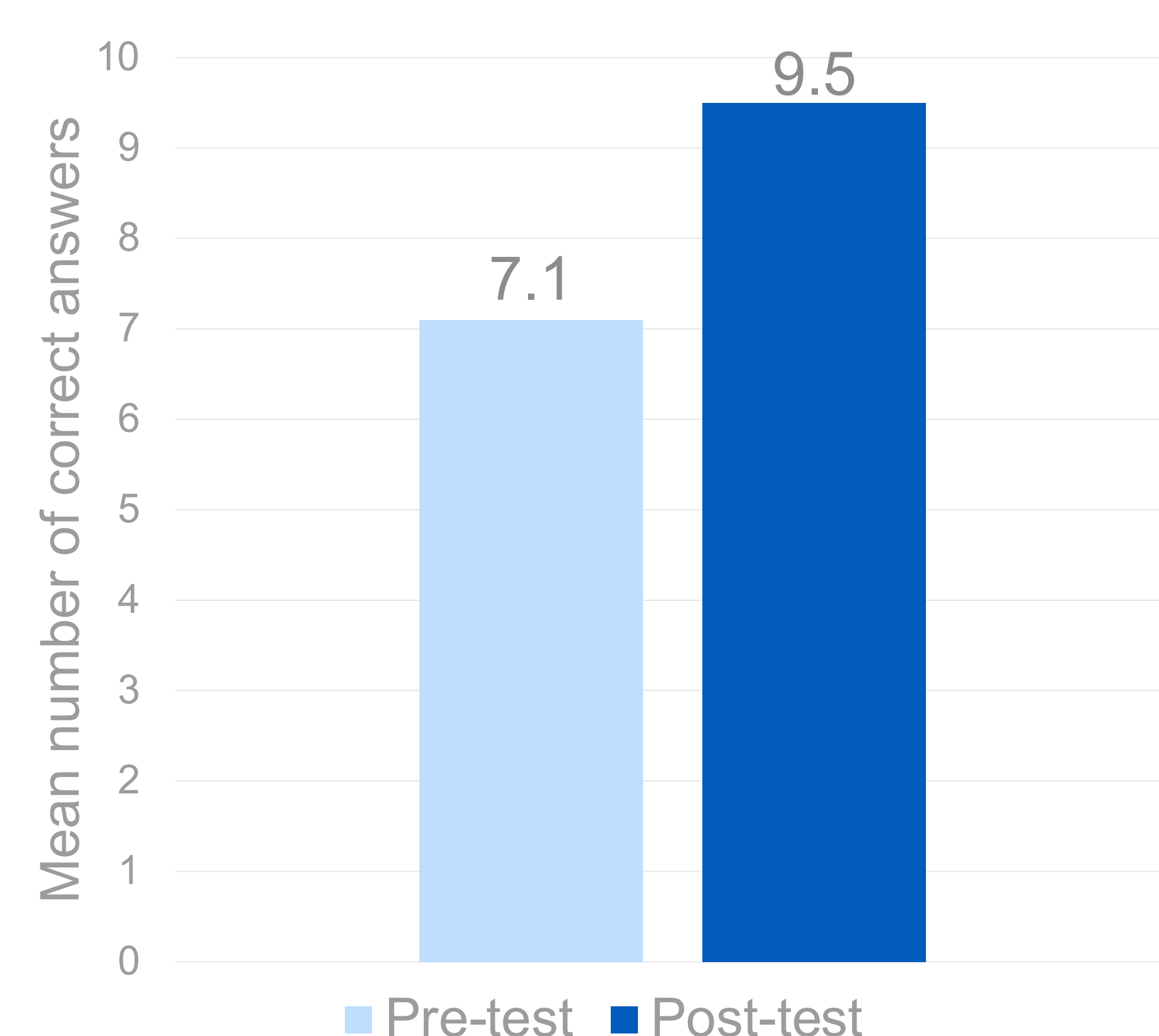


Figure 1. Mean number of correct answers on the pre-test versus post-test (11 questions total), $p < .001$

Results

- 21 participants completed the pre- and post-video surveys
- 7 second year EM residents (35%), 6 first year EM residents (30%), and 4 medical students (20%)
- The mean number of correct answers significantly differed between pre- and post-test ($p < .001$) (Figure 1)
- 25% (N=5) of participants correctly identified Kiesselbach's plexus before the video while 80% (N=16) did so after the video ($p = .001$) (Figure 2)
- 55% (N=11) of participants correctly identified the proper technique for nasal packing before the video while 95% (N=19) correctly answered this question after the video ($p = .008$) (Figure 2)

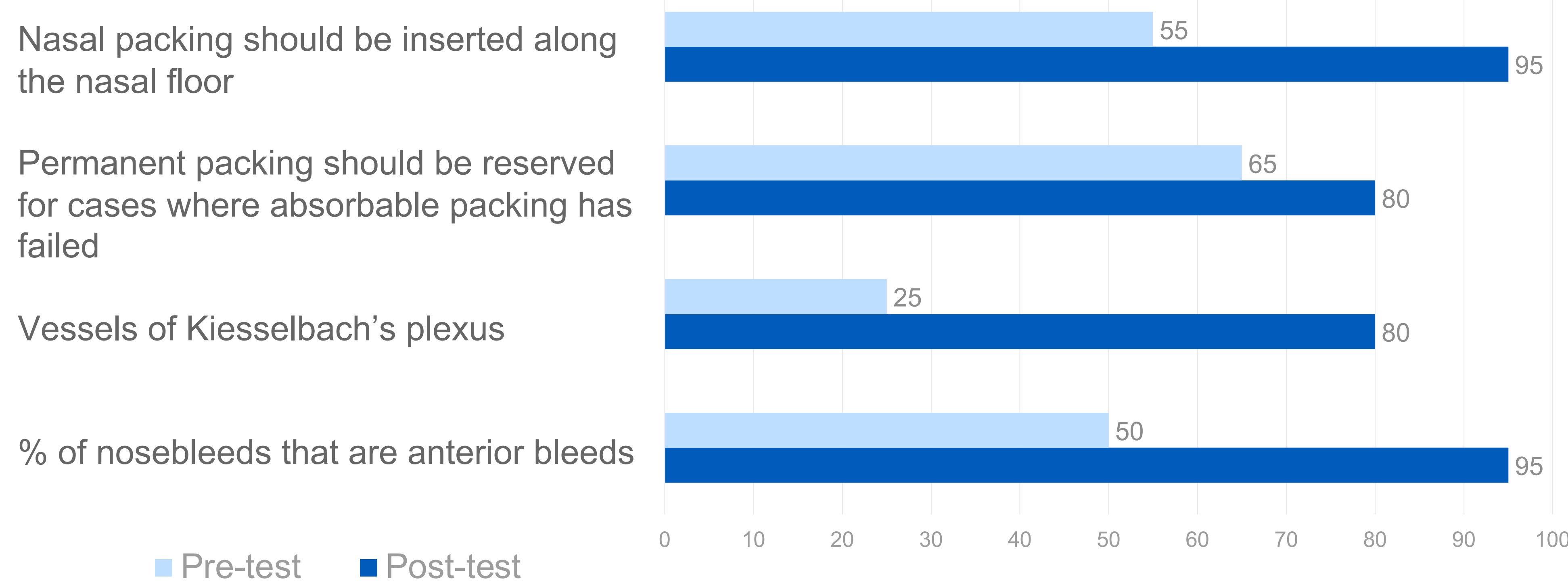


Figure 2. Percent of correct answers on the pre-test versus post-test (4 of 11 questions)

Discussion

- Sowerby *et al.* found that only 21% of EM attendings and 19% of EM residents were able to correctly identify where to apply nasal compression and appropriate patient positioning during epistaxis¹
- Video-based training has proven to be effective in surgical training and medical education^{3,4}
- Proper knowledge of epistaxis management is required to prevent airway compromise, aspiration, or significant hemorrhage⁵

Conclusion

- Knowledge deficits about epistaxis and its management are present in EM residents and medical students
- The use of a video module significantly increased their understanding of epistaxis management and could be an effective means for otolaryngologists to reach EM trainee

References

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