INTRODUCTION

Typical otolaryngology residency applications provide little information about an applicant's surgical skills or ability to be trained as a technically competent surgeon. The role of manual dexterity testing in applicant selection is controversial; however, some demonstration of technical aptitude by applicants may have a place in predicting surgical competency.

The objective of this study was to test the validity of a pre-residency manual dexterity test in predicting surgical skill of graduating chief residents.

METHODS AND MATERIALS

In 1983, one of the senior authors developed a manual dexterity test to evaluate the dexterity, visuospatial ability, attention to detail, and the ability to follow instruction of incoming otolaryngology residency applicants.

We identified all soaps that were carved by applicants since 1990 who were accepted to our residency program and had already graduated.

The soap carvings were blindly re-evaluated by the four attending surgeons who have been with the program throughout this time. In order to standardize the soap carving evaluation, a scoring scheme was developed which used a 1-to-5 rating for four different aspects of the carving. (see Form)

Post-training surgical skill evaluations were completed in a retrospective fashion by the four senior authors who had been present for the entire training period of each former resident. This was done completely confidentially and data was immediately coded in an anonymous fashion resulting in no personal identifiers being associated with the data. (see Form)

Linear correlative analysis (Pearson correlation) was performed by an independent analyst who was blind to both the identity of the soap and the former resident.

RESULTS

The mean pre-residency dexterity score was 14.0, standard deviation (SD) 3.4 (maximum 19). The average total chief resident surgical skill score was 12.7, SD 2.7 (maximum 17.5). The Pearson correlation coefficient r was equal to 0.16, indicating weak to no correlation.

Conclusion:
The role of pre-residency manual dexterity remains controversial in otolaryngology resident selection. No correlation was noted in the present study. However, limitations of the present study, inherent limitations to dexterity testing, and the subjective nature of surgical skill evaluation are noted.

CONCLUSIONS

No correlation was noted in the present study.

Manual dexterity testing in resident selection remains controversial.

At this time, the type of testing and the accuracy of surgical skill evaluation remains under-developed.

REFERENCES