

# Hand Surgery Questions on the Orthopaedic In-Training Examination: Analysis of Content and Reference

Adam S. Martin, MD,\* M. Craig McMains, MD,\* Andrew G. Shacklett, MD,\* Hisham M. Awan, MD\*

**Purpose** To provide an updated analysis of the hand surgery section of the Orthopaedic In-Training Examination (OITE) from 2009 to 2015. The goal was to contribute to the existing literature on the analysis of OITE questions, to aid both residents and residency programs in preparation for the OITE and board examination.

**Methods** The authors analyzed all OITE questions pertaining to hand surgery between 2009 and 2015. Hand questions were analyzed for category and subcategory of content, cited reference, treatment intervention, and imaging modality used.

**Results** Hand-related questions comprised 157 of the 1,872 OITE questions (8.4%). Nine general topic areas were identified, the most common of which were fracture-dislocation, tendon/ligament, nerve, congenital, and amputation. Trends existed in the recommended references; the 5 journals and 2 textbooks that were consistently cited included the *Journal of Hand Surgery (American Volume)*, the *Journal of the American Academy of Orthopaedic Surgeons*, the *Journal of Bone and Joint Surgery (American Volume)*, the *Journal of Hand Surgery (European Volume)*, *Hand Clinics*, *Orthopaedic Knowledge Update*, and *Green's Operative Hand Surgery*, respectively.

**Conclusions** Knowledge regarding topics and resources used for OITE hand questions could be mutually beneficial to both residents and residency programs. This information would consolidate resident OITE and board examination study time. Furthermore, this analysis could help residency programs develop or improve educational conferences and journal clubs.

**Clinical relevance** An understanding of question content and sources should enable efficient learning and improved scores on this section of the examination. (*J Hand Surg Am.* 2017; ■ (■):1.e1-e6. Copyright © 2017 by the American Society for Surgery of the Hand. All rights reserved.)

**Key words** Hand surgery, OITE, resident training.



**I**N THE 1960S, THE AMERICAN ACADEMY of Orthopaedic Surgeons developed the first in-training exam (OITE) to assess resident knowledge and education in a standardized fashion.<sup>1,2</sup> The current exam evaluates knowledge in 10 categories of orthopedic

surgery including pediatrics, trauma, hand, hip and knee, adult spine, foot and ankle, sports medicine, shoulder and elbow, oncology, and basic science.<sup>3,4</sup> Although studies revealed only weak correlations between OITE scores and pass rates on the American

From the \*Hand and Upper Extremity Center, Ohio State University Wexner Medical Center, Columbus, OH.

Received for publication April 20, 2016; accepted in revised form November 24, 2017.

No benefits in any form have been received or will be received related directly or indirectly to the subject of this article.

**Corresponding author:** Hisham M. Awan, MD, Hand and Upper Extremity Center, Ohio State University, 915 Olentangy River Road, Suite 3200, Columbus, OH 43212; e-mail: [awanOSUortho@gmail.com](mailto:awanOSUortho@gmail.com).

0363-5023/17/ ■ ■ -0001\$36.00/0  
<https://doi.org/10.1016/j.jhssa.2017.11.017>

Board of Orthopaedic Surgery part I written examination, Herndon et al<sup>3</sup> showed that individuals who failed American Board of Orthopaedic Surgery part I had a mean OITE percentile of  $15 \pm 12$  at the post-graduate year 5 level.

Because the OITE is a national standardized exam, residency programs have started viewing the OITE as a benchmark for the quality of their residency education curricula. Furthermore, program directors and chairmen may be held accountable for resident OITE performance. Several studies have examined sections of the OITE and reported on specialties such as trauma, foot and ankle, sports medicine, and hand. Marker et al<sup>5</sup> previously analyzed 5 years (2002 to 2006) of OITE questions classified as hand surgery and reported on content and sources for OITE questions.

The authors of the current study sought to provide an updated and detailed analysis of the hand surgery section from 2009 to 2015. Our aim was to add to the existing literature on the OITE, to aid both residents and residency programs in preparation for board examination.

## MATERIALS AND METHODS

We performed a detailed analysis of OITE questions from 2009 to 2015. The percentage of questions designated as hand was calculated. Hand questions were further divided into the following subcategories: tendon/ligament, fracture-dislocation, amputation, wound, congenital, vascular, nerve, tumor, and degenerative.

We also analyzed imaging modalities used in the hand questions and categorized them as x-rays, computed tomography scans, magnetic resonance imaging, clinical pictures, videos, and combinations of x-rays and pictures. The references provided for each question were also tabulated. In addition, questions that tested knowledge of a specific treatment modality were recorded.

## RESULTS

From 2009 to 2015, the exam consisted of a mean of 267 questions. Hand-themed questions averaged 22.4/y (SD, 1.98/y). Overall, hand-themed questions totaled 157 of 1,872 questions (8.4%). Table 1 shows the breakdown of hand OITE questions.

The most frequently referenced sources are listed in Table 2. There were 90% and 10% total citations from journals and textbooks, respectively. Most of the journal citations (188 of 255; 73.7%) were from 5 journals: the *Journal of Hand Surgery (American Volume)* (85 citations; 33.3%), the *Journal of the American Academy of Orthopaedic Surgeons* (28

**TABLE 1. Percentage of Hand Surgery Questions by Year**

Year	Total Questions	
	Total OITE	Total Hand (%)
2009	270	25 (9.25)
2010	262	22 (8.39)
2011	260	23 (8.85)
2012	268	27 (10.01)
2013	262	21 (8.01)
2014	275	19 (6.9)
2015	275	20 (7.27)
Total	1,872	157 (8.4)

citations; 11%), the *Journal of Bone and Joint Surgery (American Volume)* (26 citations; 10.2%), the *Journal of Hand Surgery (European Volume)* (25 citations; 9.8%), and *Hand Clinics* (24 citations; 9.4%). Most of the textbook citations (23 of 31; 74.2%) were from 2 textbooks: *Orthopaedic Knowledge Update* (12 citations; 38.7%) and *Green's Operative Hand Surgery* (11 citations; 35.5%). During the 7 years reviewed, 286 total references in 47 different sources (an average of 1.8/question) were cited in the hand questions. An average of 40.9 references/y were listed.

The 5 most common topics represented, according to the number of questions, were: fracture-dislocation (34), tendon/ligament (26), nerve (25), congenital (17), and amputation (15) (Table 3). The 5 most tested individual topics were flexor pulley system (16), peripheral nerve injury (11), forearm fracture-dislocation (11), carpal/cubital tunnel syndrome (9), and distal radius fractures (8). These 5 individual topics accounted for 55 of the 151 hand questions (36.4%).

Knowledge of specific treatment interventions was required on 88 of 151 hand questions. Treatment methods asked at least twice are shown in Table 4. The top 5 categories of treatment included soft tissue repair, reconstruction, or resection (24 questions; 27.3%), reduction or use of an orthosis (13 questions; 14.8%), open reduction internal fixation (11 questions; 12.5%), combination of soft tissue repair and bone fixation (10 questions; 11.4%), and tendon repair or reconstruction (8 questions; 9.0%).

## DISCUSSION

First administered in 1963, the OITE was the first specialty examination taken by residents.<sup>1</sup> The test is given yearly and provides a nationally standardized method of assessing the quality of residency program

Download English Version:

<https://daneshyari.com/en/article/8799938>

Download Persian Version:

<https://daneshyari.com/article/8799938>

[Daneshyari.com](https://daneshyari.com)