Levels of Evidence for Foot and Ankle Questions on the OITE: 15-Year Trends

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GEISINGER ORTHOPAEDIC INSTITUTE
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Levels of Evidence for Foot and Ankle Questions on the OITE: 15-Year Trends

Cory T. Walsh MD

My Disclosure is in the Final AOFAS Mobile App
I have no conflicts with this presentation
BACKGROUND

• There has been a trend towards evidence based medicine (EBM) in the orthopaedic surgery literature.

• Levels of Evidence (LoE) for articles in peer reviewed journals have improved in the past decade.

• The OITE functions as a yearly indicator of orthopaedic resident knowledge and has been found to correlate with performance on ABOS Part I Examination

• There is a paucity of literature pertaining to LoE supporting OITE questions.
PURPOSE & METHODS

PURPOSE

• Determine if LoE for primary journal articles referenced within FA content domain on OITE have increased over 15 year period

• Determine if both characteristics and taxonomy have changed during this same time period

METHODS

• All questions in FA content from 1995-1997 and from 2010-2012 were analyzed. Omitted questions excluded from official OITE
METHODS

Data collection from OITE score reports included:

- Year of publication, journal, source type (primary journal article, review article, ICL, textbook)
- For each primary journal we documented the LoE for each using AAOS Levels of Evidence Guidelines

Taxonomy

- Using Buckwalter Classification questions were assigned T1, T2, or T3
  - T1 – recall basic facts
  - T2 – interpret an imaging study or make a diagnosis
  - T3 – treatment and management provided clinical situation
## BASELINE CHARACTERISTICS

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>1995-97</th>
<th>2010-12</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of included questions, N</td>
<td>132</td>
<td>78</td>
<td>54</td>
<td>--</td>
</tr>
<tr>
<td><strong>Buckwalter Classification</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T1, N (%)</td>
<td>39 (29.5%)</td>
<td>29 (37%)</td>
<td>10 (18.5%)</td>
<td>.0286</td>
</tr>
<tr>
<td>T2, N (%)</td>
<td>25 (19%)</td>
<td>15 (19%)</td>
<td>10 (18.5%)</td>
<td></td>
</tr>
<tr>
<td>T3, N (%)</td>
<td>68 (51.5%)</td>
<td>34 (44%)</td>
<td>34 (63%)</td>
<td></td>
</tr>
<tr>
<td><strong>Number of references per question</strong></td>
<td></td>
<td></td>
<td></td>
<td>&lt;.0001</td>
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<tr>
<td>1, N (%)</td>
<td>24 (18%)</td>
<td>24 (31%)</td>
<td>0 (0%)</td>
<td></td>
</tr>
<tr>
<td>2, N (%)</td>
<td>88 (67%)</td>
<td>46 (59%)</td>
<td>42 (78%)</td>
<td></td>
</tr>
<tr>
<td>3, N (%)</td>
<td>19 (14%)</td>
<td>7 (9%)</td>
<td>12 (22%)</td>
<td></td>
</tr>
<tr>
<td>4, N (%)</td>
<td>1 (1%)</td>
<td>1 (1%)</td>
<td>0 (0%)</td>
<td></td>
</tr>
<tr>
<td><strong>Types of reference per question</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At least 1 primary journal article, N (%)</td>
<td>64 (48%)</td>
<td>34 (44%)</td>
<td>29 (54%)</td>
<td>.1762</td>
</tr>
<tr>
<td>At least 1 journal review article, N (%)</td>
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<td>28 (36%)</td>
<td>27 (50%)</td>
<td>.1061</td>
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<td>At least 1 textbook, N (%)</td>
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<td>51 (65%)</td>
<td>25 (46%)</td>
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<td>At least 1 ICL, N (%)</td>
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<td>2 (3%)</td>
<td>1 (2%)</td>
<td>.7871</td>
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</tbody>
</table>
RESULTS

• 78 questions from 1995-1997, 54 questions from 2010-2012
• FAI was the most frequently cited source overall

TAXONOMY

• Change in taxonomy distribution was statistically significant – 34/54 were level T3
RESULTS

Levels of Evidence

• 6/54 (11%) of FA questions from 2010-2012 were Level I or II, while 3/78 (4%) from 1995-1997 were Level I or II
  (p level = .1035)
# RESULTS

Comparison of the LoE for questions in each time period

<table>
<thead>
<tr>
<th></th>
<th>1995-97 OITE (n=78)</th>
<th>2010-12 OITE (n=54)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions in each time period that cited level I-II evidence, N (%)</td>
<td>3 (4%)</td>
<td>6 (11%)</td>
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<tr>
<td>Yes</td>
<td>75 (96%)</td>
<td>48 (89%)</td>
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<tr>
<td>No</td>
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<td></td>
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<tr>
<td>Questions in each time period that cited level I-III evidence, N (%)</td>
<td>5 (6%)</td>
<td>8 (15%)</td>
<td>.1111</td>
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<td>Yes</td>
<td>73 (94%)</td>
<td>46 (85%)</td>
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</tbody>
</table>
CONCLUSIONS

• There has been a trend towards creating OITE questions supported by higher LoE, which reflects the improved LoE in orthopaedic FA literature

• Increase in level 1 studies in comparing 1995-1997 to 2010-2012

• Change in question taxonomy with increased emphasis on clinical management questions compared to years past

• FAI was more frequently cited source
CONCLUSION

Summary

Our results can be used to help improve resident self-study and suggest that reviewing recent FAI articles may aid OITE preparation.
References


