Classification and Relationship of Plantar Heel Spurs in Patients with Plantar Fascitis

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Our disclosures are in the Final AOFAS Mobile Application. We have no potential conflicts with this presentation.
Plantar fascitis (PF)

- Affects 1.5 - 2 million people each year
- 50-75% of PF patients have a plantar heel spur on radiographs
  - The spur lies within the flexor digitorum brevis (FDB) muscle

No current consensus regarding the effect that plantar heel spurs have for PF patients

- Does shape matter?
- Does size matter?
- Can these spurs be classified?
Purpose

- To classify the morphology & size of plantar heel spurs in PF patients
  - To determine a clinical relationship between the heel spur & pain or dysfunction

Hypothesis

- The size & shape of the plantar heel spur is directly related to pain &/or dysfunction
109 patients with PF
- Diagnosis confirmed on MRI or ultrasound (US)
- January 2012 – December 2013
- 2 treating surgeons (J.A. & J.N.D.)

Clinical assessment
- Foot & Ankle Ability Measures (FAAM)
- Visual analog scale (VAS) for pain
Radiographic Examination

- **Plantar heel spur shape**
  - 0 = Absent
  - 1 = Horizontal
  - 2 = Vertical
  - 3 = Hooked

- **Plantar heel spur size**
  - 0-5 mm
  - 5-10 mm
  - > 10 mm

- **Independent observer (A.K.)**
109 patients with PF

Male : Female 31 : 78

Mean age in years (24 – 78 yrs) 57.3

Right : Left 55 : 54

Mean FAAM (range 16.7 – 94%) 60.4/100

Mean VAS (range 3 - 10) 7.3/10
## Data cont.

<table>
<thead>
<tr>
<th>Spur Shape</th>
<th>No. of patients</th>
<th>FAAM</th>
<th>VAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>26 (23.9%)</td>
<td>58.7</td>
<td>7.5</td>
</tr>
<tr>
<td>1</td>
<td>66 (60.1%)</td>
<td>60.5</td>
<td>7.2</td>
</tr>
<tr>
<td>2</td>
<td>4 (3.7%)</td>
<td>55.8</td>
<td>6.8</td>
</tr>
<tr>
<td>3</td>
<td>13 (11.9%)</td>
<td>65.0</td>
<td>7.6</td>
</tr>
<tr>
<td>Spur Size</td>
<td>No. of patients</td>
<td>FAAM</td>
<td>VAS</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>Less than 5 mm</td>
<td>75 (68.8%)</td>
<td>58.9</td>
<td>7.3</td>
</tr>
<tr>
<td>5-10 mm</td>
<td>28 (25.7%)</td>
<td>63.1</td>
<td>7.5</td>
</tr>
<tr>
<td>Greater than 10 mm</td>
<td>6 (5.5%)</td>
<td>62.3</td>
<td>7.4</td>
</tr>
</tbody>
</table>
Discussion

- The shape of the heel spur
  - No one shape was correlated significantly different function or pain
  - \( P > 0.3 \)

- The size of the heel spur
  - No one shape was correlated significantly different function or pain
  - \( P > 0.7 \)
Conclusion

- The plantar heel spur –
  - Can be classified
    - 0=horizontal, 1=vertical, 2=hooked
    - Less than 5 mm, 5-10 mm, & greater than 10 mm

- This is very important for educating patients about their condition!
  - Spur shape/size do not correlate with function/pain

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References