Posterior tibial tendon integrity can be screened using plain anteroposterior foot radiography

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Disclosure

The authors have no disclosures.
Purpose

- To investigate the possibility that continuity of TP tendon can be screened on plain AP foot radiographs in patients that underwent foot radiograph & USG for suspicious TP tendinopathy
Radiographic evaluation

Normal symmetric TP tendon integrity

Abnormal TP tendon integrity

Abnormal TP tendon integrity
Ultrasonographic examination

Normal TP tendon integrity
Abnormal TP tendon integrity
Abnormal TP tendon integrity
Interobserver reliability

• Radiographic evaluation
• 2 observer: orthopaedic experience of 8 and 3 years, respectively
• Kappa statistics
• Using SPSS
Results

<table>
<thead>
<tr>
<th>Data summary</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>21</td>
</tr>
<tr>
<td>Age</td>
<td>51.5 (SD 15.7)</td>
</tr>
<tr>
<td>Gender (M : F)</td>
<td>5 : 16</td>
</tr>
<tr>
<td>USG finding</td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>4</td>
</tr>
<tr>
<td>tenosynovitis</td>
<td>6</td>
</tr>
<tr>
<td>tendinosis</td>
<td>8</td>
</tr>
<tr>
<td>loss of continuity</td>
<td>3</td>
</tr>
<tr>
<td>Normal : Abnormal integrity</td>
<td>10 : 11</td>
</tr>
</tbody>
</table>

- **Reliability test: Kappa 0.576**
- **17 out of 21 (81%) consistent between two observers**
- **Accuracy 16/21 (76.2%), 14/21 (66.7%)**
  - **USG: gold standard**
Discussion

- Posterior tibial tendon integrity near the navicular insertion could be screened using plain foot radiography.
- Cannot detect tenosynovitis or mild tendinosis without change of TP tendon thickness.
- Distance between medial malleolus and navicula could be a sign of PTTD on foot radiograph.