Plantar fasciitis: physiotherapy or wait-and-see?

Geoffrey Formosa MSc(Orth.Med), MSOM, SRP
Senior Physiotherapist
Primary Health Care
Who gets it?

- ATHLETES
- ELDERLY
- MIDDLE AGED
- SEDENTARY
- NON-SEDENTARY
- OVERWEIGHT
- HIGH/LOW ARCH
DEFINITION

- Plantar fasciitis is a repetitive microtrauma overload injury of the attachment of the plantar fascia at the inferior aspect of the calcaneus.
  (Harty et al 2005)
What causes it?

- PROLONGED WEIGHT-BEARING
- WEIGHT GAIN/OBESITY
- UNACCUSTOMED WALKING/EXERCISE
- THICK + STRONG CENTRAL BAND
- SIMILAR TO LIGAMENT
- LONGITUDINAL ARCH
Biomechanics

PF SUSTAINS 45% LOAD DURING WB
X ray
IMAGING STUDIES

- COMMON FINDINGS:
  - MICROTEARS
  - THICKENING
  - THICKENING
  - PERI-FASCIAL OEDema

- DEGENERATIVE VS INFLAMMATORY
SIGNS/SYMPTOMS

- Pain on standing from lying
- Pain on standing from sitting
- Pain on palpation

Bartold 2004
### Differential Diagnosis

<table>
<thead>
<tr>
<th>Condition</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 radiculopathy</td>
<td>Posterior tibial nerve compression</td>
</tr>
<tr>
<td>Periostitis</td>
<td>Osteomyelitis</td>
</tr>
<tr>
<td>Paget’s disease</td>
<td>Heel contusion</td>
</tr>
<tr>
<td>Plantar fascia rupture</td>
<td>Heel pad atrophy</td>
</tr>
<tr>
<td>Subcalcaneal bursitis</td>
<td>Seronegative arthropathies</td>
</tr>
<tr>
<td>Gonorrhea/tuberculosis</td>
<td>Infection</td>
</tr>
<tr>
<td>Vasculitis/vasculopathies</td>
<td>Gout</td>
</tr>
<tr>
<td>Soft tissue chondroma</td>
<td></td>
</tr>
</tbody>
</table>
- Calf and hamstring tightness
- Weak intrinsic foot muscles
- Weak extrinsic foot muscles
Is it fasciitis?

- INFLAMMATION

- THICKENING OF THE FASCIA AND LOSS OF BLOOD SUPPLY

- FOCUS OF TREATMENT SHOULD BE AIDING THE HEALING PROCESS
TREATMENT

- CONSERVATIVE
- USUALLY MULTIPLE
- EARLY/LATE
- VARIES ACCORDING TO PROFESSION
<table>
<thead>
<tr>
<th>CONSERVATIVE TREATMENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ORTHOSES</td>
<td>RADIOTHERAPY</td>
</tr>
<tr>
<td>STEROID INJECTIONS</td>
<td>STRAPPING / TAPING</td>
</tr>
<tr>
<td>NSAIDs</td>
<td>GALVANIC CURRENTS</td>
</tr>
<tr>
<td>HEEL PADS</td>
<td>FARADIC FOOTBATHS</td>
</tr>
<tr>
<td>ULTRASOUND</td>
<td>BELOW KNEE CASTS</td>
</tr>
<tr>
<td>SHOE MODIFICATIONS</td>
<td>PHONOPHORESIS + HYDROCORTISONE</td>
</tr>
<tr>
<td>EXERCISES</td>
<td>ACUPUNCTURE</td>
</tr>
<tr>
<td>PADDING</td>
<td>SHORT WAVE DIATHERMY</td>
</tr>
<tr>
<td>HEEL CUPS</td>
<td>CRUTCHES</td>
</tr>
<tr>
<td>REST</td>
<td>FOOTBATHS</td>
</tr>
<tr>
<td>HEAT/COLD/MASSAGE</td>
<td>LASER</td>
</tr>
<tr>
<td>NIGHT SPLINTS</td>
<td>ESWT</td>
</tr>
</tbody>
</table>
EVIDENCE

• ‘Few .... high quality randomised controlled studies exist for one of the most frequently seen soft-tissue disorders of the foot’.
  (De Vera Barredo et al 2007)
TREATMENT...

- ICE
- EDUCATION
- STRETCHING – STRENGTHENING
- ADVICE
STRETCHING
STRENGTHENING EXERCISES

Towel Curls

Toe Tapping
TRANSVERSE FRICTION MASSAGE
‘The diagnosis of PF is fairly straightforward, but the appropriate education of each patient about his or her condition necessitates considerable time and effort’

Beischer et al 2008
THANK YOU