Outpatient Physical Therapy Following Surgical Debridement of Osteochondritis Dissecans of the Talar Dome: A Case Report
Angela Serrani, BS, DPT Student
University of New England

Background

Osteochondritis Dissecans (OCD):
• Alteration of subchondral bone with disruption of the adjacent articular cartilage
• Cause unknown, hypotheses include repetitive trauma and or non-traumatic disruption of subchondral blood supply
• Suspected chondral injury with up to 50% of ankle instability episodes

Treatment Options:
• Goals: relieve symptoms and improve function
• Non-surgical: rest, immobilization, NSAIDS
• Surgical: excision of lesion, excision with curettage and/or microfracturing, filling the defect with bone graft, antegrade transmalleolar drilling, retrograde drilling, fixation, osteochondral transplantation, and autologous chondrocyte implantation

Case Description

• 27 year old female who lives on a farm with her husband and 4 young children
• History of frequent ankle sprains
• Early March 2014: “turned the wrong way” while bowling leading to increased right ankle pain, instability, and abnormal gait pattern
• Orthopedic surgeon diagnoses OCD of the talus
• April 2014: surgical debridement of OCD lesion
• Early May 2014: referred to physical therapy for post surgical care, evaluation, and treatment

Examination

Exam Findings

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Visit 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Extremity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional Scale score</td>
<td>13/80</td>
<td>27/80</td>
</tr>
<tr>
<td>Right ankle active range of motion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plantarflexion</td>
<td>46°</td>
<td>45°</td>
</tr>
<tr>
<td>Inversion</td>
<td>18°</td>
<td>10°</td>
</tr>
<tr>
<td>Eversion</td>
<td>6°</td>
<td>18°</td>
</tr>
<tr>
<td>Right ankle circumferential measurements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Figure 8</td>
<td>52 cm</td>
<td>51.5 cm</td>
</tr>
<tr>
<td>Metatarsal heads</td>
<td>23.5 cm</td>
<td>23 cm</td>
</tr>
<tr>
<td>Malleoli</td>
<td>27 cm</td>
<td>26.75 cm</td>
</tr>
<tr>
<td>Forefoot</td>
<td>23 cm</td>
<td>22 cm</td>
</tr>
<tr>
<td>Dorisflexion</td>
<td>-15°</td>
<td>7°</td>
</tr>
</tbody>
</table>

Interventions

• Exercises: Gait training, weight shifting, BAPS board, eccentric calf lowering, balance practice, LE strengthening and stretching
• Manual: Joint mobilizations and soft tissue mobilization
• Modalities: ice, vasopneumatic compression
• Tape techniques: as pictured below

Outcomes

• Minimal reduction in ankle swelling
• Small but statistically significant improvement in LEFS score
• Increased inflammation starting at visit 6
• Patient referred to orthopedic specialist for imaging of suspected tibialis posterior rupture

Discussion

The patient’s suspected tibialis posterior injury is likely the reason for her lack of progress in PT and her continued state of inflammation. Inability to weight bear with a normal foot position remained a limiting factor during exercises. PT was placed on hold and will likely resume once the secondary injury is addressed by an orthopedist.

References