**Interventions**

**Historical Review**

- The patient is a 38-year-old female who started having right wrist pain ten years ago and eventually was diagnosed with right scaphoid necrosis.
- The patient had a bone graft to replace the dead bone which healed well but after a month a half-inch raised keloid formed along the incision site.
- The patient came in to the physical therapy clinic 2 weeks status post right wrist keloid excision.
- The patient’s mother has a history of keloid formation with previous keloids that she had excised.
- The patient had a bone graft to replace the dead bone which healed well but after a month a half-inch raised keloid formed along the incision site.
- The patient’s mother has a history of keloid formation with previous keloids that she had excised.

**Interventions Used Each Session**

- **Moist Heat**
- **Continuous Ultrasound**
- **Wrist Flexion/Extension Stretches**
- **Soft Tissue Mobilization**
- **Carpal Bone Glides**
- **Rubber Band Extensions**
- **Putty Squeezes**

**Added 2nd Week**

- **Wrist Flexion/Extension with 1# dumbbells**

**Added 4th Week**

- **Supination/Pronation with Yellow Therabar**
- **Electrical Stimulation for 10 minutes**

**Discussion**

- The improvement could have been attributed to therapies provided during the 8 weeks as well as natural progression of scar healing.
- It is difficult to determine how the keloid will continue to heal since the complete process may take up to a year.
- The only changes made were increasing resistance and repetition of exercises to reduce keloid formation and decrease any functional limitations that arose from it.

**Results**

<table>
<thead>
<tr>
<th>Tests &amp; Measures</th>
<th>Initial Evaluation</th>
<th>Progress Report</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Scar</td>
<td>6cm proximal to distal</td>
<td>7cm proximal to distal</td>
<td>7cm proximal to distal</td>
</tr>
<tr>
<td>Width of scar (at widest part)</td>
<td>1cm</td>
<td>1cm</td>
<td>1cm</td>
</tr>
<tr>
<td>Width of scar (at most narrow part)</td>
<td>2mm</td>
<td>2mm</td>
<td>2mm</td>
</tr>
<tr>
<td>Height of scar (raised from skin)</td>
<td>2mm</td>
<td>2mm</td>
<td>2mm</td>
</tr>
<tr>
<td>Grip Strength using Hand Dynamometer</td>
<td>10 pounds</td>
<td>10 pounds</td>
<td>10 pounds</td>
</tr>
<tr>
<td>Pinch Strength</td>
<td>5 pounds</td>
<td>9 pounds</td>
<td>9 pounds</td>
</tr>
<tr>
<td>Optimal Outcome</td>
<td>6/12 or 50% limited</td>
<td>6/12 or 50% limited</td>
<td>4/12 or 33.3% limited</td>
</tr>
</tbody>
</table>

**References**

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