Radiographic and Clinical Outcomes of Weil Osteotomy for Bunionette deformity

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Outcomes of Weil Osteotomy for Bunionette

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Our disclosures are in the Final AOFAS Program Book.
We have no potential conflicts with this presentation.
Background

- Bunionette is characterized by varus 5th MTP joint with or without increased 4-5 IMA
- Several surgical osteotomies have been described
  - Require excessive soft tissue stripping, weak fixation
- Barouk recommended the use of intra-articular oblique distal metatarsal (Weil) osteotomy
  - No published results of outcomes
Hypothesis

- The intra-articular oblique osteotomy would yield good deformity correction and symptom resolution similar to other techniques, with the added benefit of easy and stable fixation.
Methods

- IRB approved, retrospective review
- 27 patients (31 feet) treated with Weil osteotomy for bunionette deformity
- Demographic data and chart review
- Contacted for clinical and radiographic follow-up
- Function, pain and satisfaction questionnaire
Methods – Pre and Post Radiographic measurements

a. 4-5 intermetatarsal angle
b. 5th MTP angle
c. 5th metatarsal head prominence
d. 4-5 head distance
e. 4-5 length difference
f. 5th plantar declination angle (on lateral x-ray)
Results

- 27 patients (31 feet)
  - 29 females, 2 males
  - 17 Right, 14 Left
- Ave. age at surgery 51.6
- Average f/u 29.2 months
- 20 patients available for clinical f/u
  - 16 complete pain relief, 3 significant improvement
  - 19 no activity limitation, no swelling, good cosmesis
  - One unsatisfied patient, radiographically improved
## Results

<table>
<thead>
<tr>
<th></th>
<th>Pre-op</th>
<th>Post-op</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-5 IMA*</td>
<td>9.3</td>
<td>3.8</td>
</tr>
<tr>
<td>5th MTP angle*</td>
<td>13.0</td>
<td>5.1</td>
</tr>
<tr>
<td>5th head prominence (mm)*</td>
<td>3.6</td>
<td>-0.6</td>
</tr>
<tr>
<td>4-5 head distance (mm)*</td>
<td>5.4</td>
<td>3.7</td>
</tr>
<tr>
<td>4-5 length difference (mm)*</td>
<td>12.3</td>
<td>14.1</td>
</tr>
<tr>
<td>5th Metatarsal declination angle</td>
<td>95.8</td>
<td>92.5</td>
</tr>
</tbody>
</table>

*Statistical significance achieved (p<0.05)
Discussion

- First study to report on outcomes of Weil osteotomy for treatment of bunionette deformity
- 100% union with twist-off screw
- High satisfaction rate
- 3 patients required hardware removal
References


