Short versus 'Standard' Scarf Osteotomy for Hallux Valgus Correction

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Short versus 'Standard' Scarf Osteotomy for Hallux Valgus Correction

Disclaimer

• The Authors have no conflicts to disclose
Short versus 'Standard' Scarf Osteotomy

- Scarf osteotomy is an established procedure for correction of hallux valgus deformity.

- Short osteotomy (short scarf/modified chevron) and single screw fixation is an alternative option for correction of mild to moderate hallux valgus deformity.

- Advantage of lesser soft tissue disruption, smaller scar and being cost effective.
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Aims

Comparison of radiological parameters of hallux valgus correction by a ‘standard’ scarf osteotomy and 2-screw fixation or a short osteotomy and single screw fixation
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Methods

• Prospectively collected data

• Pre- and Postoperative weight-bearing radiographs

• 37 consecutive patients
  – All with mild deformity (Intermetatarsal angle ≤13 degrees)
  – Mean Age 49 years +/- 13
  – Group 1 – Short Osteotomy 16 (43%)
  – Group 2 – Standard Osteotomy 21 (57%)
  – Both groups comparable for distribution of age and pre-operative radiological measures.

• Mean duration of follow up 3 months(2-12)
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Methods

- Radiological Measures
  - Hallux Valgus Angle (HVA)
  - Intermetatarsal Angle (IMA)
  - Distal Metatarsal Articular Angle (DMAA)
  - Medial Sesamoid position.
    - Determined by dividing metatarsal head into three equal sections and recorded as more than 50% of medial sesamoid in a section.
    - The three grades were 3(lateral), 2(central) and 1(medial)
## Short versus 'Standard' Scarf Osteotomy

### Results

<table>
<thead>
<tr>
<th></th>
<th>HVA</th>
<th>IMA</th>
<th>DMAA</th>
<th>Medial Sesamoid Position</th>
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<tbody>
<tr>
<td></td>
<td>Preop</td>
<td>Postop</td>
<td>Preop</td>
<td>Postop</td>
</tr>
<tr>
<td><strong>Group 1</strong></td>
<td>24.4</td>
<td>10.9</td>
<td>10.0</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>35.3</td>
<td>12.6</td>
<td>10.5</td>
<td>5.4</td>
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Results
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Results

Both groups were comparable, with no statistically significant difference, for improvements in all radiological parameters.
Short versus 'Standard' Scarf Osteotomy

Conclusion

Short osteotomy with single screw fixation is equally effective in correction of symptomatic mild hallux valgus deformity as compared to ‘standard’ scarf osteotomy.
Conclusion

• Short osteotomy with single screw fixation has advantage of a smaller scar and lesser soft tissue disruption.

• We believe it is also cost effective because of potential reduction in duration of surgery and the cost of the implant.