Clinical and Radiographic Outcomes of the Infinity Total Ankle Arthroplasty System: Early Results From a Prospective Single Centre Study

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Disclosure

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(3B Wright Medical)

Our disclosures are in the Final AOFAS Mobile App.
We have no potential conflicts with this presentation.
What is Infinity TAR?

- Fixed bearing
- Low profile tibia
- Recently introduced to UK
- CE marked for cementless use in the UK
- No independent short term outcomes
Methods

- All Infinity TARs performed by 3 F&A surgeons since first introduced in July 2014 until September 2015
- Prospective study. Reviewed at 3, 6 and 12 months
- Clinical assessment using ankle scores (AOS, VAS, Subjective AOFAS), and recording complications
- Postoperative radiographs reviewed
- Coronal and sagittal alignment measured pre- and postoperatively
Cohort

- Total 35 ankles in 34 patients
- Mean age 66 (range, 42-88)
- 14 females : 21 males
- Mean follow-up 12 months (range, 4-18)
- No loss to follow-up
- Preop diagnosis:
  - Primary OA in 15 cases (43%)
  - Posttraumatic arthritis in 15 cases (43%)
  - Inflammatory arthritis in 5 cases (14%)
Cohort

- COFAS ankle arthritis classification:
  - Type I in 26%
  - Type II in 31%
  - Type III in 6%
  - Type IV in 37%

- Preop coronal alignment:
  - < 10 degrees in 54%
  - 10-20 degrees in 43%
  - > 20 degrees in 3%
### Results – clinical

<table>
<thead>
<tr>
<th>Ankle score</th>
<th>Mean (range) Preop</th>
<th>Mean (range) 6/12 postop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective AOFAS</td>
<td>19/70 (2-47)</td>
<td>49/70 (44-60)</td>
</tr>
<tr>
<td>AOS</td>
<td>64 (36-91)</td>
<td>24 (1-72)</td>
</tr>
<tr>
<td>VAS</td>
<td>70 (20-100)</td>
<td>20 (0-50)</td>
</tr>
</tbody>
</table>

- **AOFAS**: American Orthopaedic Foot & Ankle Score
- **AOS**: Ankle Osteoarthritis Score
- **VAS**: Visual Analogue Score (Ankle pain)
Radiographic alignment
Radiographic assessment

<table>
<thead>
<tr>
<th>Radiographic alignment</th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tibial coronal alignment</td>
<td>1.9 degrees varus</td>
<td>1.7 deg valgus to 5.3 deg varus</td>
</tr>
<tr>
<td>Tibial sagittal alignment</td>
<td>2.8 degrees dorsiflexion</td>
<td>1.7 deg plantarflexion to 8.5 deg dorsiflexion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Radiographic Abnormality</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periprosthetic cysts</td>
<td>0%</td>
</tr>
<tr>
<td>Implant subsidence*</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Patient was not compliant and started full weight-bearing on day 1 postop
## Complications

<table>
<thead>
<tr>
<th>Complication</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intraop medial malleolar #</td>
<td>8.5%</td>
</tr>
<tr>
<td>Delayed wound healing</td>
<td>14%</td>
</tr>
<tr>
<td>Tibial osteotomy non-union</td>
<td>3%</td>
</tr>
<tr>
<td>Regional pain syndrome</td>
<td>3%</td>
</tr>
</tbody>
</table>
Conclusion

- Satisfactory early patient reported outcomes
- Reproducible alignment
- Low serious complication rate
- Longer term survival studies awaited