Sinus tarsi approach for calcaneal fractures: clinical and radiological outcomes

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Sinus tarsi approach for calcaneal fractures: clinical and radiological outcomes

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My disclosure is in the Final AOFAS Mobile App

I have no potential conflicts with this presentation
INTRODUCTION

- Classically, intra-articular calcaneal fractures were treated using an extensile lateral approach.¹²

- In recent years, the sinus tarsi approach has gained popularity because it is less invasive and could avoid complications related to larger approaches.³⁴
OBJECTIVES

To describe and evaluate clinical, radiological outcomes and complications in patients with intra-articular calcaneal fractures operated using sinus tarsi approach.
PATIENTS AND METHOD

- Retrospective chart review
- Patients admitted between 2010 and 2013
- 34 intra-articular calcaneal fractures treated using sinus tarsi approach
- Patients were treated by the Foot and Ankle Team
# RESULTS

<table>
<thead>
<tr>
<th></th>
<th>MALE</th>
<th>FEMALE</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>N°</td>
<td>30</td>
<td>4</td>
<td>34</td>
</tr>
<tr>
<td>Mean age (years)</td>
<td>41.5</td>
<td>42.5</td>
<td>41.6</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SANDERS</th>
<th>N</th>
<th>%</th>
</tr>
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<tbody>
<tr>
<td>II</td>
<td>20</td>
<td>58.8</td>
</tr>
<tr>
<td>III</td>
<td>13</td>
<td>38.2</td>
</tr>
<tr>
<td>IV</td>
<td>1</td>
<td>2.9</td>
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</table>
Mechanism of injury

- Height fall: 29
- Traffic accident: 3
- Others: 2

Mean height: 2.5 meters

Type of fixation

- Conventional calcaneus plate: 20
- MIPO plate: 3
- Screws: 9
- Other plate: 2

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<table>
<thead>
<tr>
<th>Wound complications</th>
<th>N</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Minor</td>
<td>9</td>
<td>26.5</td>
</tr>
<tr>
<td>Major</td>
<td>2</td>
<td>5.9</td>
</tr>
</tbody>
</table>

**Minor complications:** minimal wound breakdown, superficial infection (local wound care, no admission)

**Major complications:** extensive wound necrosis, deep infection (admission)

<table>
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<tr>
<th>Bohler angle (mean)</th>
<th>Preop</th>
<th>Postop</th>
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<tbody>
<tr>
<td></td>
<td>5.8°</td>
<td>22.5°</td>
</tr>
</tbody>
</table>
In our study, sinus tarsi approach shows:

- Low rate of major surgical wound complications
- A significant improvement in radiological parameters represented by Böhler angle

Our complications rates are in line with previously reported data 5,6,7
Limitations

- Retrospective
- Different surgeons
- No data collection in relation to:
  - Tobacco
  - Co-morbility

It is recommended perform measurements using functional scores


