Early weight bearing on a fixed syndesmosis. Does it matter?

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The authors have no conflicts to disclose
Introduction

• There is no consensus about when to allow weight bearing in ankle fractures treated with syndesmotic screw fixation.

• There has been no evaluation, of the radiographic fate of the syndesmosis when syndesmotic screws are retained and early weight bearing is encouraged.
Objective

To evaluate the radiographic parameters of the syndesmosis over time in patients who had a screw fixation of the syndesmosis and early weight bearing was allowed.
Methods

- Retrospective study. Consecutive series of patients

- Inclusion criteria:
  - All patients with x-ray - fluoroscopy confirmed syndesmotic injury.
  - 2 years FU.
  - Screw fixation and full weight bearing allowed at 3 weeks.
Methods

- 42 patients meet the inclusion criteria.
- Post op x-rays obtained at 2 weeks, 2 months and final FU.
- On the postoperative images we measured the medial clear space (MCS), tibia-fibula overlap (OL), tibia-fibula clear space (CS) and talar shift (TL). Screw breakage and osteolysis were also recorded.
Results

• In 83.3% cases only one syndesmotic screw was used.

• All of the screws spanned 3 cortices.

• At final FU 66% of the screws were broken.

• 30.9% presented significant osteolysis.
## Results

<table>
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<tr>
<th></th>
<th>Radiograph</th>
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<th></th>
<th>P value</th>
<th>Final</th>
<th>P value</th>
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<tr>
<td>Radiograph</td>
<td>Post op</td>
<td>2 months</td>
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<td>3.02</td>
<td>.597</td>
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<tr>
<td><strong>Tib-fib overlap</strong></td>
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<tr>
<td>Radiograph</td>
<td>Post op</td>
<td>2 months</td>
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<tr>
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</tbody>
</table>

- No difference in any measurement in subsequent radiographs (p>0.05).
- No difference in patients with intact versus broken screw (p>0.05).
Discussion

• Classic rehabilitation protocols on a fixed syndesmosis recommends non weight bearing from 3 weeks to 3 months.

• Series with early weight bearing do not provide radiologic results and include a small number of patients.

• Previous studies shows no benefit of implant removal.
Conclusion

• There is no loss of reduction nor diastasic at the syndesmosis despite allowing early weight bearing.

• Early weight bearing on a fixed syndesmosis is safe.
