The difference of surgical and radiological results between the subluxation of MTP joint and the non-subluxation in severe hallux valgus

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My disclosure is in the Final AOFAS Program Book and in the Orthopaedic Surgeon’s Disclosure Program database. I have no potential conflicts with this presentation.
Introduction

The second and third MTP joint subluxations are often complicated with severe hallux valgus deformity and cause of painful callosity. The modified Mann procedure was performed for severe hallux valgus deformity and, after that, the Weil osteotomy was performed for MTP joint subluxation at grade I and II, or the metatarsal neck shortening osteotomy for MTP joint subluxation with grade III and IV.

The aim of this study was to clarify the differences of radiological and clinical results between the subluxation of MTP joint and non-subluxation in severe hallux valgus deformity.
Patients and Methods

Patients

- **Cases:** 77 cases, 98 feet
- **Age at surgery:** mean 62.5 (37 to 87) yrs
- **Follow-up period:** mean 38.0 (6 to 98) months

**Subluxation group (S group)**
- **Cases:** 23 cases, 35 feet
- **Age at surgery:** mean 65.4 (37 to 87) yrs

**Non-subluxation group (N group)**
- **Cases:** 54 cases, 63 feet
- **Age at surgery:** mean 60.9 (37 to 82) yrs
Methods

• Radiological evaluation:
  Hallux valgus angle (HVA)
  Intermetatarsal angle 1-2 (IMA 1-2)

• Clinical evaluation:
  AOFAS Hallux Metatarsophalangeal-
  Interphalangeal Scale (AOFAS score)

S group vs N group

• HVA
• IMA1-2
• AOFAS score
Results

HVA

<table>
<thead>
<tr>
<th>Preop</th>
<th>Postop</th>
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<tbody>
<tr>
<td>S group</td>
<td>51.6 ± 7.2</td>
</tr>
<tr>
<td>N group</td>
<td>46.5 ± 6.4</td>
</tr>
</tbody>
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*P<0.01
AOFAS score

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<thead>
<tr>
<th></th>
<th>Preop</th>
<th>Postop</th>
</tr>
</thead>
<tbody>
<tr>
<td>S group</td>
<td>52.0 ± 10.0</td>
<td>94.2 ± 4.6</td>
</tr>
<tr>
<td>N group</td>
<td>55.7 ± 8.9</td>
<td>91.1 ± 5.5</td>
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</tbody>
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*: P<0.01
Case 1: 51-yrs-old female

Preop

After 18 Mos

HVA: 44°
IMA1-2: 16°
AOFAS: 60

HVA: 10°
IMA1-2: 6°
AOFAS: 95
Conclusions

1. Clinical results of the subluxation group was getting worse than those of the non-subluxation group postoperatively.

2. Almost all patients were satisfied with the surgical results. The selection of surgical procedure should be taken care of on severe hallux valgus with MTP joint subluxation.

References