Modified Proximal Scarf Osteotomy for HV

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< Open Versus Arthroscopic Microfracture for Treating Posteromedial Osteochondral Lesions of Talus>
< Jinsu Kim>

My disclosure is in the Final AOFAS Program Book.
I have no potential conflicts with this presentation.
Introduction

- **History**
  - Burutaran in 1976
  - Popularize by Weil and Borelli in the USA
  - Barouk in France

- **Strength**
  1. Frontal, sagittal, transverse displacement
  2. Inherent stability
  3. Minimal shortening of the 1\textsuperscript{st} MT.
  4. Ease of internal fixation

- **Weakness**
  1. Less **Correction power**
  2. Technically demanding

<table>
<thead>
<tr>
<th></th>
<th>HVA</th>
<th>IMA</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>scarf</strong></td>
<td>15</td>
<td>6</td>
<td>Xavier, FAI, 2001</td>
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<tr>
<td></td>
<td>19</td>
<td>6</td>
<td>Jones, JBJS, 2004</td>
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<tr>
<td><strong>PMO</strong></td>
<td>21</td>
<td>8</td>
<td>Mann, JBJS, 1992</td>
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<tr>
<td></td>
<td>26.5</td>
<td>9</td>
<td>Hans, FAC, 2005</td>
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</table>
Proximal migration of CORA (center of rotation of angulation) → increase correction power of IMA
Materials and Methods

The radiologic and clinical results of Proximal Scarf?

- 35 patients (33 female), 44 feet
- Rt / Lt : 23/21, Age : 46 yrs (14-68)
- IMA<20°, adequate bone stock
- F/U : 65 months (38-141)
- Akin osteotomy in 34 feet
Results: Radiologic measurement

HVA
- PreOP: 32.2
- PostOP: 12.5
  - P<0.05

IMA
- PreOP: 14.3
- PostOP: 5.7
  - P<0.05

DMAA
- PreOP: 18.7
- PostOP: 6.3
  - P<0.05
### Results: Clinical evaluation

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<thead>
<tr>
<th></th>
<th>Pre OP</th>
<th>Post OP</th>
<th>P value</th>
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<tbody>
<tr>
<td><strong>AOFAS</strong></td>
<td>47</td>
<td>86</td>
<td>$P&lt;0.05$</td>
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<td><strong>VAS</strong></td>
<td>7</td>
<td>1</td>
<td>$P&lt;0.05$</td>
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<td>Decreased ROM</td>
<td></td>
<td>2 cases (4.5%)</td>
<td></td>
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<td>Recurrence</td>
<td></td>
<td>3 cases (6.8%)</td>
<td></td>
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<tr>
<td>Screw removal</td>
<td></td>
<td>9 cases (20%)</td>
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- **Troughing**
  - Ours: 1 case (2.3%)
  - 1%~35% Coetzee FAI, 2003
### Discussion: Complication

| 1st MPJ stiffness |  
|------------------|------------------|
| Jones *JBJS, 2004* | 11%~41.7%         |
| Hammel *RCORAM, 2007* |                |

#### Our study

- **2 case** (4.5%)

#### Stiffness ↓:

1. avoid extensive plantar and dorsal preparation
2. early passive mobilization
3. capsule repair with maximal plantar flexion
Limitations

- Retrospective study
  Short-term follow-up

- **Translation > rotation**
  → not much proximal migration of CORA

- Subject: Moderate-severe HV group
Conclusions

- **Modified proximal Scarf osteotomy** is a comparable technique for the correction of HV.

- Further study is necessary on ‘severe’ group of deformity.

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Reference