Chronic combined injury of the medial and lateral collateral ligaments of the ankle: Clinical characteristics and results of surgical treatment

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

- Injuries of the medial collateral ligament (MCL) complex account for approximately 15% of ankle ligament traumas and are frequently associated with lateral collateral ligament (LCL) injuries\(^2\).

- We have performed simultaneous surgery on the MCL and LCL for patients with chronic combined ligamentous injury of the ankle\(^5\).

- This study aimed to clarify the pathological conditions and the results of surgical treatment in this group of patients.
We surgically treated 27 ankles of 26 patients with chronic combined injury of the MCL and LCL of the ankle.

- Male: 13 cases
- Female: 13 cases
- Mean age: 32 years (16 ~ 60 years)
- Athletes: 20 cases (10 competitive, 10 recreational)

Each patient described a definite and severe injury of the ankle after which the previously stable ankle had become unstable and symptomatic.
In 25 ankles, anatomical reconstruction of the anterior talofibular ligament (ATFL) was performed using the palmaris longus tendon\(^3\). In the remaining 2 ankles, the remnant ligament was advanced.
The MCL was reconstructed in 20 cases with medial ankle instability. The MCL were cut at the insertion of the medial malleolus. After roughening the medial aspect of the medial malleolus, 4 drill holes were made and the MCL was refixed and advanced. Seven patients with medial fibrotic impingement lesions were treated by excision of the lesions. These 7 patients had no medial ankle instability.
Evaluation

- Preoperative magnetic resonance imaging (MRI)
- Arthroscopic findings (n=24)
- Clinical and radiographic results

Mean follow-up period

20 months (12～52 months)
On T2-weighted MRI images, none of the MCL deep fibers appeared striated\textsuperscript{2}, and high-intensity signal changes were seen in the MCL.

**Arthroscopic findings**

Arthroscopy showed ruptured MCLs and surrounding synovitis in all ankles and medial fibrotic impingement lesions in 7 cases. Focal chondral lesions were found in 19 (79\%) of the 24 ankles. Chondral lesions were found more frequently on the medial side (83\%) than on the lateral side.
### Result 2

**Clinical and radiographic results**

<table>
<thead>
<tr>
<th></th>
<th>Before Surgery (Mean ± SD)</th>
<th>After Surgery (Mean ± SD)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karlsson score (points)</td>
<td>68.7 ± 5.1</td>
<td>96.0 ± 5.6</td>
<td>&lt; .0001</td>
</tr>
<tr>
<td>Talar tilt angle (varus stress) (degrees)</td>
<td>16.7 ± 4.1</td>
<td>4.6 ± 1.8</td>
<td>&lt; .0001</td>
</tr>
<tr>
<td>Talar tilt angle (valgus stress) (degrees)</td>
<td>4.1 ± 1.9</td>
<td>1.1 ± 0.3</td>
<td>&lt; .0001</td>
</tr>
<tr>
<td>Anterior displacement (%)</td>
<td>20.1 ± 4.2</td>
<td>10.1 ± 3.9</td>
<td>&lt; .0001</td>
</tr>
</tbody>
</table>

All 20 athletes returned to their pre-injury level of sports participation.
MCL insufficiency was due to medial ankle instability or medial impingement lesions. Ankle instability because of LCL insufficiency may chronically overload the MCL\textsuperscript{1}).
Our results indicated that MCL reconstruction or resection of medial impingement lesions, in addition to LCL reconstruction, was effective for patients with chronic combined injury of the MCL and LCL of the ankle.
References


