Use of the Tendoscopic Modified Das De Procedure for Recurrent Peroneal Tendon Dislocation

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NO CONFLICT TO DISCLOSE

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Our disclosures are in the Final AOFAS Mobile App.
We have no potential conflicts with this presentation.
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- Dislocation of peroneal tendons is a relatively rare traumatic injury, but it can also occur as a sports injury.
- It is often misdiagnosed as an ankle sprain, which then results in recurrent peroneal tendon dislocation (RPTD).
- We often need to perform the surgery for RPTD.
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- Surgical procedures for RPTD
  - **Open**
  - Bone block procedure (DuVries, Kelly…)
  - Reattachment of the retinaculum (Das De…)
  - **Scope**
  - Fibular groove deepening\(^1\)
  - Reattachment of the retinaculum\(^2-4\)

**Purpose**

The purpose of this study was to introduce and examine the utility of the original tendoscopic modified Das De procedure for RPTD.
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● Patients
  - 6 consecutive patients
    (5 men and 1 woman, mean age 22.8 years)
  - All the patients were injured during sports activities
    (3 soccer, 2 basketball and 1 bouldering)

● Evaluation
  - Complications
  - Recurrence
  - Return to regular sports activities
  - AOFAS ankle/hindfoot scale
  - Operation time
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- Tendoscopic modified Das De procedure

 Distal portal  Proximal portal  Tendoscopic finding

Lateral decubitus position

PP: pseudo-pouch
FCR: fibrous cartilaginous ridge
PT: peroneal tendon
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① Cleaning of lateral malleolus

- The lateral surface of the LM under a false pouch is slightly roughened with an arthroscopic burr (AB).

② Insertion of suture anchors

- Suture anchors (1.4-mm JuggerKnot) are inserted into the fibrocartilaginous ridge (FCR) through the portals.

③ Suture lasso using 18G needle and 2-0 proline

- An 18G needle, into which a shuttle relay has been looped (No. 2-0 Proline), is used as a suture lasso to thread through the superior peroneal retinaculum (SPR).
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④ Knot tying

- Six threads are picked up subcutaneously.
- The sutures are tightened by the sliding knot to reattach the SPR to the fibula.
- One limb of each suture anchor is cut with a suture cutter.

⑤ Suture bridge

- All anchor threads are passed into the eyelet of a knotless anchor (3.5-mm PEEK SwiveLock, Arthrex, Naples, FL).
- The threads are pulled to the desired tension, and the anchor is inserted into the fibula.
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- **Results**

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up (month)</td>
<td>8.2 ± 2.8</td>
</tr>
<tr>
<td>Complications</td>
<td>None</td>
</tr>
<tr>
<td>Recurrence</td>
<td>None</td>
</tr>
<tr>
<td>Return to regular sports activities</td>
<td>6/6</td>
</tr>
<tr>
<td>AOFAS ankle/hindfoot scale</td>
<td>75.5 → 100</td>
</tr>
<tr>
<td>Operation time (minute)</td>
<td>88.0 ± 23.6</td>
</tr>
</tbody>
</table>

- Compared with the initial cases, recent cases tended to have shorter operation times.
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**Discussions**

### Merit
- simple
- two incision

### Demerit
- fixation of SPR in line (single-low repair)

### Our procedure
- fixation of SPR in the surface of LM (double-low repair)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Merit</th>
<th>Demerit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lui TH. 2006. 2) Guillo S et al. 2013. 3) Miyamoto W et al. 2015. 4)</td>
<td>simple two incision</td>
<td>fixation of SPR in line (single-low repair) complicated three incision</td>
</tr>
</tbody>
</table>
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**Conclusions**

- We have described a tendoscopic double-row suture bridge peroneal retinaculum repair.
- This procedure requires some training, but it seems to be an alternative to open procedures and has more advantages than other tendoscopic surgical procedures.
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References