Treatment of Acute Achilles Tendon Rupture with a Standardized Protocol in Normal Clinical Setting

Haapasalo Heidi\textsuperscript{1}, Peltoniemi Ulla\textsuperscript{2}, Laine Heikki-Jussi\textsuperscript{1}, Mattila Ville M\textsuperscript{1}

\textsuperscript{1} Tampere University Hospital, Tampere, Finland
\textsuperscript{2} Satakunta District Hospital, Pori, Finland
Conflict of Interest (First author – H.H.)

MD, PhD, Specialist in Orthopaedic and Trauma Surgery and Sports Medicine

Main occupation
- Senior Consultant in Tampere University Hospital

Secondary occupation
- Private practitioner, Pihlajalinna DEXTRA, Tampere

Research and development
- Researcher in the programme ’Treatment Stratgies in Foot and Ankle Injuries’ (Funded by Competitive State Research Financing of the Expert Responsibility Area of Tampere University Hospital)

No other disclosures
Objectives

A treatment protocol modified from RCT studies of acute Achilles Tendon Rupture (ATR) was implemented in standard clinical care of Tampere University Hospital in 2008.

The purpose of this study was to find out whether the results and complication rates in non-selected population correspond to those achieved in high-quality RCT settings.
Patients & Methods

All patients treated due to the acute ATR in Tampere University Hospital during 2008-2014 were included in the study (n=514)

79.2% of the patients were men and 20.8% women (Table 1, Slide 4)

The mean age of the patients was 47.2 years

ATR occurred most often when playing ball games (badminton 18.3%, volleyball 8.9%, soccer 8.6%, floorball 6.8%)

The data was retrospectively collected from the patient records
Table 1. Patient characteristics

<table>
<thead>
<tr>
<th></th>
<th>OPERATIVE TREATMENT</th>
<th>CONSERVATIVE TREATMENT</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>239 (46%)</td>
<td>275 (54%)</td>
<td>514</td>
</tr>
<tr>
<td>Mean age (range)</td>
<td>39.7 (17-74)</td>
<td>53.7 (22-88)</td>
<td>47.2 (17-88)</td>
</tr>
<tr>
<td>Reruptures</td>
<td>11 (4.6%)</td>
<td>16 (5.8%)</td>
<td>27 (5%)</td>
</tr>
<tr>
<td>Wound problems</td>
<td>25 (10.5%)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Wound problems requiring surgery</td>
<td>5 (2.1%)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Thromboembolic complication</td>
<td>5 (2.1%)</td>
<td>9 (3.3%)</td>
<td>14 (2.7%)</td>
</tr>
</tbody>
</table>
Figure 1. The numbers of operatively and conservatively treated patients per year.
Table 2. Functional results

<table>
<thead>
<tr>
<th></th>
<th>OPERATIVE TREATMENT</th>
<th>CONSERVATIVE TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsatisfactory clinical outcome</td>
<td>12 (5.0%)</td>
<td>19 (6.9%)</td>
</tr>
<tr>
<td>Surgery to improve the function</td>
<td>5 (2.1%)</td>
<td>10 (3.6%)</td>
</tr>
<tr>
<td>Mean age of patients with unsatisfactory clinical outcome</td>
<td>39.1 years</td>
<td>61.2 years</td>
</tr>
</tbody>
</table>
Conclusions - 1

The treatment of acute ATRs in our clinic has changed remarkably during the years 2008-2014 towards conservative treatment.

In 2008 70% of acute ATRs in our clinic were treated operatively whereas in 2014 just 21% of the ATRs were operated.
Conclusions - 2

Our study shows that it is possible to implement a similar treatment protocol than used in the controlled study setting as a part of the daily clinical care in Level I trauma clinic.

The clinical outcome of our patients was fully comparable to the clinical results achieved in RCT settings despite the heterogeneity of the treated patients and medical staff.
References


