Treatment of isolated Ligamentum Teres (LT) partial tears by debridement with the addition of capsular tightening prevents tear recurrence.

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Disclosure

Consultant Smith and Nephew
Introduction

• LT is now recognized as an important structure of the hip joint.
• Incidence of LT tear in hip arthroscopies has been reported between 8 and 51%.
• LT tears classification includes 3 types as described by Gray and Villar.

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Introduction

• LT tears are clearly related to articular pain.
• Our previous report showed that debridement is a reliable treatment obtaining excellent outcomes and relieving pain.
• However this technique had a recurrence of 17% at a mean follow-up of 9 months\textsuperscript{4}.
The purpose of this study is to evaluate the outcomes and the recurrence of symptoms in patients who suffered an isolated LT tear and were treated with debridement plus capsular tightening.

Our hypothesis is that the recurrence of LT tears is due to the persistence of ligamentous laxity, or subtle instability. We believe that achieving a more stable joint by tightening the joint capsule will diminish the recurrence of tears.
• Retrospective review of the surgical database from the senior author from June 2009 to August 2011.
• Indication for hip arthroscopy was patients with history of hip pain, with or without mechanical symptoms, which did not respond to conservative treatment.
• Inclusion criteria were all the patients who underwent hip arthroscopy and had an isolated (no other intra-articular pathology) partial LT tear.
Methods – Surgical technique and Follow-up

• Tear debridement with a thin flexible radiofrequency probe. The capsule was tightened either by radiofrequency shrinkage or suture plication.
Methods – Surgical technique and Follow-up

- All the patients undergoing hip arthroscopy were prospectively assessed with the Modified Harris Hip Score (MHHS) and the Non Arthritic Hip Score (NAHS).
- Following surgery these Outcome Measures were repeated at 6 weeks, 6 months, and then annually.
- The mean follow up period was 13.4 months (range 6-24).

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June 2009- November 2011
 • 1574 arthroscopies

LT tears identified in 684 (43%)
 • Partial tears 619 (90%)
 • Complete tears 65 (10%)

Isolated LT tear in 27 hips (26 patients)

27 hips with isolated LT tear. All treated with debridement and capsular tightening. The capsular tightening was done by suture plication in 3 hips and by radiofrequency shrinkage in 24.

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Results

Improvement of Hip Outcome Scores after surgery (Student t test)

<table>
<thead>
<tr>
<th></th>
<th>Average pre op</th>
<th>Average post op</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHHS</td>
<td>65,2±13 (59,5-71)</td>
<td>89,3±11,6 (84,2-94,5)</td>
<td>&lt;0,05</td>
</tr>
<tr>
<td>NAHS</td>
<td>66,2±13,3 (60,4-72,1)</td>
<td>86,7±11 (81,9-91,5)</td>
<td>&lt;0,05</td>
</tr>
</tbody>
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Results are showed as: Mean + Standard Deviation (95% Confidence Interval)

• No revision surgery was required for a recurrent tear over a Mid Term follow-up period.

• One patient developed recurrent symptoms and a second procedure was performed. The only finding was a zone of synovitis in the superior capsule, and there was no LT tear.

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Discussion

• Our results reaffirm debridement as the treatment of choice for LT tears.
• This study demonstrates the evolution in the treatment of LT pathology.
• The biomechanics of the LT and its precise role as a hip stabilizer are not completely understood, nor its interactions with the other static or dynamic hip stabilizers.
Conclusions

The treatment of LT tears by radiofrequency debridement led to improvement in pain and function and, by adding an anterior capsular tightening at the time of surgery, we were able to reduce the LT tear recurrence rate from 17% to 0% at a mid term follow-up.

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References


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