Functional Results and Outcomes After Repair of Partial Proximal Hamstring Avulsions at Mid-term Follow-up

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I (and/or my co-authors) have something to disclose.

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Proximal Injuries - Evaluation

- Ecchymosis over prox post thigh 2-3 days
- TTP over the ischial tuberosity or just distal at level of retracted tendon
- +/- Palpable gap/deformity
- Weakness with resisted flexion
- Stiff-legged gait
“Sickle Sign”
It is a Partial tear
inc signal focus T2
Poor scar response

VS.

Tendinopathy
T1&PD - inc signal
T2 no bright signal
Proximal Injuries
Surgical Technique

- Transverse incision in gluteal crease
- 6 bioabsorbable anchors (3.0mm)
  - 2 luggage tag with 2.4mm
- Simple mattress

Cohen S, Bradley JAAOS2007
Operative management of partial thickness tears of the proximal HS in athletes

Bradley J, Bowman K

- 17 pts 3 males 14 females
- Avg. f/u 32 months, avg. age 43yrs
- Outcome scores: LEFS 73.3/80, Marx 7/16
- All pts RTS same level, but 1 pt w/ persistent symptoms during competitive distance running

Short term f/u, only 17 patients

Numerous complete HS tear studies, BUT

Only 1 study in literature of partial prox HS tears:
Introduction

Purpose:
- To assess postsurgical outcomes in active patients after primary repair of acute and chronic partial proximal hamstring tears

Hypothesis:
- Surgical repair would lead to improved outcomes with higher patient satisfaction, pain relief, and ability to return to sport at the same level at mid-term follow-up.
Methods

- 37 pts w/ partial proximal HS tears treated with sx by single surgeon at 2-year min f/u
- Demographic, physical exam, surgical findings
Methods

Questionnaires:

- Lower Extremity Functional Score (LEFS), Marx activity rating scale, custom LEFS and Marx scales, & total proximal hamstring score
- Pain, hamstring-related function, & satisfaction with surgery
## Results

### Patient Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
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<tbody>
<tr>
<td>Age</td>
<td>46.4 (16 – 65)</td>
</tr>
<tr>
<td>Gender</td>
<td>9 males, 25 females</td>
</tr>
<tr>
<td>Follow up, yrs</td>
<td>6.6 (2 – 12.5)</td>
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</tbody>
</table>

### Questionnaire Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Value</th>
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<tbody>
<tr>
<td>Total Marx</td>
<td>12.71 (4 – 16)</td>
</tr>
<tr>
<td>LEFS Total</td>
<td>96 (79 – 100)</td>
</tr>
<tr>
<td>Custom Marx</td>
<td>100 (1.00)</td>
</tr>
<tr>
<td>Custom LEFS</td>
<td>91 (39 – 100)</td>
</tr>
<tr>
<td>Proximal HS score</td>
<td>95 (69 – 100)</td>
</tr>
</tbody>
</table>
Results

- No difference in any outcome btw acute vs. chronic repairs.
- All (37/37) were satisfied with surgery
- 83.7% participate in strenuous activity
- 94.6% strength to be >75% & 62.2% to be 100% of their contralateral side
- No future revision sxs
- Complications: no nerve symptoms, 1 stitch abscess tx w/ abx
Discussion

- Sx repair of partial proximal hamstring avulsions leads to high functional outcomes, a high rate of return to sport, and low complication rate at 6.6-year f/u

- Non-op tx should first be attempted including PT w/ PRP injections as a possible adjunct.
References