Fate of Acute Calcific Tendinitis around the Hip Joint

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Introduction

• Calcific tendinitis
  - Most common in the rotator cuff of the shoulder

• Calcific tendinitis of hip
  - 2nd common site
  - Several case reports, only
  - Treatment methods
    • NSAIDs, Injection, ESWT, Arthroscopy...

Sarkar JS. JBJS Br. 1996

Oh KJ. Orthopedics. 2012

Pierannunzii L. CORR. 2010

Schmitz CC. Arthroscopy. 2010
Purpose

• **Natural course** of calcific tendinitis of hip joint
  - Duration & Severity of pain
  - Location of calcification
  - Size of calcification
  - Radiographic type & change of calcium deposit
  - Treatment guideline
Materials and Methods

• From January 2010 to December 2012
• Calcific tendinitis of hip joint
• Conservative / Injection / Surgery
• Minimum 1 year follow-up
• 29 consecutive patients (30 hips)
Materials and Methods

• Clinical evaluation
  – Pain VAS score

• Radiographic evaluation
  – Pelvis AP and Lateral radiographs
    – Location (muscle)
    – Size (mm) : Width x Length (Pelvis AP)
    – Radiographic Type : I, II, III
      • Type I (sharply outlined and densely structured)
      • Type II (sharply outlined and inhomogeneous or homogenous with no defined border)
      • Type III (cloudy and transparent in structure).

Gartner and Simons. CORR. 1990
Results

- Characteristics of 29 patients (30 hips)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male / Female (No.)</td>
<td>7/22</td>
</tr>
<tr>
<td>Mean Age, year (range)</td>
<td>51.5 (28-78)</td>
</tr>
<tr>
<td>Mean Follow-up, month (range)</td>
<td>17.6 (12-32)</td>
</tr>
<tr>
<td>Body Mass Index (range)</td>
<td>23.3 (16.2-35.0)</td>
</tr>
<tr>
<td>Side (Right / Left / Both)</td>
<td>16/12/1</td>
</tr>
<tr>
<td>Dominance (%)</td>
<td>59</td>
</tr>
</tbody>
</table>
Results

- Pain
  - VAS score change ($P<0.001$)
    - 7.1 (range, 5 to 10) at first visit
    - 0.8 (range, 0 to 4) at final follow-up

- Duration of symptom
  - Mean 4.4 months (range, 0.1 to 18)
  - 19 patients (20 hips) nearly complete resolved at mean 2.5 months
  - 4 patients still complained mild pain at final follow-up (VAS range 2-4)
Results

- **US-guided local anesthetic and steroid injection**
  - 2 patients
  - Acute very severe pain (VAS 9~10)
  - Medications were not effective
  - At 4 weeks, completely resolved symptom and calcification

- **Arthroscopic calcific deposit excision**
  - 4 patients
  - Prolonged severe pain (> 3 months)
  - Radiologic type I
  - Large size (range, 96-416 mm²)
  - At 3 months, completely resolved symptom. No recurrence
Results

• Radiographic course
  – Except Refused/Injection/Surgery cases
  – 20 hips

• Location of calcific deposit

<table>
<thead>
<tr>
<th>Location</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gluteus medius</td>
<td>15</td>
</tr>
<tr>
<td>Rectus femoris (Reflected head)</td>
<td>9</td>
</tr>
<tr>
<td>Rectus femoris (Direct head)</td>
<td>1</td>
</tr>
<tr>
<td>Piriformis</td>
<td>1</td>
</tr>
<tr>
<td>Iliopsoas</td>
<td>1</td>
</tr>
<tr>
<td>Capsule</td>
<td>3</td>
</tr>
</tbody>
</table>
F/55 Lt. hip pain, Onset : 2MA

VAS score 9
Radiologic Type I
Gluteus medius

Conservative Treatment
NSAIDs + Tramadol

Arthroscopic excision

3 Month f/u
VAS score 0
Conclusion

- **Conservative treatment**
  - 66% were much or completely improved at 2.5 M f/u

- **Radiographic change**
  - 50%, decrease size or complete resolution
  - Irrelevance of the radiologic type and size to the pain VAS

- **Treatment Guideline**
  - Start with NSAIDs + Tramadol
  - Very severe acute pain (VAS >9) → Injection
  - Chronic (> 3 month), Type I, Large size → Arthroscopic excision
References