LA PUBALGIE DU SPORTIF: tendinopathie d’insertion des adducteurs « Adductor-related groin pain »

Bordeaux 2012
Epidemiology

- All sports together: 5 – 18% athletes
- Soccer and hockey: -> 20% during a season
- 68% professional football players with at least one episode of pubalgia
- 50% pubalgia still painful > 20 weeks
- In collective sports, recurrence -> 44%

Swan, CORR, 2006; McIntyre, Curr Sports Med Rep, 2006; Tyler, Sports Health, 2010
Importance of a classification, but which one?

- Topographic classification (Brunet, Thèse, 1983; JTS, 1984)
  - Forme sus-pubienne: « sports hernia »
  - Forme pubienne: osteitis pubis
  - Forme sous-pubienne: adductor-related injuries

- The groin triangle:
  - ASIS
  - Pubic tubercle
  - The 3G point

« Overlapping symptoms »: or more in 25 to 90%

2

Lovell, Austr J Med Sport, 1995
Classification: time to change ??

• When classification into 12 clinical entities, long-standing groin pain might fall into 3 “primary clinical patterns”:
  - 207 consecutive athletes with long-standing groin pain
  - add-related pain as primary clinical entity in 58%
  - ilio-psoas-related pain in 35%
  - rectus abdominis-related pain in 10% (most of them: secondary and tertiary clinical entity)
  - 42% of patients with at least 2 or 3 clinical diagnosis

Hölmich, BJSM, 2007
Adductors-related groin pain

• Adductors strain
  - acute strain frequently at musculo-tendinous junction

• Adductors tendino(entheso)pathy
  - chronic damage to fibrocartilage enthesis
  - osteitis pubis and adductor enthesopathy mechanically related and coexisting
  - abnormalities in pubic bone on MRI correlates with clinical symptomatic adductor enthesopathy

• Mechanical stress and eccentric loading

Avrahami, J Can Chiropr Assoc, 2010; Davies, Skeletal Radiol, 2010; Bouvard, JTS, 2012
Anatomy

- Pectineus
- Adductor longus
- +/- Gracilis

Biomechanical characteristics:
- single joint course
- very short tendon
- fixed, fibrocartilage pubic insertion
- concerned in 44-60%

superficial layer: pre-symphysis continuity

- +/- Adductor brevis: middle layer
- Adductor magnus: deep layer
- Obturator externus
Adductor-related injuries

• Clinical examination:
  - For the 3 tests, very high percentage of agreement and kappa values for intra- and inter-observer reliability (>93% et 0.70)

Hölmich, Br J Sports Med, 2004
<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Advice, sport rest, stretching and mobilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milestone</td>
<td>Normal ROM and joint harmonization</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Core stability exercises and low load hip adduction strengthening</td>
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<tr>
<td>Milestone</td>
<td>Normative values for core stability endurance</td>
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<tr>
<td>Phase 3</td>
<td>Increase in Add strength exercises with eccentric and low pliometry; proprioception; start running</td>
</tr>
<tr>
<td>Milestone</td>
<td>No pain during squeeze test and running during 20 minutes</td>
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<tr>
<td>Phase 4</td>
<td>Agility drills and sport-specific exercises</td>
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<tr>
<td>Milestone</td>
<td>Recovery of 80% of estimated performance capacity</td>
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<tr>
<td>Phase 5</td>
<td>Return to field</td>
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Results of conservative management

- Randomized prospective trial in athletes with long-standing (median 40 ws) adductor-related pain (with >60% with osteitis pubis): active training program vs passive program

  - n=68; 2 intervention groups (AT vs PT); 8-12 weeks of treatment; evaluation at 4 weeks et 4 months
  - excellent and good objective results: 78% in AT group vs 33% in PT (p<0.001)
  - return to sport at same level without pain: 79% in AT group vs 14% in PT (p<0.001)
  - subjective assessment: « much better » by 22 AT vs 13 PT (p=0.006)

Hölmich, Lancet, 1999
Results of conservative management

• Open prospective case series in athletes with long-standing pubic bone stress and adductor-related pain:
  - n=27; 12 weeks of treatment: rest, core stabilization and muscle strengthening, graded return to sport; no weight-bearing running activities for 12 ws; f-up -> 2ys
  - 6 months after ttt: return to sport at same level for 89% in the subsequent season with only 41% pain free at that time
  - 2 years: return to sport for all athletes, without symptoms for 81% and 74% at the same level

Verrall, AJSM, 2007
Results of conservative management

• Open prospective case series in athletes with long-standing adductor-related groin pain:
  - n=44; 12-16 weeks of treatment: joint mobilization, stretching and active muscle exercises; f-up -> 22 mos
  - return to sport at same level for 77% at 20 weeks without symptoms; 4 athletes did not return to sport
  - return to sport at same level for 55% at 22 months, and 26% experienced a recurrence of groin pain
  - age was not a predictor of recurrent injuries

Weir, Phys Ther Sport, 2010; Man Ther 2011
Local corticosteroid injections

• In competitive athletes:
  - open, retrospective study with 24 athletes, f-up 1yr
  - 2 gr: without and with MRI findings of enthesisopathy and symphysitis
  - 80 mg triamcinolone acetonide under US into adductor enthesis; standardized program with strengthening and stretching exercises
  - at 6 ws, 11athletes in group 2 were still symptomatic
  - at 1 yr, no recurrence in group 1, but 94% in group 2 had a recurrence (between 6 and 8 weeks)
  - strong correlation between recurrence of pain and MRI findings

Schilders, JBJS Am, 2007
Prolotherapy

- Consecutive case series with 72 elite athletes with abdominal and/or adductors pain (level of evidence: IV)
- Monthly injections (min 2, mean 3) of 12.5% dextrose and 0.5% lidocaine
- Minimal f-up 6 mos, mean of 26 mos
- Improvement of 82% for VAS pain during sport and 78% for Nirschl scale
- 6/72 without improvement
- Return to sport in 66 (92%) athletes in average of 3 mos; in 19/21 with adductors lesions only

Platelet rich plasma

• Concentrated amount of platelets with high concentrations of growth factors in the alpha granules (PDGF, TGF \( \beta_1 \), EGF, IGF 1, BMP-12, …)

• No literature data for adductor-related groin injuries or athletic pubalgia

Merci de votre attention