Groin pain in athletes: anatomy and diagnosis

Adam Weir
@adamweirsports
Objectives

• Anatomy: highlight complex interconnections
• Diagnosis: diagnostic terminology – Doha
Interesting anatomy
Symphysis

Add longus
Tendon Apparatus Superficial Layer

Dzung Vu (2012)
PM – Pubic Modiolus
Is the whole thing loose?
Thanks: Prof E. Schilders
rectus abdominis

pyramidalis

pubic bone

adductor longus

Courtesy Vicky Earle McGraw Hill Education
Anatomy – round up

• Many superficial interconnections
• Large muscles: rectus + add longus – large insertions
Terminology and definitions on groin pain in athletes: building agreement using a short Delphi method

Adam Weir,¹ Per Hölmich,¹,² Anthony G Schache,³ Eamonn Delahunt,⁴ Robert-Jan de Vos⁵
<table>
<thead>
<tr>
<th>Term</th>
<th>First diagnosis (n=23)</th>
<th>Second diagnosis (n=13)</th>
<th>Third diagnosis (n=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adductor-related groin pain</td>
<td>6 (26)</td>
<td>2 (15)</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Adductor tendinopathy</td>
<td>6 (26)</td>
<td>2 (15)</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Adductor enthesopathy</td>
<td>4 (17)</td>
<td>1 (8)</td>
<td>1 (4)</td>
</tr>
<tr>
<td>FAI</td>
<td>2 (9)</td>
<td>1 (8)</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Adductor tendinitis</td>
<td>1 (4)</td>
<td>1 (8)</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Adductor strain</td>
<td>1 (4)</td>
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<tr>
<td>Pubic bone stress injury</td>
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<tr>
<td>Low-grade capsular/enthesis strain</td>
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<tr>
<td>Pubic bone fibrocartilage syndrome</td>
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<tr>
<td>Osteitis pubis</td>
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<td>Adductor teno-osseous defect</td>
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<tr>
<td>Adductor tear</td>
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<tr>
<td>Cam lesion</td>
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<tr>
<td>Pubic symphysis fracture</td>
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<td>Pubic marrow oedema</td>
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<td>Pubic ring failure</td>
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<tr>
<td>Pubic symphysis osteoarthritis</td>
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<tr>
<td>Combination of multiple diagnoses</td>
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<tr>
<td>Pubic plate tear</td>
<td>1 (4)</td>
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</tbody>
</table>

FAI, femoroacetabular impingement.
Does it matter?

ТОМАНТО!

ТОМАЙТО!

They said the same thing, but in very different ways.
<table>
<thead>
<tr>
<th>Open Access</th>
<th>Research</th>
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<tbody>
<tr>
<td>BMJ Open</td>
<td>Words do matter: a systematic review on how different terminology for the same condition influences management preferences</td>
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</table>
Doha Agreement Meeting terminology and definitions for groin pain in athletes
Clinical examination based classification system

1. Defined clinical entities
   – Adductor, iliopsoas, inguinal, pubic-related groin pain

2. Hip-related groin pain

3. Other causes
Considerations

• Clinical based
• Long-standing
• Underlying pathology?????
• Multiple possible (probable!)
Adductor-related groin pain

• Tenderness: adductor

• Resisted adduction = pain

Courtesy Robbart van Linschoten
Inguinal-related groin pain

• Pain in the inguinal canal region
• Tenderness: inguinal canal
• No palpable inguinal hernia
• More likely if
  — Pain: Valsalva/cough/sneeze
  — Pain: resisted abdominals
Iliopsoas-related groin pain

- Tenderness: iliopsoas
- More likely if
  - Pain: resisted hip flexion
  - Pain: hip flexor stretching
Pubic-related groin pain

• Tenderness: pubic symphysis/adjacent bone
• No specific resistance test
Terms not to be used:

• Osteitis pubis
• Athletic groin pain, athletic pubalgia
• Gilmore’s groin
• Groin disruption
• Sports groin, sportsman’s groin
• **Sports hernia**, sportsman’s hernia
Just one small step in the right direction...