MRI of Athletic Pubalgia

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Groin Pain

- Hip joint
  - Arthritis
  - Femoracetabular impingement (FAI)
  - Osseous stress injuries
  - AVN
  - Tendinopathy or tear
  - Peritendinous inflammation or bursitis
  - SCFE

- Inguinal or femoral hernia (traditional)
- “Sports or sportsman’s hernia”
“Sports Hernia”

- Originally, described as a weakness in the abdominal wall without true herniation of bowel. “incipient hernia”
- Later, a variety of predominantly musculotendinous disorders about the pubis recognized and lumped under this term, having nothing to do with hernia whatsoever
- A somewhat better term the syndrome of groin pain in athletes is athletic pubalgia
Athletic Pubalgia

- Groin pain in an individual that cannot be attributed to hip joint or hip tendon pathology, often in competitive athletes
- May be acute, but is more often chronic
- Encompasses osseous, myotendinous, as well as abdominal wall disorders
- Current terminology in fashion is “core (muscle) injury”
Etiology

- Sports with rapid change in direction and twisting or kicking
  - American football
  - Soccer
  - Rugby
  - Australian rules football
  - Hockey
  - Trail running (?)
Anatomic Structures Involved

Bones - pubic symphysis
Tendons and muscles
  Rectus abdominis
  Adductors, long and short
Inguinal ligament and abdominal wall muscles
Injury Patterns

- Osteitis pubis - bone marrow edema
- Rectus-adductor “pubic plate” injury
- Adductor longus tendinopathy/tear
- Short adductor tendinopathy/tear
- Muscle tear
Pubic bone marrow edema, Osteitis Pubis
Radiographic Signs

- Primary (symphyseal) cleft
  - Normal physiologic cleft between pubic bones, closed superiorly and inferiorly by cartilage and ligaments

- Secondary cleft
  - Fluid extending from the primary cleft and tracking parallel to the inferior margin of inferior pubic rams. Related to tears of the short adductors (adductor brevis, gracilis, pectineus)

- Superior cleft
  - Fluid tracking parallel to the inferior margin of the superior pubic ramus. A marker of tear of the adductor longus or rectus-adductor aponeurosis.
Symphyseal Cleft Injection
Radiographic Signs


Large FOV Cor T1 and T2FS
Central Pubic Plate Disruption
22 y.o. Running Back
29 y.o. Quarterback with 2 weeks of Groin Pain
56 y.o. Runner with RT Groin Pain
Incipient Hernia = Gilmore’s Groin

78 y.o. Man with Prostate Ca and XRT
**Take Home Points**

- Athletic pubalgia is an important clinical syndrome with complex anatomy
- Primarily involves myotendinous structures about the pubic symphysis
- Some interaction with inguinal canal injury and traditional hernia exists
- At least 4 injury areas need to be assessed:
  - Osteitis pubis - bone marrow edema
  - Rectus-adductor “pubic plate” injury
  - Adductor longus tendinopathy/tear
  - Short adductor tendinopathy/tear