MRI Evaluation of the “Sportsmans’ Hernia” and Associated Causes of Athletic Pubalgia

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Learning objectives:

1. Learn functional definitions of “sportsmans’ hernia”, “sports hernia”, and “athletic pubalgia”
2. Understand the musculoskeletal anatomy of the pubic symphysis, its surrounding myotendinous attachments, and their interrelated biomechanics with regard to athletic activities.
3. Recognize the MRI findings associated with rectus abdominis, adductor longus and pubic symphysis injury as well as rectus abdominis/adductor aponeurotic plate disruption.
4. Develop imaging tools including an MRI protocol dedicated to diagnosis of these pathologies.
5. Be aware of the numerous confounding causes of athletic pubalgia and diagnose them accurately with MRI.

What is a sportsmans’ hernia or sports hernia?

- Definitions vary widely
- No palpable or visible hernia
- Most often related to defect or disruption at the rectus abdominis pubic attachment
  - Rectus abdominis tendon tear
  - Rectus abdominis/adductor aponeurosis disruption
  - Adductor tendon avulsion
- Injury may create deficiency of the posterior inguinal wall, simulating hernia
- Athletic pubalgia is generally a better term for clinical syndrome

How do I image athletic pubalgia or the sportsmans’ hernia?

- Dedicated pubalgia protocol recommended
  - Surface coil over the pubic symphysis
  - All sequences centered on the symphysis
- 4 planes including axial oblique
- 20 – 26 FOV
- At least one large FOV sequence to assess for pathology remote from the symphysis, causing radicular symptoms
  - Consider dedicated imaging of the ipsilateral hip
    - Direct MR arthrography with intraarticular anesthetic
  - Reserve pubalgia protocol for select scenario of athletic pubalgia

What are the MRI findings?

- Majority of pathology is centered at the rectus abdominis/adductor aponeurosis
  - Aponeurotic disruption from its pubic attachment
    - Midline disruption
    - Lateral disruption
  - Tear at the lateral edge of the rectus abdominis or the aponeurosis
  - Aponeurotic degeneration
- Isolated adductor tendon origin pathology
- Osteitis pubis

What are the common confounders?

- Ipsilateral intrinsic hip pathologies
  - Labral tear
  - CAM type FAI
- Muscle strains
- Osseous pathology
  - Stress fracture
  - Osteoid osteoma
- Apophysites
- Visceral pelvis pathology
  - Endometreosis
  - IBD
- Nerve entrapment syndromes
  - Ilioinguinal
  - Obturator
  - Pudendal
- Soft tissue masses
- True Hernia
References


