Soft Tissue Pathology: Gluteal, Hamstrings, Sports Hernia & Ischiofemoral Impingement

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Talk Outline

- Anatomy
- Tendons/Muscle
  - Gluteus minimus
  - Gluteus medius
  - Iliopsoas
  - Hamstrings
  - Snapping Hip
  - Sports Hernia
  - Ischiofemoral Impingement
- Nerve-Related Issues
  - Sciatic
  - Piriformis Syndrome

Tendon Pathology

Anatomy

Gluteal anatomy

Dwek et al. MRI Clinics North Am 2005
Pfirrmann et al. Radiology 2001

Gluteal anatomy

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Pfirrmann et al. Radiology 2001

Tendon Pathology

Rotator Cuff Tear of the Hip

Rotator cuff tear of the hip

Small full thickness cuff tear

Tendon Pathology

Small full thickness cuff tear

Full thickness cuff tear

Tendon Pathology

Full thickness cuff tear

Snapping Hip Syndrome

- Sudden, painful audible snapping of the hip which can be reproduced during specific movements of the hip.
- Typically occurs during flexion-abduction-external rotation (frogleg position) to the neutral position.
- Typically observed in athletic individuals.
- DDx
  - Intra-articular
    - Labral tear
    - Chondral defect
    - Intra-articular bodies
  - Extra-articular
    - Iliopsoas tendon
    - Iliofemoral ligament
    - Iliotibial band


Iliopsoas Snapping Hip

Hip in Frogleg
Extending Hip
Hip in Extension

Tendon Pathology

External Snapping Hip Syndrome

- Iliotibial band (tensor fascia lata anteriorly and gluteus maximus posteriorly)

- Iliotibial band can be thickened - lies posterior to greater trochanter with extension and snaps forward with flexion

- Thickening and fibrosis of anterior border of gluteus maximus can occur following repeated i.m. injections (vits, analgesics or antibiotics)

- Trochanteric bursitis between iliotibial tract and greater trochanter causes pain and snapping
Tendon Pathology

Hamstring Anatomy

Hamstring Tear and Peritendonitis

20 year old cross country runner

Hamstring Tear and Peritendonitis

Hamstring Peritendonitis

19 year old cross country runner

Hamstring Peritendonitis and Partial Tear

26 year old marathon runner
Athletic Pubalgia (Sports Hernia)

- Other names: Sportsman’s hernia, hockey hernia, Gilmore’s groin, osteitis pubis, adductor syndromes.
- Defined as athletic groin pain with multiple etiologies.
- Patients present with pain in the inguinal region. Pain with palpation is present at the external inguinal ring without palpable hernia.
- Opposing interconnected tendinous attachments play a role in pubic symphysis stability (esp. the rectus abdominis and adductor longus). Injury to one tendon leads to injury of the opposing tendon resulting in chronic groin pain.
- Imaging:
  - Large FOV (28-32 cm to include both hips & ASIS using body coil) coronal STIR and T1, Ax T2 FSE with FS.
  - Dedicated smaller 20 cm FOV with surface coil placed at midline for OSl Ax PD FSE & T2 FSE with FS, Sag T2 FSE with FS.

Tendon Anatomy

Athletic Pubalgia

Muscle Pathology

Ischiofemoral Impingement (IFI) Syndrome

Abnormal T2 signal in the mid to distal portion of the quadratus femoris muscle with relatively small ischiofemoral space (1.4 cm, normal subjects 2.3 +/- 0.8 cm); these findings may be seen in ischiofemoral impingement syndrome / hip pain.

Muscle Pathology

Radiation-Induced Myositis

Muscle-Nerve Pathology

Nerve Anatomy

Muscle-Nerve Pathology

Nerve Anatomy

Piriformis Syndrome


--40-year-old man with piriformis syndrome

Nerve-Related Pathology

Piriformis Syndrome

--40-year-old man with piriformis syndrome

Summary

- Tendons/Muscle
  - Gluteus minimus
  - Gluteus medius
  - Iliopsoas
  - Hamstrings
  - Snapping Hip
  - Sports Hernia
  - Ischiofemoral Impingement

- Nerve-Related Issues
  - Sciatic
  - Piriformis Syndrome

I would like to extend a Special Thanks to...

- Kate Stevens, MD
- Chris Beaulieu, MD, PhD
- Garry Gold, MD
- Brian Suh, MD
- Samuel Fuller, MD
- Nepenthe Fong, MD

Happy Walking!

Thank you!

for an updated syllabus, please feel free to email me..
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