Trochanteric Pain Syndrome and Hamstring Pathology

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Trochanteric Pain Syndrome:
• Most commonly caused by gluteus minimus and medius tendon abnormalities
  • Trochanteric bursitis: uncommon
    – 20% of symptomatic patients
    – Not actually inflamed
    – Not associated with pain
  1 Kong A et al. Eur Rad 2007; 17:1772
  2 Long SS et al. AJR 2013; 201:1083
  3 Sylva F et al. Clin Rheumatol 2008; 14:92
  4 Blankenbaker DG et al. Skeletal Radiol 2008; 37:503

Trochanteric Bursal Fluid + Glut Min Tear

Trochanteric Bursitis: Septic

Note posterior location of bursa

Trochanteric Bursa: infection + gas
Gluteal Tendon Pathology:

- Tendinosis: hypoechoic, no defects
- Partial tear: anechoic clefts
- Complete tear: discontinuous tendon
- >2 mm cortical irregularity (depth)
  - Associated with tendon tear
  - Positive predictive value = 90% (xray)*

*Steinert et al. Radiology 2010; 257:754
Fenestration: pelvis
• 22 tendons in 21 patients
• Gluteus medius (11), hamstring (8),
gluteus minimus (2), tensor fascia lata (1)
• Marked or some improvement: 82%


Gluteus Maximus and Minimus
• Randomized controlled: 30 patients
• PRP versus fenestration alone
• Significant improvement at weeks 1 and 2
• Approximately 80% had long term
improvement: up to 1 year follow-up
• No difference between treatment groups¹
• Two injections: more sustained response²


Potential Treatment Algorithm:
• If bursa: aspirate, inject steroids
• If tendinosis:
  – Tenotomy or fenestration
  – Inject steroids superficial to tendon
    • 72% of patients significantly improved³
• If tendon tear: platelet-rich plasma injection?

³Labrosse, et al. 2010 AJR 2010; 194:202
Semimembranosus: tendinosis

Conjoined Biceps Femoris-Semitendinosus: tendinosis

Conjoined BF-ST Tendon: partial tear

Snapping Conjoined Long Head Biceps Femoris, Semitendinosus + Sacrotuberous Ligament

From Bierry et al. Radiology 2014; 271:162

Spencer-Gardner LS et al. PMR 2015; 7:1102

From Bierry et al. Radiology 2014; 271:162
Hamstring: complete tear with retraction

Biceps Femoris: remote tear

Semimembranosus: remote tear

Semimembranosus: remote tear

Hamstring Tear:
FTT: Conjoint
PTT: semimembranosus

Semimembranosus: remote tear

Seroma
Take-home points

- Greater trochanteric pain syndrome:
  - It is not bursitis
  - Gluteal tendon pathology
- Hamstring pathology
  - Proximal: often limited utility
  - Massive tears: often need MRI