An Osteopathic approach to the Athletic Hip

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CASE STUDY

- 35 yo f with 2 years of right hip pain
- Referred by colleague who is on same indoor soccer team
- Patient in not involved in soccer because of pain
- 3 intra-articular injections/PT – no benefit
- MRI shows labral tear – surgery recommended
• “Although Greater Trochanter Pain Syndrome was previously thought to be caused by inflammation of the bursa, recent histological investigation could not confirm this hypothesis. In 2001 a study of the classification of hip disorders showed that edema around the greater trochanteric tendons…”
“(seen on sonography), but not sonographic signs of trochanteric bursitis, was closely related to the symptoms of GTPS.8 Magnetic resonance imaging also suggests that pathologic findings of the gluteus medius is associated with GTPS.”

• Study suggested that steroid injection may help
FLOW OF ASSESSMENT

Anatomical  Functional  Somatic Dysfunction  Treat and reassess
GENERAL MSK CATEGORIES

• **Traumatic:** damage
  • sprains, trains, fractures
  • REST IS NEEDED
  • Analgesics/anti-inflammatory
  • Physical therapy

• **Acute Overload:** inflammation
  • Steroid injection
  • Physical therapy

• **Chronic Overuse:** scar tissue
  • Analgesics
  • +/- inflammation
  • Physical therapy

• **Somatic Dysfunction:**
  • Painful movement w/o anatomical change

• **Mix**
**Evaluation & Rehabilitation Principles**

- **Rule Out:**
  - Anatomical problems
  - Acute Surgical issues

- **Imaging:**
  - X-ray: fracture, mass
  - MRI: surgical

- **Treatment:**
  - Relative rest
  - NSAIDS: +/-
  - Physical therapy

- **Return to play:**
  - Surgical or fracture: have definite timeline
  - Soft Tissue: based upon:
    - Pain
    - function: strength, flexibility, balance
  - Shut down??
    Great reason why athletes try to “work through it”
PELVIC OUTLET SYNDROME

• Non-specific term – not a ICD-9 dx (ICD-10??)

• Conceptual idea to help explain:
  • Nonspecific Neurological presentation
  • Nonspecific History and Exam
  • Normal imaging
  • Abnormal imaging and unsuccessful standard care

• Great opportunity for OMT!!
Joints (21):
- 5 lumbar x 3 articulations
- Lumbo-sacral
- 2 sacroiliac
- 2 aceto-femoral
- Pubic bone

Ligaments:
- Support all the above joints

Muscles:
- Lumbar spinal muscles
- Latisimus dorsi
- G. Max, medius, minimus
- Piroformis
- Pelvic floor
- Psoas
- ITB
- Inter vs exter rotators
- Adductiors
- Hamistrings
- Abdominal muscles
HIP PATHOLOGY

• Snapping Hip
• Bursitis
• Stress fractures
• Age:
  • Peds: apophysitis
  • Masters: DJD

• Lateral hip pain
  • gluteus medius

• Posterior hip pain
  • SI pain
  • Gluteus Maximus
  • Piriformis

• Lumbar muscles spasms into hip
Snapping Hip Syndrome
Tendon moving over femur causing a “catch” that feels or sounds like a click or snap

Iliopsoas
- Thompson Test – lack of extension of hip, or pain

- Ilio-tibial Band
- Ober test – pain or hip stays elevated
**BURSITIS**

- **Treatment:**
  - Rest
  - NSAIDS: +/-%
  - Physical therapy
  - Steroid injections

- **Is this:**
  - Acute overload
  - Chronic overuse
  - Somatic dysfunction
STRESS FRACTURE

• Gradual increase of pain with decrease in performance
• Deep intra-articular pain
• Pain with passive ROM and hopping in a high performance athlete
• Femur fractures are “high risk” – high likelihood of through-and-through fracture
GROIN PAIN

- Common – soccer and hockey
- Due to stability nature of adductors, hard to heal
- Tender to palpation in the groin
- Painful with hip abduction
- Rehab: slow and often recurs because return to play too soon
- Can take many weeks, months
STRESS FRACTURE
STRESS FRACTURE

- Absolute Rest: SHUT DOWN
- Look for somatic dysfunctions
- NEED physical therapy
- Return to play: painless walk → painless running
SPECIAL POPULATION

• Pediatric
  • Growth plates are weaker than tendons
  • NEVER, NEVER diagnose a soft tissue injury without an x-ray
  • If maximal tenderness is at bone – fracture or apophysitis, NOT muscle strain

• Masters
  • Soft tissue: lose of fluid and elasticity
  • Repair takes longer
  • DJD can be an co-morbid condition
  • DJD may not even be relevant
  • DJD may be a persistent underlying condition
PEDiatric - APOphysitis

- Common
- TTP at these sites
- Acute onset
- X-ray may show asymmetric growth plates
- >1.5 cm displacement – ortho referral
Masters - Hip DJD

- >15 degrees difference on hip internal rotation
- Hard end feeling in hip passive ROM
  - Extension/flexion
  - Internal/external rotation

- Surgical Candidates
  - Progressive pain
  - Decrease in function
  - Radiographic evidence of DJD
  - (failure of rehab to improve condition)
MASTERS: DJD
CONCLUSION ON THESE DIAGNOSES

• These diagnoses are “anatomical”
  • you can do imaging to identify
  • Actual tissue damage is considered the underlying problem
  • BUT…. 
• A functional component is not excluded
• Functional problems are often the underlying cause
• An Osteopathic exam seeks to find the “dys”functional components
• OMT seeks to treat somatic dysfunctions so as to make the body “functional.”
OSTEOPATHIC REHABILITATION PRINCIPLES

- **Active component of MSK:**
  - Governed by Alpha motor control
  - Improved by exercise, training

- **Passive component of MSK**
  - Mechanoreceptors: golgi tendons, musc. Spindle
  - Reciprocal inhibition
  - Sensori-motor:
    - Feedback
    - Feedforward: shoulder and TrA