Extra-Articular Impingement And Soft Tissue Injuries

AAPM&R

Saturday, October 22\textsuperscript{nd}, 2016

Peter J. Moley, MD
Assistant Attending Physiatrist
Fellowship Director
Hospital for Special Surgery
Extra-articular Femoro-Pelvic Impingement

1. Subspine Impingement
2. Ischiofemoral Impingement
3. Trochanteric Pelvic Impingement
Subspine Impingement

- Subspine impingement is the most commonly seen an mechanism has been describe
  - The inferior aspect of the femoral neck impacts the Anterior Inferior Illiac Spine (AIIS)
  - Physical exam consists of bringing a patient into straight flexion
  - Three variants have been describe using CT Scans
  - Surgery involves a resection of the AIIS, generally in conjunction with the treatment of FAI
Morphologic Classification

- **Type I**
  - Upsloping
  - Clear Space

- **Type II**
  - Flat
  - Loss of Clear Space

- **Type III**
  - Downsloping
  - Tip extends distal to acetabular rim
Ischiofemoral Femoral Impingement
Ischiofemoral Femoral Impingement

- There is increasing evidence for the presence of a previously unrecognised impingement-type condition around the native hip joint.
- Decreased space between the ischium and lesser trochanter.
- Caused by abnormal contact between the lesser trochanter & ischium, and presents as atypical groin and/or posterior buttock pain.
Trochanteric Pelvic Impingement

• The mechanics involved with pelvic structure and femoral version can lead to impact between the trochanter and the pelvis
  – Most often seen with excessive femoral anteversion
• In addition the size of the trochanter and height can create conflict between the trochanter and pelvis
• Relative neck length can play a role in trochanteric pelvic impingement
• Pain with Abduction and External Rotation (modified FABER)
1. The femoral offset was measured as the distance between the long axis of the femur and the hip joint center (offset = AB) [2].
2. The trochanteric height was the height of the greater trochanter relative to the center of the femoral head (distance AF).

3. The variation in location of hip joint centers on the pelvic wall was calculated as the difference in height of each hip from the biischial line (hip center height difference = distance CD).
4. The internal diameter of the medullary canal was determined at a level of 2 cm distal to the lower border of the lesser trochanter (distance HI).
Tendonosis and Bursitis

• Think back to the layered theory and the “contractile layer”

• Much more tendonosis than bursitis

• Ideally suited for comprehensive non-operative care
Layer 3: Contractile Layer

**Structures:** All musculature including lumbosacral musculature

**Purpose:** Dynamic stability

Direct of Indirect on Hemi-pelvis – “Pubalgia”

- **Medial**
  - Adductor Tendinopathy
  - Rectus Tendinopathy
- **Anterior**
  - Hip Flexor Strain
  - Psoas Impingement
  - Sub-Spine Impingement
- **Posterior**
  - Proximal Hamstring Syndrome
- **Lateral**
  - Peritrochanteric Space Disorders
Athletic Pubalgia

• Core Muscle Injury, Sportsman’s hernia, etc.
• Failure around the pubic cleft in a generally active population
• “Groin Strain” is often the working diagnosis but a more complex group of issues exists
• Most common in cutting, kicking and explosive sports
• Must have a good understanding of other causes of groin and lower abdominal pain
Athletic Pubalgia/Core Muscle Injury
Thank You