Arthroscopic Treatment of Hip Injuries

A.J. Detterline, M.D.
Towson Orthopaedic Associates
Towson Sports Medicine
Disclosures

• None
Anatomy

- Hip
  - Ball and socket joint
  - Concentric
Anatomy

- Labrum
  - Cartilaginous rim
  - Surrounds acetabulum
  - Creates suction seal of hip joint
Causes of Hip Pain

• Muscle / Tendon Injuries
  • Adductor Strain
    • Groin Pull
  • Proximal Quadriceps Strain
    • Common in kicking or sprinting sports
  • Proximal Hamstring Strain
    • Water Skiing
    • Avulsion off ischial tuberosity
• Sports Hernia
  • Recognized more frequently
Causes of Hip Pain

- Bone
  - Dislocation
  - Femoral neck stress fractures
    - Common in endurance sports
  - Femoroacetabular Impingement
    - FAI
Dislocation

• Location
  • Anterior
    • Less common
  • Posterior
    • Most common in MVC
    • Rare in sports
      • Fall onto flexed knee

• Associated Fracture
  • Acetabular wall
    • Determines stability
  • Labral injury
  • Cartilage injury
Dislocation

• Diagnosis
  • X-ray
  • CT Scan

• Treatment
  • Emergent reduction
    • Closed vs. Open
  • Arthroscopic
    • Loose bodies within the joint once reduced
Dislocation

- Long Term Considerations
  - Avascular Necrosis
  - Development of Arthritis
  - Recurrence of Instability
Impingement

• What is it?
  • As hip is taken through range of motion, contact between proximal femur and rim of acetabulum
  • Result is abnormal stresses placed on articular cartilage and labrum
Anatomy

- Proximal Femur
  - Head / neck junction developmental variation
  - Abnormal contour or offset of femoral head and neck
Anatomy

- Acetabulum
  - Socket of hip
  - Variable depth and tilt or version
Impingement

• How does it occur?
  • Abnormality of femoral side
    • CAM lesion
      • Loss of normal contour of anterior femoral head/neck junction
Impingement

- Abnormality on acetabular side
  - Overcoverage of femoral head
  - Pincer lesion
Impingement

• What is the result?
  • Labrum is crushed between bony abnormalities leading to a tear
Labral Tear

- The labral tear is a result of the bony abnormality about the hip
- Rarely occurs without impingement
- Treatment must address the labral tear but also the underlying bony abnormality that caused tear
Physical Exam

• Hip Range of Motion
  • Usually loss of internal rotation secondary to bony impingement
  • May also include loss of hip flexion
Physical Exam

- Pain
  - Flexion
  - Adduction
  - Internal Rotation
Diagnosis

- Radiographs
  - AP pelvis
  - Frog lateral hip
Advanced Imaging

- MRI
  - May diagnose labral tear
    - Very common but not always symptomatic
    - Contrast not usually necessary
Advanced Imaging

- 3D CT Scan
  - Helpful in showing three dimensional view of bony abnormality
Treatment

• Nonoperative
  • Physical Therapy
    • Pelvic stabilization
    • Core strengthening
  • Relative Rest
  • Anti-inflammatories
    • NSAIDs
Treatment

• Nonoperative
  • Intra-articular cortisone injection
    • Usually performed under fluoroscopic guidance
    • May provide both diagnostic and therapeutic benefit
Operative Treatment

• Hip Arthroscopy
  • Relatively new procedure
  • Gained popularity in last 10-15 years
  • Better techniques
    • Better understanding of pathology
Operative Treatment

- Hip Arthroscopy
  - Outpatient procedure
  - Distract hip joint
Hip Arthroscopy

• Evaluate and Treat
  • Labral Tears
  • Chondral Injuries
  • Synovitis
• Bony Impingement
  • CAM Lesion
    • Femoral side
  • Pincer Lesion
    • Acetabular side
Rehabilitation

- Protected weight-bearing
  - 2-6 weeks
- Early range of motion
Rehabilitation

- Gradual strengthening
  - Core
  - Hip abductors
  - Quads
  - Hamstrings
Return to Sport

- 3-4 months institute running program
- Full return to sport in 4-6 months
Questions???
References

References