Acetabular Undercoverage

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WASHINGTON ORTHOPAEDICS & SPORTS MEDICINE

Case Presentations: Borderline Dysplasia

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Radiographic Comparison

Patient A

- Risser 5, closed prox femoral physis
- LCEA = 18
- ACEA = 18
- Tonnis Angle = 14
- Femoral Neck-Shaft angle= 135
- Alpha angle = 50

Patient B

- Risser 5, closed prox femoral physis
- LCEA = 18
- ACEA = 18
- Tonnis Angle = 12
- Femoral Neck-Shaft angle= 135
- Alpha angle = 80

Treatment Recommendations

- Patient A?
- Patient B?

Physical Exam Comparison

Patient A

- +FADIR
- Supine Internal rotation 45 degrees
- Femoral anteversion 15 degrees
- Normal gait
- Symmetrical FABER
- Good strength; symmetric to contralateral
- Beighton Score 6

Patient B

- +FADIR
- Supine Internal rotation 0 degrees
- Femoral anteversion 0 degrees
- Normal gait
- Asymmetrical FABER (10 cm difference)
- Good strength; symmetric to contralateral
- Beighton Score 0

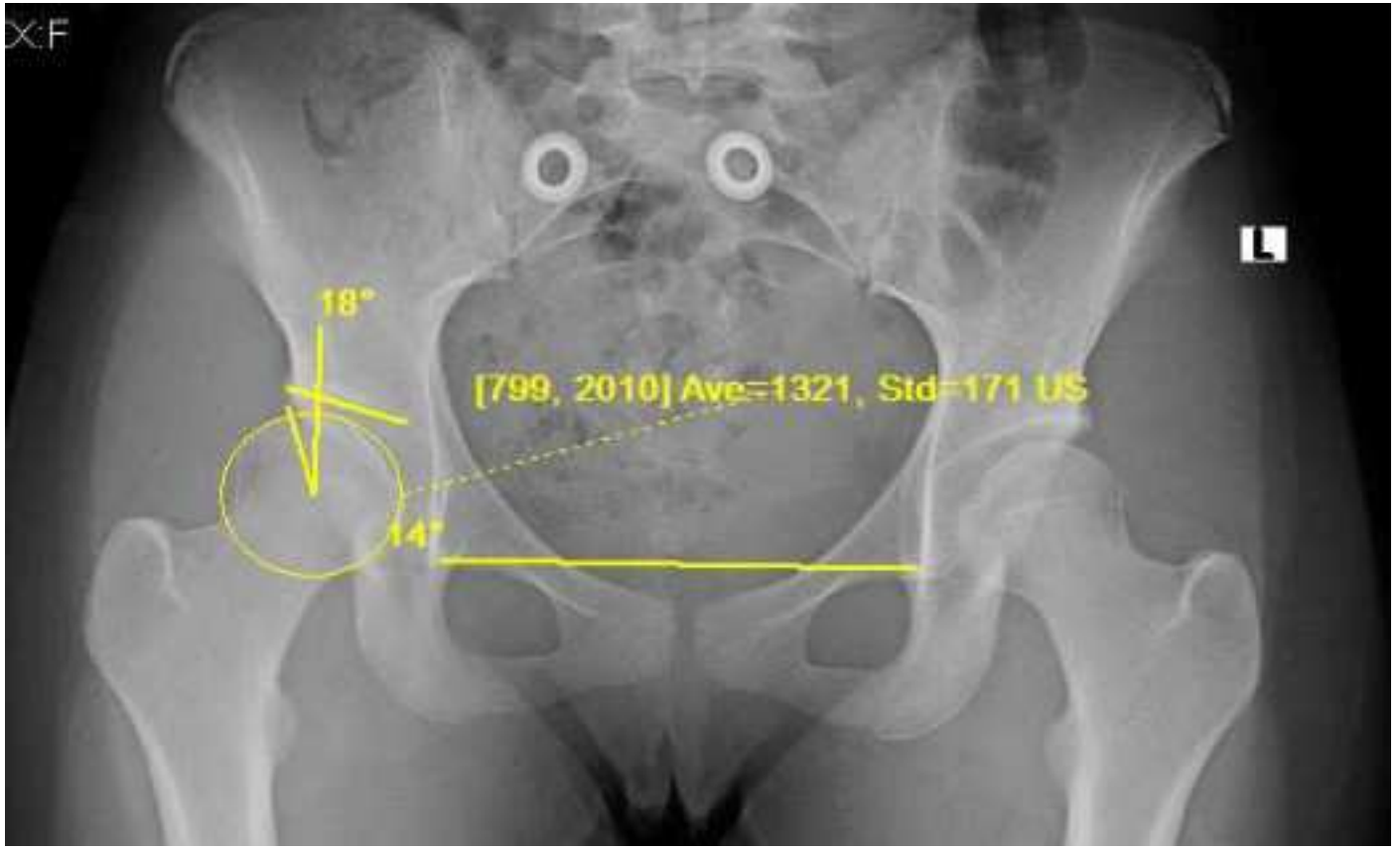
Treatment Recommendations

- Patient A?
- Patient B?

Patient A: 14 yr old female gymnast

- 2 yrs R hip pain insidious onset
- Failed PT
- Unable to participate
- Groin pain, no lateral pain
- Pain with ADLs
- MRI Arthrogram
  - Anterosuperior labral tear in slightly hypertrophic labrum
  - No chondral damage

14 yr old female gymnast



14 yr old female gymnast

14 yr old female gymnast

Patient B: 22 yr old male Division 1 Hockey Goalie

- 6 months of Right hip pain insidious onset
  - Groin only
- Decline in and pain with performance
- No pain with ADLs
- MRI Arthrogram
  - Anterosuperior labral tear in slightly hypertrophic labrum
  - No chondral damage

22 yr old male Division 1 Hockey Goalie

22 yr old male Division 1 Hockey Goalie

22 yr old male Division 1 Hockey Goalie

Treatment Recommendations

- Patient A?
- Patient B?

My Recommendations

14 yo female gymnast

- Recommended combined arthroscopic labral repair and open PAO
- Refused PAO after consultation with PAO surgeon
- Opted for arthroscopic labral repair, capsular plication.

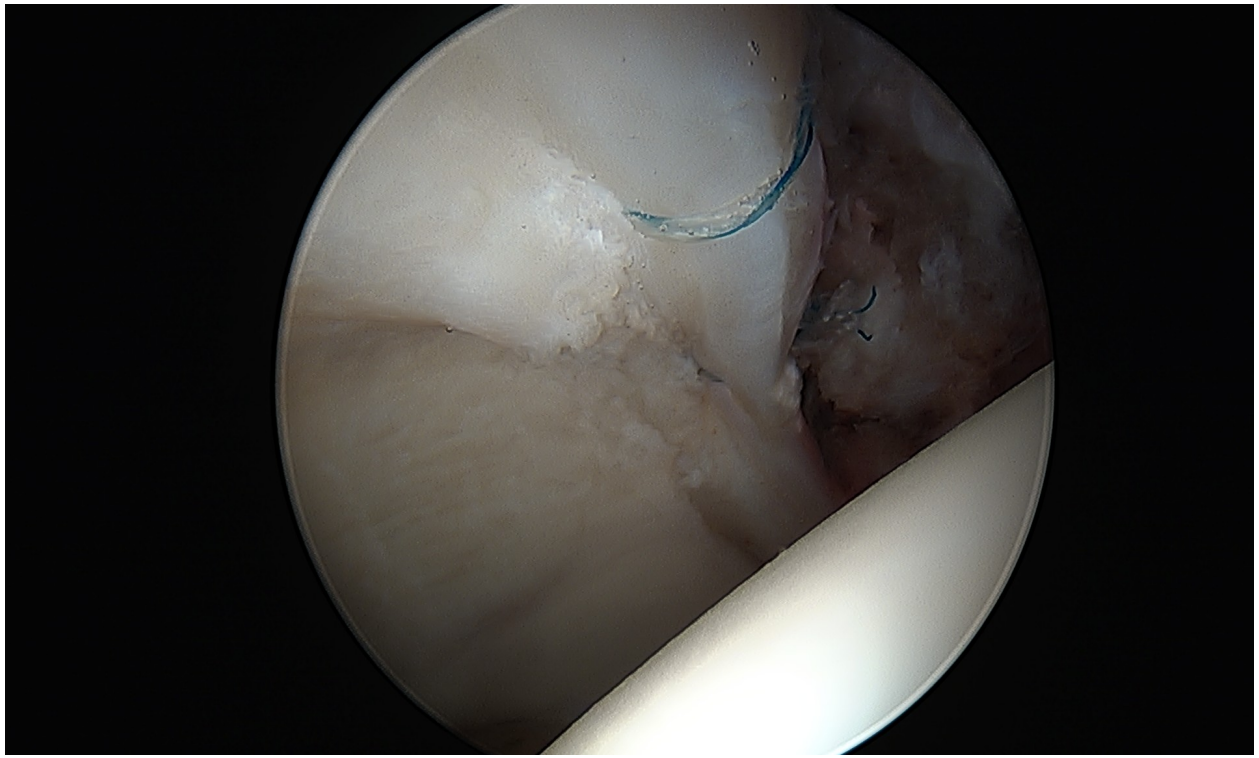
22 yo male hockey goalie

- Sought several opinions
- Two recommended PAO
- Recommended arthroscopic only femoral osteoplasty and labral repair

Outcome

<u>14 yo female gymnast</u>

- Arthroscopic labral repair, capsular plication performed.



Outcome

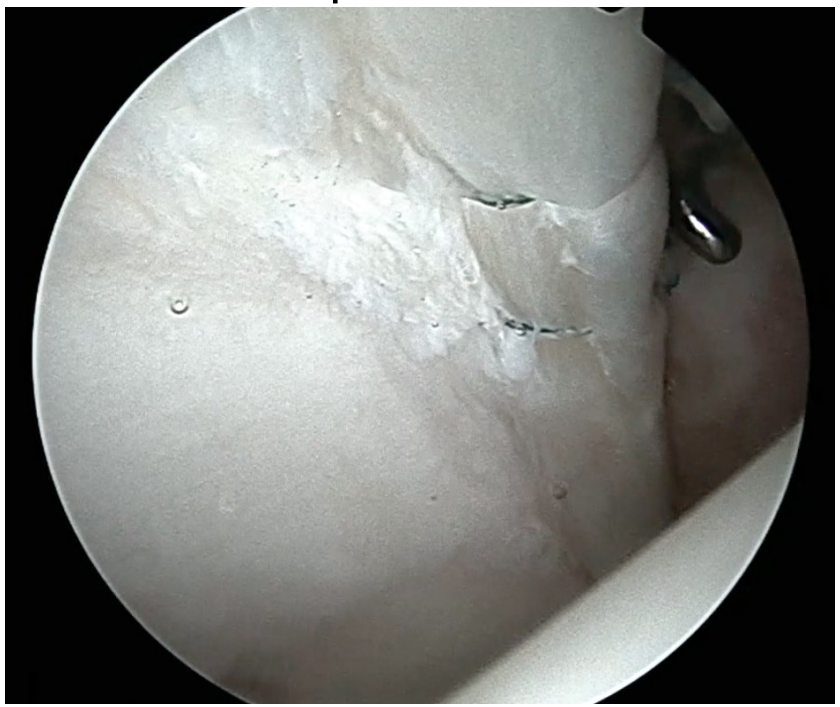
14 yo female gymnast

- 6 months post-op returned to gymnastics (against recommendations)
  - Unable to compete without return of symptoms
  - Pain with ADLs returned but less severe than pre-op
  - Counseled that PAO likely to be necessary in the future

Outcome

<u>22 yo male hockey goalie</u>

- Arthroscopic labral repair, cam osteoplasty, capsular closure performed



Outcome

22 yo male hockey goalie

Outcome

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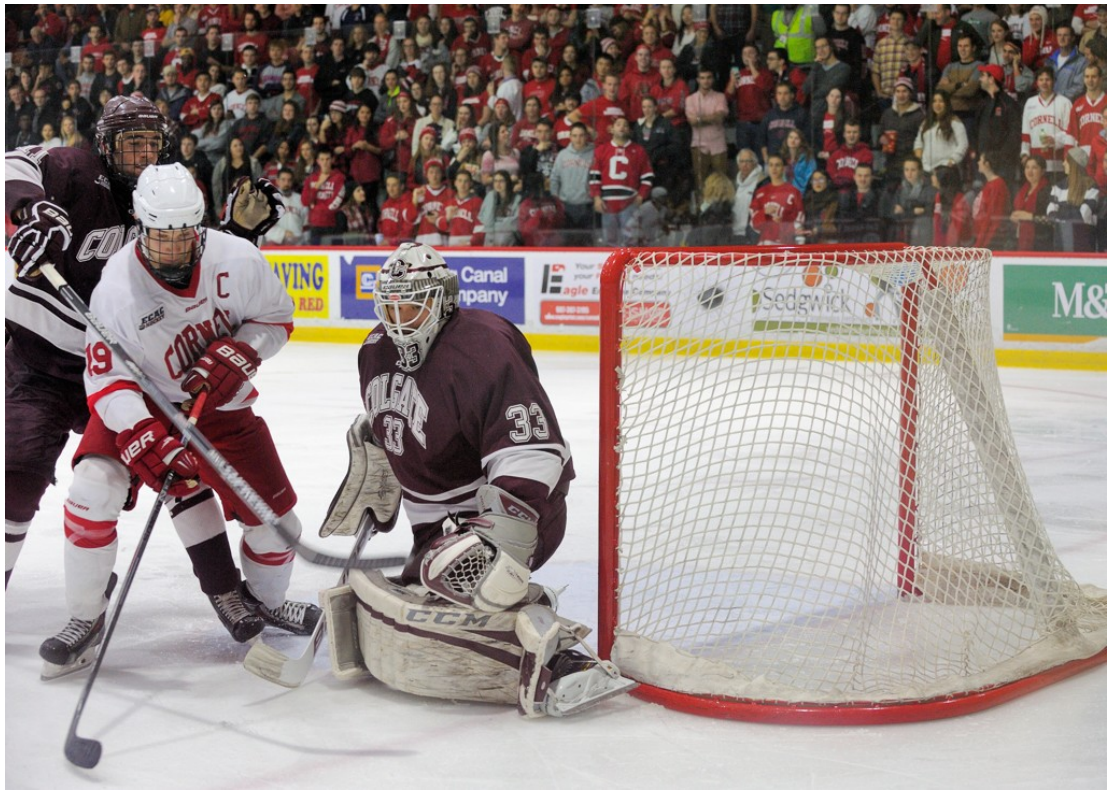
Outcome

<u>22 yo male hockey goalie</u>

Return to play at 4.5 months



Reasons for Outcome

14 yo female gymnast

- Bony issue not corrected (dysplasia)
  - **Dysplasia/Instability was main issue**
    - No Cam FAI
    - Supine IR not restricted
    - High normal femoral anteversion
      - » Places extra forces on anterior hip joint
    - Compounded by moderate hypermobility

22 yo male hockey goalie

- Bony issue corrected (Cam FAI)
  - **Dysplasia/Instability not a factor**
    - Relative femoral retroversion
      - » Makes undercoverage anteriorly less of an issue
    - Restricted supine internal rotation suggests FAI more likely culprit
    - No generalized hypermobility