Approach To The Failed Hip Scope

Michael J. Salata, MD
Assistant Professor, CWRU
UH Sports Medicine Institute
Associate Team Physician, Cleveland Browns
Director, Joint Preservation and Cartilage Restoration Center
University Hospitals of Cleveland

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*no conflict for this presentation

*Nothing to do with this presentation

Who/What is to Blame?
- Wrong diagnosis?
- Inadequate bony resection?
- “Too adequate” bony resection?
- Heterotopic Ossification
- Adhesions
- Labral issues
- Capsular issues
- Poor therapy/post-op stiffness
Wrong Diagnosis

- Missed dysplasia
- Don’t rely on CEA
- Get a CT scan
- Low volume acetabulum
- Femoral or acetabular Version
- Capsular laxity
- Ehlers
- Patients do well initially with plication but results get worse over time

Dysplasia & FAI MAY BOTH BE PRESENT!

Dysplasia
- Anterior Wall deficit
- Anteverted socket
- Retroverted socket
- Shallow socket
- Instability
- Coxa Valga
- Anteverted femur

Impingement
- Cam lesion
- Deep socket
- Instability
- Coxa vara
- Retroverted femur
- Retroverted socket

Femoral Retroversion

- This may be a cofactor in the development of OA in the setting of CAM driven FAI (Odds Ratio 1.55-Molisani et al 55th annual ORS meeting)
- May present challenges in adequate CAM resections in this population
- Should be considered in work-up of FAI (CT/MRI)
Bony Resection

• Residual FAI most common reason for revision hip preservation
  • Heyworth et al., Arthroscopy 2007, Philippon et al., AJSM 2007, Larson et al., AANA 2013, Clohisy et al., 2013 (ANCHOR)

Bony Resection

• Bigger sin is TOO MUCH resection
  • No bail out for this that is reliable
  • When in doubt, take less
  • See what you are doing
  • Don’t have your xrays show up in talks like this

Bony Resection

• Avoid resecting > 30% neck width
  • Risk femoral neckFx
  • Cadaveric Study
    • Mardones et al., JBJS 2006
  • Finite element model 1:3 (10mm)
    • Alonso et al., JOR 2012

Over-Resection

Appropriate Resection
Over-Resection RIM

- Over-resecting pincer-type FAI can create instability

- Dysplasia with retroversion
  - Resection anteriorly = global instability
  - Reports of iatrogenic dislocations

- Slide courtesy of C. Larson

Retroversion, Sup-Post deficiency, Upsloping Sourcie

Be CAREFUL on the RIM

12 cadaveric hips

The average pre-resection lateral CE angle was 33.8. Anterior center edge angle decreases by a factor of 2.1 when compared to lateral CE angle.

The lateral CE angle decreases by approximately 1 degree (0.9) per millimeter of rim recessed.

The anterior CE angle decreases by approximately 2 degrees (1.8) per millimeter of rim recessed.

Once 7.5mm of rim had been recessed, 3 out of 12 (1/4) specimens had a lateral CE angle less than 20 degrees, while 6 out of 12 (1/2) had anterior CE angles less than 20 degrees.

Heterotopic Ossification

- Overall risk without prophylaxis as high as 8.3%
- With prophylaxis risk drops to 1.8%
- Post-Op Nsaids
  - Indocin 75mg po qday
  - Limit trauma to the hip capsule
  - Remove as much bony debris as possible

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Capsulolabral Adhesions

- Adhesions between the capsule and peripheral labrum
- Often around suture knots
- Limited ROM
- Presentation:
  - Patients do well for several months post-op
  - Then complain of tugging or pulling sensation with movement
- Recreate the capsulolabral sulcus

Labral Issues

- Lack of healing
- You took it out...

- Arthroscopic debridement versus refixation of the acetabular labrum associated with femoroacetabular impingement: mean 3.5-year follow-up.
  - Larson CM, Giveans MR, Stone RA.

- Refixation vs. Debridement:
  - The HHS (P = .001), SF-12 (P = .041), and VAS pain scores (P = .004) were all significantly better for the refixation group
  - Good to excellent results:
    - 56% of the focal excision/debridement group
    - 92% of the refixation group (P = .004)

Labral Reconstruction
Labral reconstruction with ITB autograft normalizes hip contact pressure after antero-superior labral resection: an in-vitro biomechanical analysis

Frank M. McCormick, M.D. 1, Jacqueline Thomas B.S. 1, Michael Salata, M.D., Asheesh Bedi, M.D., Marc J. Philippon, M.D., Shane J. Nho, M.D., M.S. 1

Intact Labrum Defect ITB

% Contact Area as Compared to Intact Labrum

Change in Contact Area with Labral Defect & ITB Allograft

P < 0.04  P < 0.03
Capsular Issues

- You didn’t repair it and they hurt
- Improved Outcomes for T-Capsulotomy with Complete Repair vs. T-Capsulotomy with Partial Repair for FAI: A Comparative Matched Pair Analysis with a Minimum 1-Year Follow-Up
- Simon Lee, Rachel M Frank, Garth Walker, Michael Berman, Michael Huffman, Frank McCormick, Michael I Salata, Shane N Hsu

### Hip Functionality

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<thead>
<tr>
<th>Pre-Op Functionality</th>
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#### Pre-Op Functionality

- Full Plication
- No Closure

#### Post-Op Functionality

- Full Plication
- No Closure

Capsular Issues

- You didn’t repair it and they hurt
- This may lead to micro or macro instability
- Patients complain of hip “giving out”
- Capsular defect can be seen on MRA
- Capsular repair can significantly improve their function

Video courtesy of S. Aoki, MD
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Capsular Issues

- You repaired it, but it didn’t heal…
- Look for this on MRA
- Often patients have some type of trauma
- Feel a pop and then hip pain begins
- Re-repair can solve the problem if good capsule remains

Capsular Issues

- Someone (or you) cut the capsule out...
- Look for this on MRA
- Patients complain of instability
- Capsular reconstruction can be considered
  - Salvage
  - Technically demanding
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Thank You

Next Year
Springs Eternal

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