The Athletes Hip
Arthroscopic Lessons in the Total Hip Population
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San Francisco, CA

Part I (In 8 minutes)
What Kevin wants me to talk about!
The Truth about Total Hips
1. What are we doing wrong?
2. When to do THR anterior, lateral, or posterior?
3. When NOT to do a THR?
4. Protect sleeping in bed on back for several months?
5. Let them roll over in bed?
6. Abduction wedge?
7. Use of Coumadin?
8. Thigh high stockings
9. What is bologna after all these years?

Part II (In 8 minutes)
What Kevin wants me to talk about!
The Truth about Hip Arthroscopic Lessons
10. When to do arthroscopic intervention?
11. Avoid it when arthritis present?
12. Do patients get worse?
13. Does labral reconstruction really work?
14. Does labral reconstruction really work more than 2 years?
15. Should hip arthroscopy be done on patients over 30 years old?
16. Are people just born with CAM and Pincer Impingement and should they learn to live with it?

My answer to Kevin’s 16?s
What were you thinking?!

Arthroscopy for the Painful Hip Arthroplasty

I’m going to talk about what I want to!
Painful hip arthroplasty: definition

- The “hip region” constitutes the groin, buttck, upper lateral thigh, greater trochanteric area, and the iliac crest.
- Possible causes of hip pain after THA
  - The presence or absence of radiographic signs

The presence or absence of radiographic signs

Positive X-rays:
1. Aseptic Loosening
2. Septic loosening
3. Osteolysis
4. Micromotion
5. Stress shielding and tip of stem effects

Negative X-rays:
1. Reactive synovitis
2. Aseptic lymphocytic vasculitic associated lesion (ALVAL)
3. Prosthesis impingement
4. Iliopsoas tendinitis
5. Abductor muscle damage
6. Trochanteric bursitis
7. Lumbar spine disease
8. Nerve injuries
9. Hernia femoral, inguinal, obturator
10. Referred pain

Indications MRI of THR
- Painful THR suspect soft tissue
- Painful iliopsoas
- Painful Peritrochanteric region
- Pain in Subgluteal region

MRI of Total Hip Replacements

Mindset of an Arthroplasty Surgeon
1. Infected
2. Unstable
3. Leg Length
4. Mal Position

Just revise it!!

Workup for Painful THR

Arthroscopic Lessons for Painful Total Hips
Early reports of Hip Arthroscopy for Painful Total Hips: 1979

Entrapped Foreign Body Within the Acetabular Cup in Total Hip Replacement

FAYEGHV AKILIM, D.,* EDUARDOA. SALVATMI, D.,** AND RUSSELLF. WARRENM, D., F.A.C.S.*

Indications Arthroscopy THR?

- 1980s
- 1990s
- 2000s

- Acute Sepsis
- Loose cement
- Loose wires
- Loose screws
- Assess for loosening
- Iliopsoas Pain
- Repair Gluteus Muscles
- Removal Heterotopic bone
- Synovectomy for Metalosis

Early Publication on Hip Arthroscopy

Early Case Studies

Acute Pyarthrosis Total Hip

- Successfully treated four patients with late hematogenous infections of their total hips arthroscopically.
- No recurrence has been noted, with the longest follow-up being 20 years, when one patient died from natural causes at the age of 93 years.
- Pyarthrosis caused by Staphylococcus aureus in a total hip from a hand infection that occurred 1 year and 1 months after index replacement. Note the exudate between the metal head and acetabulum (arrow). B, infected total hip. Note the exudate and quartz particles filling the joint. C, Insertion of drainage tube over drilled cannula (arrows).

Painful Total Hips from Iliopsoas Impingement

Arthroscopic Lessons for Painful Total Hips
The Role of Arthroscopy in Evaluation of Painful Hip Arthroplasty

Joseph C. McCarthy MD, Stefan R. Jibodh MD, Jo-Ann Lee NP

- Treated for entrapped debris post dislocation
- Remove migrated hardware using arthroscopic techniques
- Identified previously unrecognized component related problems in two patients (metal corrosion in one patient and acetabular loosening in another)

1. Removal of loose screw
   - 68 year old woman
   - 9 year follow up revision
   - Porous ingrowth acetabular component with good ingrowth
   - Progressive loosening of one of the peripheral screws within the joint at the posterior margin.

2. Remove a broken wire
   - A 67 year-old woman
   - 3 years post revision
   - Migration of a trochanteric wire fragment adjacent to the articulation

Fluoroscopic image shows a migrated trochanteric wire noted 3 years after revision left hip arthroplasty. An intraoperative photograph shows the same hip during arthroscopic wire removal.

3. Metal corrosion
   - Case 6: corrosion at the femoral head-neck junction with diffuse metal synovitis
   - Case 15: Impinging soft tissue is visible during arthroscopic debridement
Painful clicking loose cable THR

Indications for performing surgical hip arthroscopy

TABLE 8-1. Indications for performing surgical hip arthroscopy.

- Definitive indications
  1. Undiagnosed hip pain—evaluation
  2. Pyarthrosis—drainage and tube placement
  3. Pigmented villonodular synovitis—synovectomy
  4. Foreign bodies—removal
  5. Loose bodies—removal
  6. Loose cement body in total hip replacements removal
  7. Post reduction fracture—dislocation—evaluates for loose bodies or metal in joint and removal of bone fragments
  8. Chondrolysis—debridement
  9. Synovitis—synovectomy
  10. Osteoarthritis—debridement, chondroplasty
  11. Labral tears—excise
  12. Trochanteric bursitis—bursectomy

CHAPTER 23 – Arthroscopy for Symptomatic Hip Arthroplasty

- The sole indication for this procedure is a patient with a painful hip resurfacing in the presence of normal or indeterminate investigations

BHR Resurfacing

Backside cup very abrasive Insertion of the acetabular component

Hip Arthroscopy of Painful Resurfacing Total Hips

Results Arthroscopy Resurfacing with Pain

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age</th>
<th>Sex</th>
<th>Type of Implant</th>
<th>Time Since Implantation</th>
<th>Arthroscopic Diagnosis</th>
<th>Procedure</th>
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<tbody>
<tr>
<td>1</td>
<td>55</td>
<td>F</td>
<td>Cormet</td>
<td>24 months</td>
<td>Bony FAI</td>
<td>Synovectomy and excision of the impingement lesion</td>
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<td>F</td>
<td>Cormet</td>
<td>36 months</td>
<td>Loosening of the acetabular component</td>
<td>Assessment and biopsy</td>
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<td>3</td>
<td>64</td>
<td>M</td>
<td>Cormet</td>
<td>36 months</td>
<td>Normal</td>
<td>Assessment and aspiration</td>
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<tr>
<td>4</td>
<td>43</td>
<td>F</td>
<td>Birmingham</td>
<td>24 months</td>
<td>ALVAL</td>
<td>Assessment, synovectomy, and biopsy</td>
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<tr>
<td>5</td>
<td>63</td>
<td>M</td>
<td>Cormet</td>
<td>24 months</td>
<td>Fibrous adhesions</td>
<td>Synovectomy and capsular release</td>
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<td>6</td>
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<td>F</td>
<td>Cormet</td>
<td>12 months</td>
<td>Bony FAI with psoas tendonitis</td>
<td>Excision of the impingement lesion and iliopsoas tenotomy</td>
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<td>7</td>
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<td>F</td>
<td>Cormet</td>
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<td>Psoas tendonitis</td>
<td>Iliopsoas tenotomy</td>
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<td>8</td>
<td>70</td>
<td>F</td>
<td>Birmingham</td>
<td>12 months</td>
<td>Trochanteric bursitis</td>
<td>Excision of the trochanteric bursa</td>
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<td>Psoas tendonitis</td>
<td>Synovectomy and iliopsoas tenotomy</td>
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<td>40 months</td>
<td>Soft-tissue impingement with psoas tendonitis</td>
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<td>M</td>
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<td>48 months</td>
<td>Bony FAI with psoas tendonitis</td>
<td>Excision of the impingement lesion and iliopsoas tenotomy</td>
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<td>12</td>
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<td>F</td>
<td>Birmingham</td>
<td>26 months</td>
<td>Loose cement particles with synovitis</td>
<td>Removal of loose cement and synovectomy</td>
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</tbody>
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Iliopsoas Cyst Causing Persistent Pain After Total Hip Arthroplasty

by Markus Wuenschel, MD; Beate Kunze, MD

Cup Position

Psoas cyst

Imaging Painful Iliopsoas THR

Prospective Randomized Study of 2 Different Techniques for Endoscopic Iliopsoas Tendon Release in the Treatment of Internal Snapping Hip Syndrome

Victor M. Brailsford, Jr., et al.

1. Prospective Randomized Study
2. Level 1 evidence
3. NO difference in outcome if release intra-capsular or at the lesser trochanter

Iliopsoas Impingement on THR

Iliopsoas Release THR

Thomas G. Sampson, M.D.

Arthroscopic Lessons for Painful Total Hips
2 CASES of arthroscopically assisted capsular tightening in unstable total hip replacements. Both cases had significant capsular laxity. Case 2 had impingement of the lower part of the acetabulum with the lesser trochanter that caused hip dislocations.
Arthroscopic Repair Gluteus Medius Tear THR

Expose and remove Trochanteric Bursa
Bursectomy
Abrate Footprint Lateral Facet

Re-attach free edge GM
Large Anchor Placed
Horizontal Mattress sutures for 1st Row

2nd Row Repaired
Internal Rotation View
External Rotation View

Metal on Metal THR Complications
Mass effect adjacent to acetabular component

Pseudo-tumors
Sciatic neuropaxia MoM THR

Conversion ASR MoM to CoP

ASR Debris from Metal Wear

ASR Revision

Painful iliopsoas after revision. Psoas release and synovectomy for metalosis

The Incidence of Heterotopic Ossification in Hip Arthroscopy

Ehud Rath, M.D., Haggai Sherman, M.D., Thomas G. Sampson, M.D., Tomer Ben Tov, M.D., Eran Maman, M.D., and Eyal Amar, M.D.
H.O. (Heterotopic Ossification)

Heterotopic Ossification

Excision of Heterotopic Bone

50 Y.O. Male ex-Firefighter 4 yrs. post op with painful left hip and severe limited ROM

Pre-Op Fluoro

Left Hip Lateral Decubitus Position
Expose through partial capsulectomy and excision of H.O.

The conflict is between the massive CAM bump and the excessive rim of the acetabulum caused by Heterotopic Ossification

Left Hip Excision Heterotopic Bone, Acetabuloplasty and Femoroplasty

Post-Operative Excision Heterotopic Bone after BHR

Post-Op Fluoro

Painful THR may be more subtle than:

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Treatment</th>
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<tbody>
<tr>
<td>Infection</td>
<td>Revision</td>
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<tr>
<td>Instability</td>
<td>Revision</td>
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<tr>
<td>Leg Length ≠</td>
<td>Revision</td>
</tr>
<tr>
<td>Mal Position</td>
<td>Revision</td>
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</table>
Conclusion

Arthroscopy for Painful THR

Is useful in treating painful Total Hips and resurfacing:
1. Acute Sepsis
2. Loose cement
3. Loose wires
4. Loose screws
5. Assess for loosening
6. Iliopsoas Pain
7. Tears Gluteus Muscles
8. Instability??
9. Synovectomy of Metallosis
10. Removal Heterotopic bone
11. Femoroacetabular Impingement in THR