

The Hip from “Cradle to Grave”

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Ascot Hospital

Starship Children's Hospital

- Developmental dysplasia hip DDH
- Irritable vs. septic hip
- Perthes disease
- Slipped Upper Femoral Epiphysis (SUFE)
- Hip arthroscopy
- Total hip joint replacement
- Revision hip replacement

DDH - The Problem

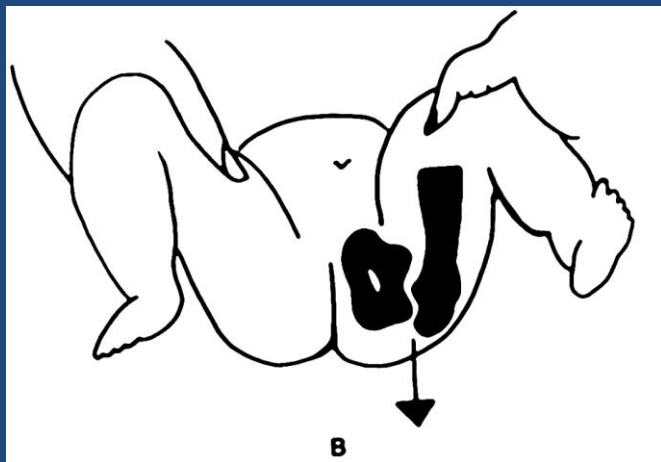
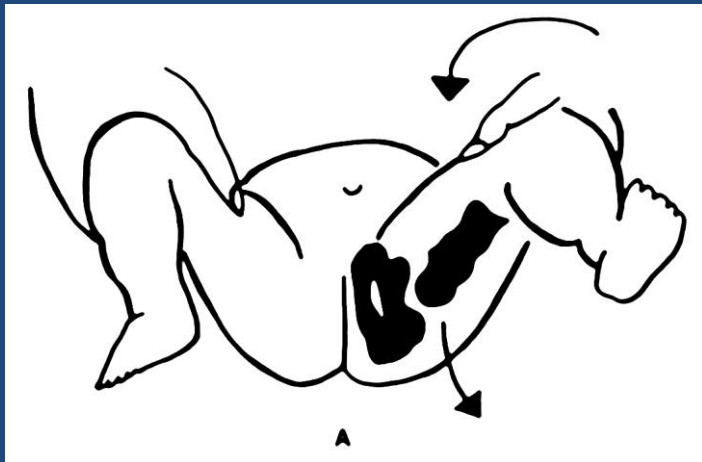
- Incidence of late DDH is increasing
 - “Hips are not checked”
 - “Early discharge”
 - “Inexperienced examiners”
 - “No screening protocols”
 - “High risk babies not referred on”

DDH

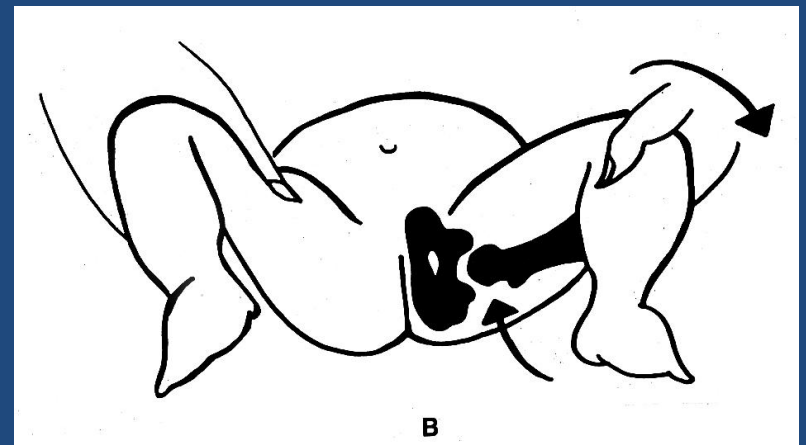
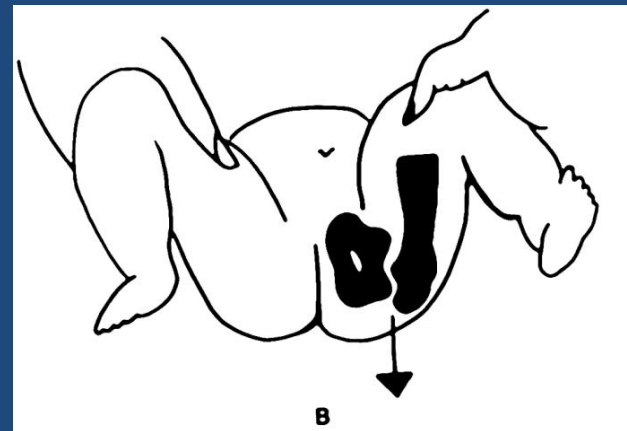
- Risk factors
 - Breech presentation
 - Family history
- Diagnosis
 - Clinical examination
 - Ultrasound
 - Antenatal
 - Postnatal
 - X-ray (AP pelvis)
 - At 4 months

Clinical Examination

Barlow test



Ortolani Test



Skin Creases



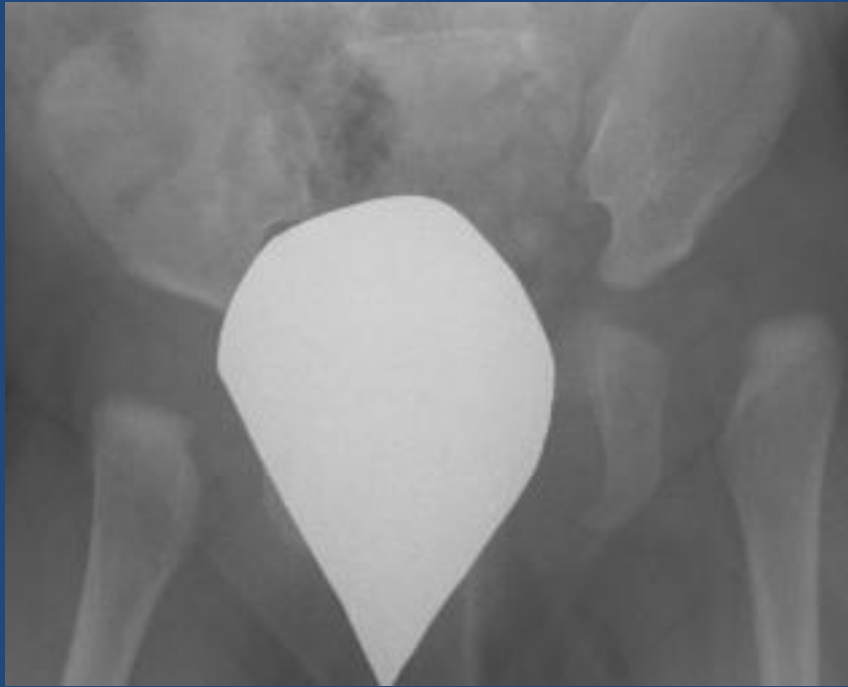
Decreased Abduction



Ultrasound Scan



AP pelvis X-ray 4 to 5 months



Treatment: Pavlik Harness



Walking child

Limping



Leg length
discrepancy



Irritable vs. Septic Hip

Irritable Hip Septic Hip

Age

6

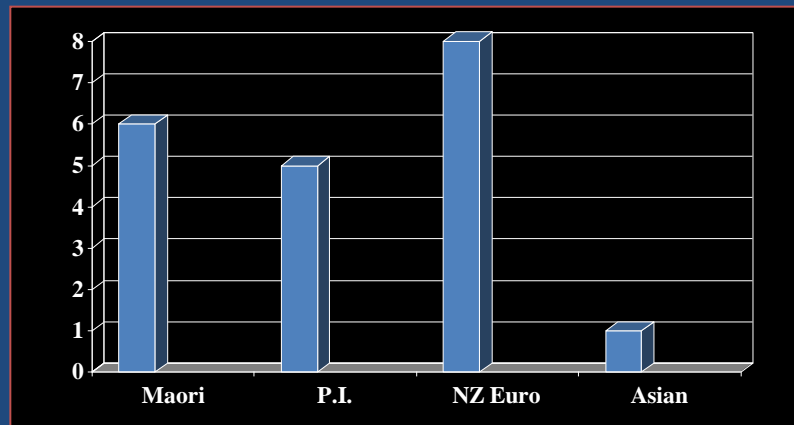
5.5

Male: Female

3.2 : 1.2

1.3 : 1.1

Ethnicity



Irritable Hip Septic Hip

Preceding injury	16%	12%
Preceding illness	29%	-
Duration of preceding Sxs	3.2 days	2.4 days
Fever	4%	64%
Malaise	16%	64%
Weight bearing	55%	0

Irritable Hip Septic Hip

• Ave Temp	36.6 (35.6-39.7)	38.3 (36-39.5)
• WCC	9.6 (4.6-15.8)	13.2 (4.1-23.9)
• Diff	5.3 (2.6-10.7)	10.3 (3.9-18.4)
• ESR	8	50
• CRP	4.2	93.5
• BC	0	7

Septic Hip: Sensitivities

- Presenting features

1. History of fever/malaise	77%
2. Fever >38 degrees on admission	77%
1 and 2	86%
- 3. WCC > 12 or diff > 10 72%
- | | |
|--------------|------|
| 1 or 2 and 3 | 100% |
|--------------|------|

Conclusions

- Septic hip is rare
- Male predominance and similar age range to irritable hip but increased frequency in Maori and Pacific Islanders
- Initial presentation parameters are sensitive

- Continue to recommend admission in
 - Those with clear history of current illness
 - Maori or Pacific Islander
 - Elevated temperature
 - Any elevation of WCC esp. PMNL
 - Raised ESR or CRP
 - Inability to weightbear should be considered
 - ? Children < 4 years

Perthes Disease

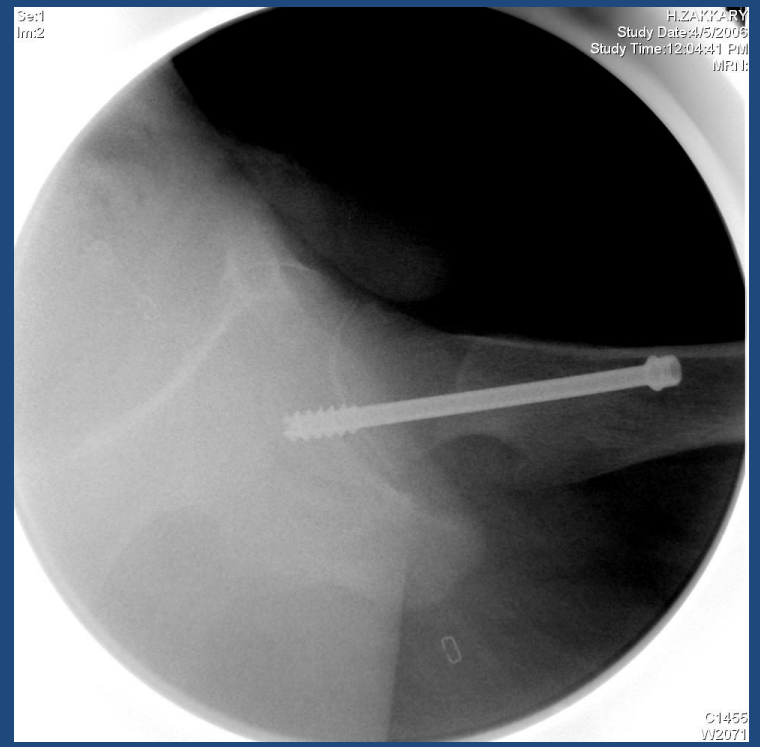
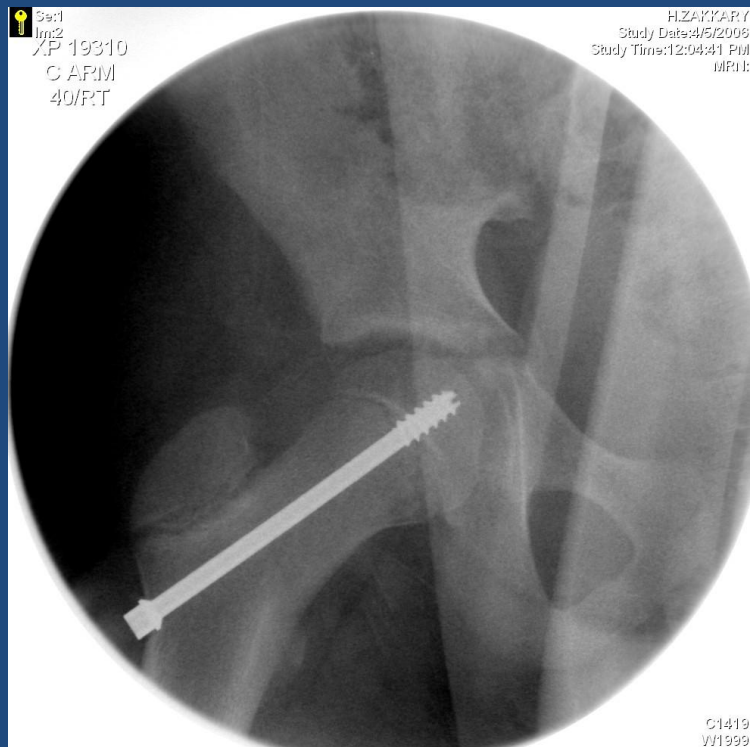
- Avascular necrosis of femoral head
- Aetiology still unclear
- Treatment extremely controversial
 - Activity modification, pain relief and maintain movement
- Refer to specialist
 - 4 monthly x-ray
- Prognosis particularly good if < 5 years old at time of diagnosis



Slipped Upper Femoral Epiphysis (SUFE)

- Cause still unclear
- Maori and Polynesian adolescents > 10 yrs old
 - Usually obese
 - Girls > boys
- Pain in hip +/- thigh +/- **knee**
- Think bilateral
- X-ray both hips AP pelvis AND lateral





Hip Arthroscopy

Hip Pain

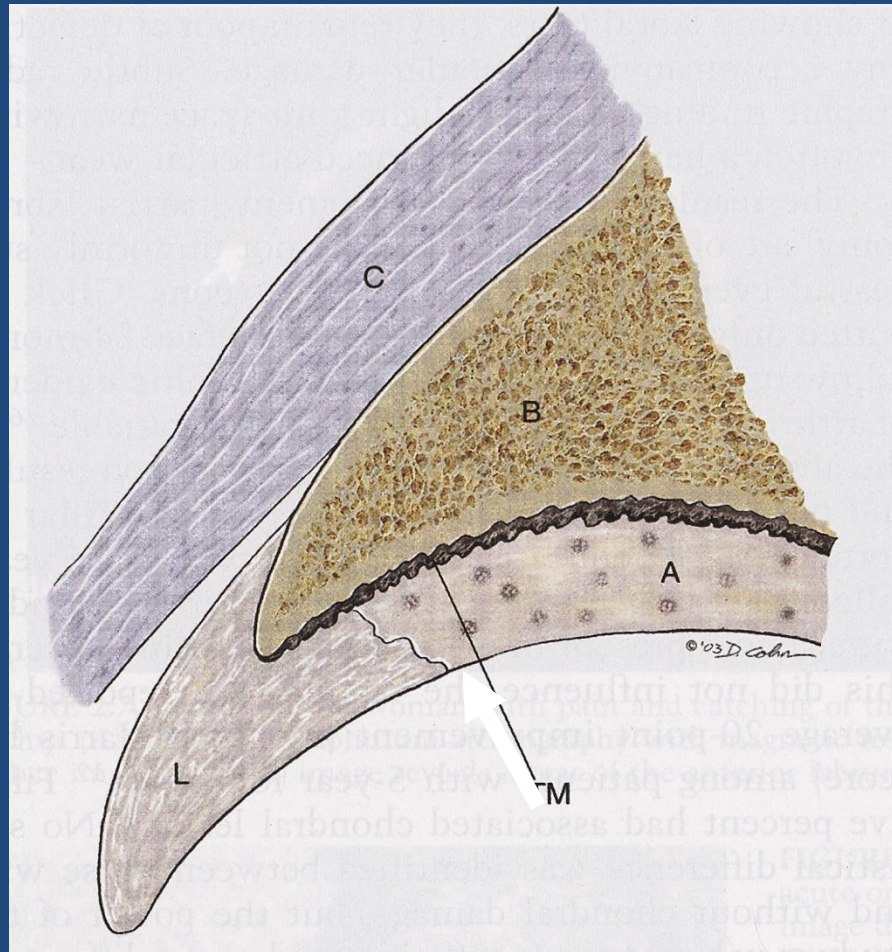
Where do you start?

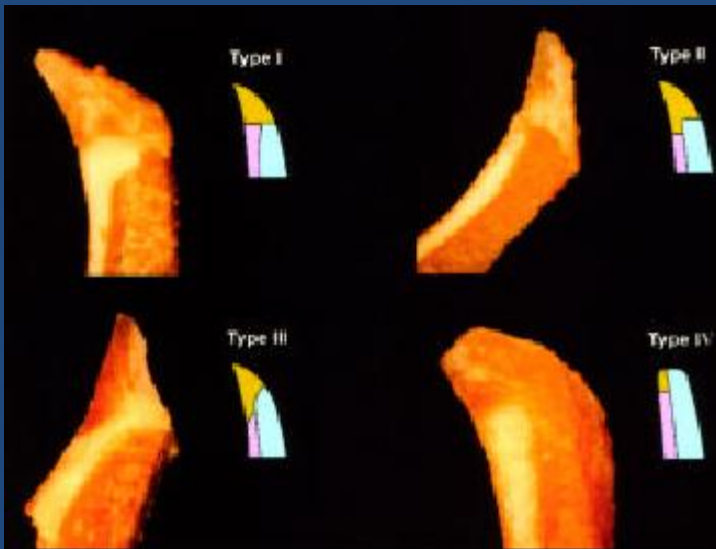
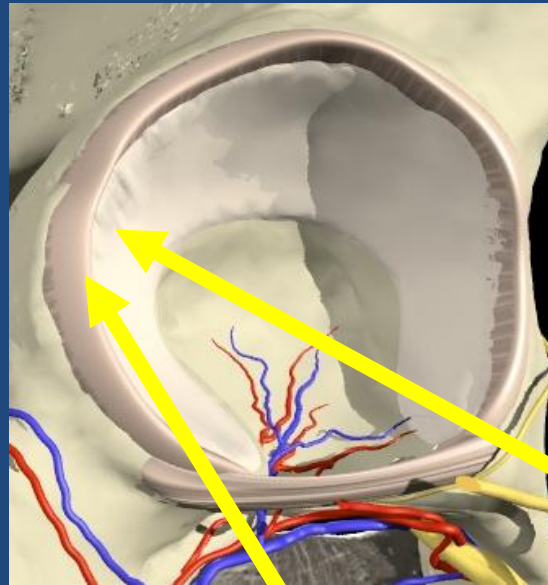
- Extraarticular
- Intraarticular
- Both
- Neither – referred!

Intraarticular Causes of Hip Pain

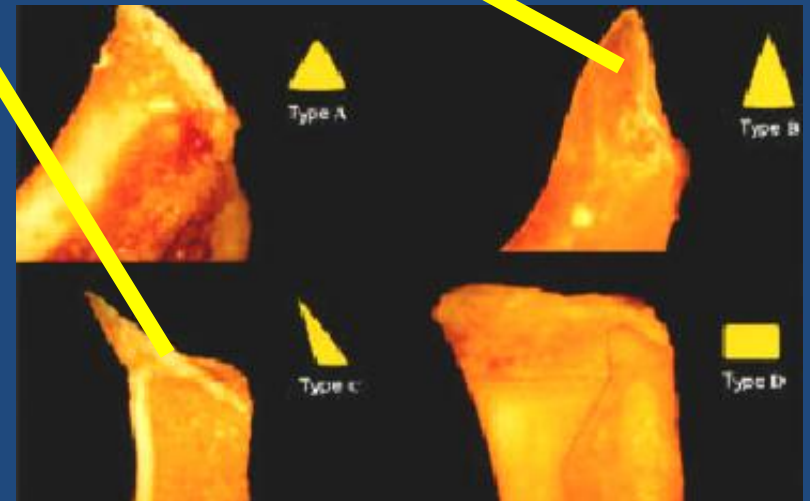
- **Bone**
 - Femoral neck stress fracture
 - SUFE
 - Perthes disease
 - Avascular necrosis femoral head
- **Articular cartilage**
 - Osteochondritis dissecans
 - Osteoarthritis
 - Chondral lesions
- **Labrum**
 - Tear
- **Synovium**
 - Synovitis (e.g. inflammatory)
 - Synovial chondromatosis (loose bodies)
 - PVNS (pigmented villonodular synovitis)
 - Septic arthritis
- **Ligaments**
 - Ligamentum teres rupture

The Labrum

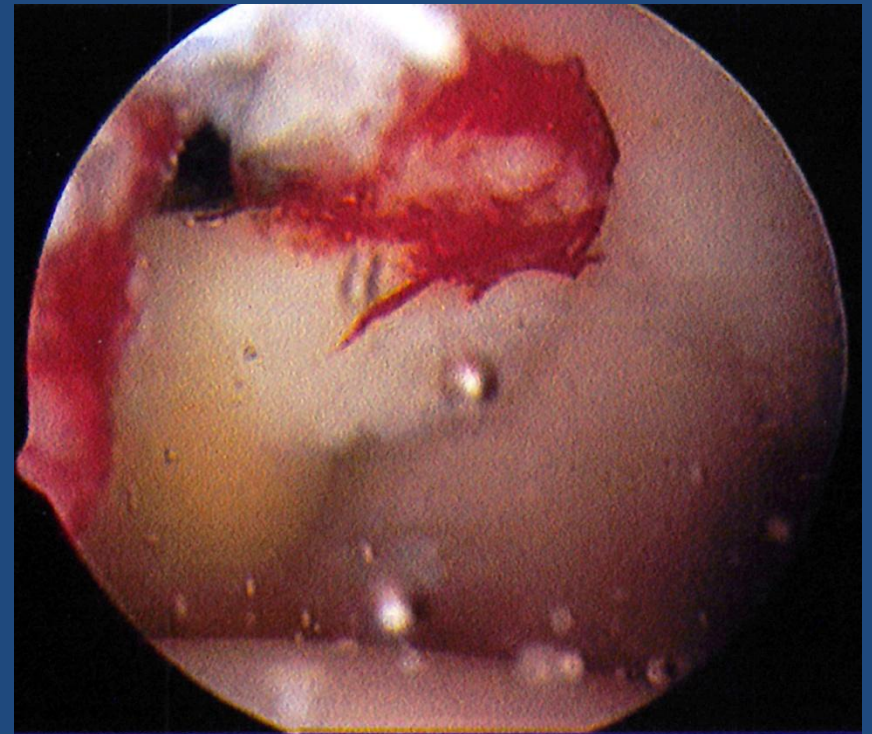




Attachment



Shape



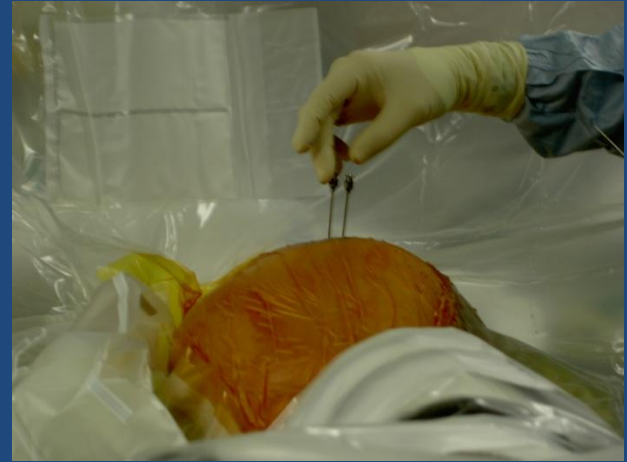
ANTERIOR LABRAL TEAR

How do you make the diagnosis?

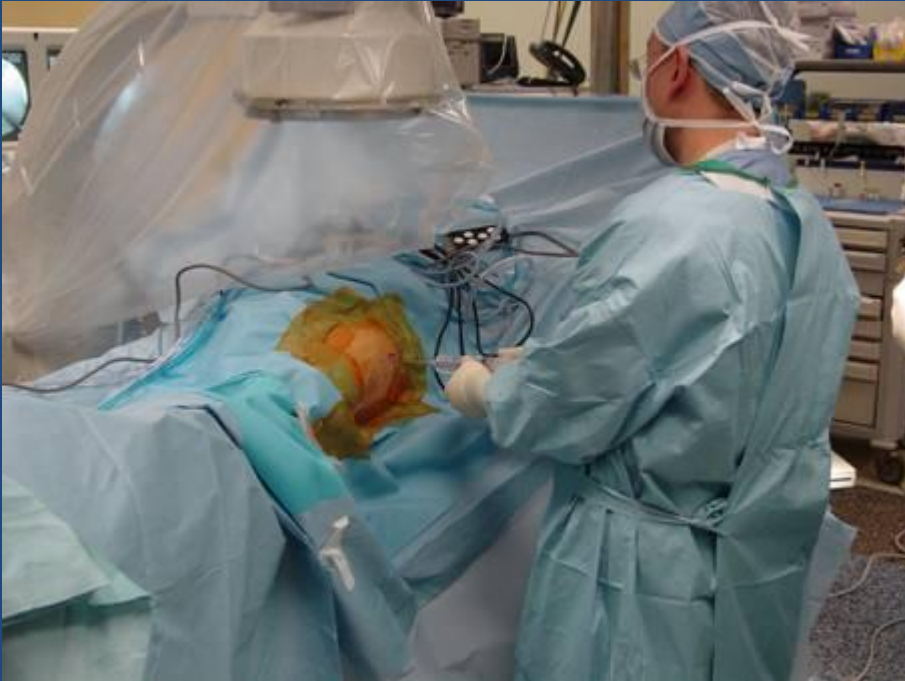
- History
 - Mechanism of injury
 - “twisted running” vs. “hyperextension in rugby tackle”
 - Mechanical symptoms
 - Intermittent pain or catching, sharp or stabbing nature
 - Localising symptoms
 - “C – sign” : characteristic hip joint pathology
 - Posterior pain : rarely intraarticular cause
 - Sitting pain and pain on standing

- Examination

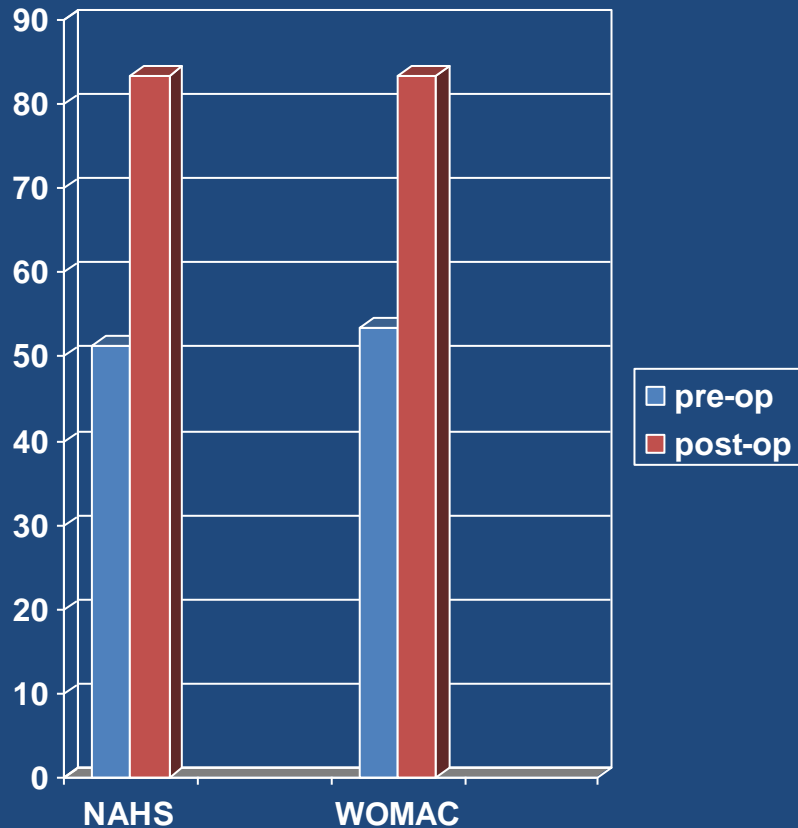
- “Impingement” test
- Groin pain on flexion , internal rotation and adduction
 - Reproduce symptoms (clicking, pain ...)
- Compare to other side
- Faber test (snapping iliopsoas)



Surgery



Functional outcome



- Post-op
 - NAHS 51.20 to 83.32
 - WOMAC 53.40 to 83.36
- 66% >80 NAHS
- 78% >80 WOMAC

Hip Arthroscopy Summary

- “Newish” technique
- Minimally invasive for intra-articular problems
- Delays need for total hip joint replacement
- Functional outcomes very good / excellent

Total hip joint replacements

- When?
 - Pain is the only reason to have one
 - “you” tell me when you want to have one
- What type?
 - Huge number of options
 - Cemented, uncemented, hybrid!
 - Surfaces
 - Metal on polyethylene (Charnley)
 - Metal on metal
 - Ceramic on ceramic



- Surface replacements
 - These are total hip joint replacements with same complications and some new ones
 - Metallosis

- Rehabilitation
 - 4-5 nights in hospital
 - 3-4 weeks on crutches
- Complications
 - Infection
 - Superficial or deep
 - Dislocation
 - DVT and /or PE
 - Or just swelling!

THJR Summary

- Referral letter important
 - Does the patient “want a THJR”
 - Co-morbidities
 - Medications
 - Thromboembolic problems
 - Social situation
- Myriad of options – new isn’t always better!
- Complications
 - Contact surgeon to review
 - Antibiotics only if definitely superficial infection

Revision Hip Joint Replacement

- Complex
- Newer instrumentation and implants making it easier
- Not all the components need revising
- Can have multiple revisions
- Rehabilitation and hospital stay longer – 6 weeks crutches





Summary

- The hip can be a difficult joint to sort out
- Think
 - Intraarticular
 - Extraarticular
 - Referred (especially if buttock)
- X-rays are mandatory especially in children
- Knee pain mean hip pathology