

Adolescent and Young Adult hip Reconstruction

Diagnosis

M Al-Maiyah

Mr G De Kiewiet

26/09/2011

Introduction

- The diagnosis of hip pain can be difficult.
- It should be differentiated from low back pain and other pelvic disorders.
- Hip pain could be;
 - Intra-articular
 - Extra-articular
- Diagnosis; history, clinical examination and imaging (Radiographs, CT, MR Arthrogram)

History ₁

- Age & Sex, occupation, sports & activity level.
- Onset: **Traumatic** versus **Atraumatic**;
trauma history is indicator of good outcome.
- Characteristic features;
 - Mechanical symptoms – better prognostic factor
 - Simply pain with activity- poor prognostic indicator
 - Pain at rest- least likely to respond to joint preserving intervention.

History 2

- Exacerbations & relieving factors
 - Symptoms worse with activities, twisting.
 - Sitting position, uncomfortable (hip flexion).
 - Pain with rising from seated position (catching).
 - Difficulty on stairs.
 - Pain with entering/exiting car.
 - Dyspareunia, especially in women.
 - Difficulty with shoes, socks, etc.

History ³

- Localisation of symptoms;
think Hilton's law
 - Explain why muscle spasm & cutaneous sensations may accompany joint pain
- Classically anterior groin pain, radiating to medial thigh & may knee
 - (mainly L3, contributions from L2-S1)



History 4


- C-sign; characteristic of hip joint pathology.
 - Don't mix with trochanteric bursitis!



History 5

- Posterior hip pain; rare, but can occur
- Past hip problem, injuries
- Previous treatment, non-operative or operative
- Systemic review; GUS, GIT, Neurology, Vascular
- Family history/ social history.

Clinical examination₁

- History  direct physical examination
- Inspection; posture, stance & gait.
- Posture, in standing & seated position;
 - Looking for list, asymmetry.
 - Pelvic obliquity, spinal mal-alignment.
 - Leg length discrepancy.
 - Leg rotation
- **Trendelenberg test**

Clinical examination₂

- **Gait:**
 - **Trendelenburg:** Abductor strength, proprioception mechanism.
 - **Antalgic:** Trauma, fracture, synovial inflammation.
 - **Pelvic rotational wink:** Intra-articular pathology, hip flexion contracture.
 - **Excessive external rotation:** Femoral retroversion, increased acetabular anteversion, torsional abnormalities, effusion.
 - **Excessive internal rotation:** Increased femoral anteversion or acetabular retroversion, torsional abnormalities, effusion
 - **Short leg gait:** iliotibial band pathology, true/false leg length discrepancy

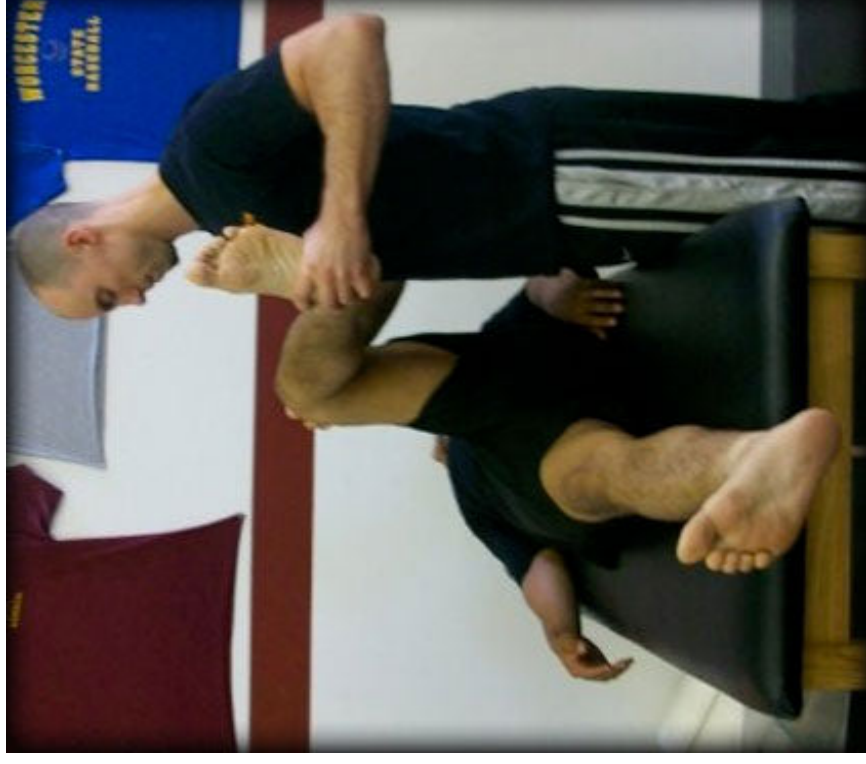
Clinical examination ₃

- Supine Examination:
- Palpation: **BE SYSTEMATIC**
- Measurement:
 - Leg length
 - Thigh circumference
- Thomas test.
- Hip Range of movements, compare to the other hip.
 - Flexion, Extension, Abduction & Adduction.
 - Check muscle strength!

Clinical examination 4

Rotational hip range of movements;

Flex hip and knee to 90° then internally and externally rotate the joint



Clinical examination 5

- Special test;
 - straight leg raise:
 - exclude lumbar nerve root irritation.
 - Active Straight raise or SLR against resistant, produce forces several times body weight in hip joint.



Clinical examination ₆

- Leg Rolling; most specific for intraarticular pathology (less sensitive)



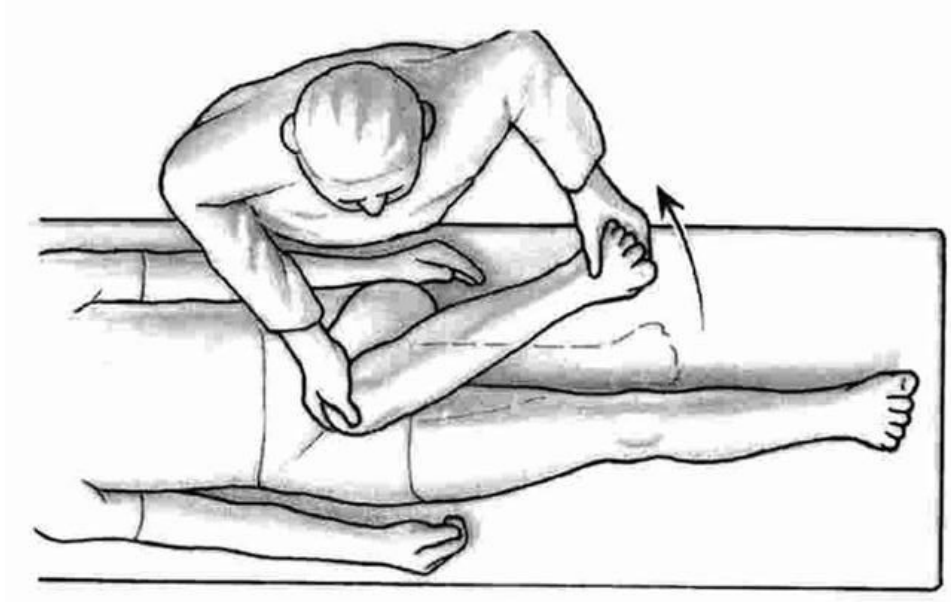
Clinical examination 7

- Patrick or FABER test; **F**lexion
Abduction **E**xternal **R**otation (Hip or
SI joint problem).



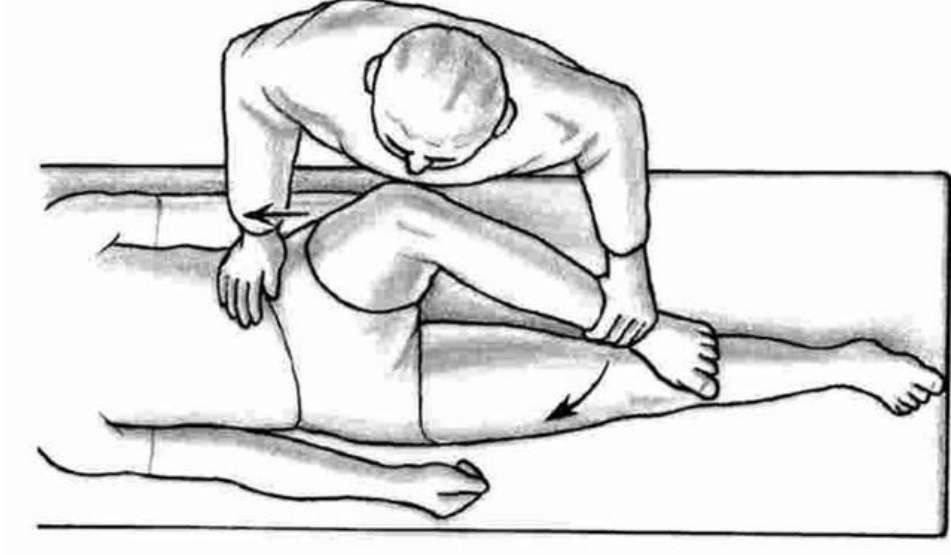
Clinical examination 8

- Impingement test (FADIR); pain with forced flexion and Internal Rotation. The most sensitive test for hip pathology.
- Produce sharp pain, catch or click.
- Reproduce patient's symptoms.



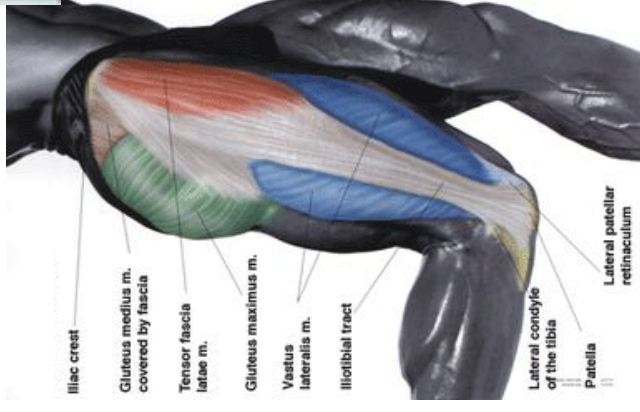
Clinical examination 9

- Reverse Impingement test; pain with flexion and external rotation, might reproduce patient's symptoms.



Clinical examination ¹⁰

- “Snapping hip” due to extra-articular cause:
 - Iliopsoas tendon
- Bring hip from flexed, abducted, externally rotated to extension with internal rotation.
- Iliotibial band
- Symptoms located laterally
- Visible & palpable snap.



References

- Operative hip arthroscopy by JW Thomas Byrd, Springer 2nd Edition 2005.
- Bryan T Kelly & Marc J Philippon. Hip Arthroscopy. Operative techniques in Orthopaedics. Volume 15, 3, July 2005.
- BRALY, BEALL, MARTIN. Clinical Examination of the Athletic Hip. CLINICS IN SPORTS MEDICINE. Clin Sports Med 25 (2006) 199–210
- Pictures from internet.