

Examination Of The Hip and Knee For Busy Practitioners

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Efficiency





Outline of Examination of Hip and Knee

- History
 - more likely to lead to diagnosis
- Examination
 - Look
 - Feel
 - Move
 - Special Test's



Knee Examination

- Standing
 - Limb alignment (varus/valgus/flexion/squinting patella)
 - Muscle wasting
 - Walking
- Sit on side of bed
 - Patella maltracking
 - Feel for crepitus



Knee Examination

- Lying on bed
 - Look for swelling (effusion/pre-patella), erythema
 - Feeling for warmth
 - Feeling for tenderness (systematic approach
 - Move
 - SLR
 - Assess ROM
 - Special tests
 - Ligament stability
 - Meniscus tests
 - Patella apprehension test
 - Assess hip and neurovascular status



Hip Examination

- Standing
 - Look
 - Alignment
 - Pelvic obliquity/ scoliosis
 - Hernia
 - Quads/buttock wasting
 - Moving
 - Walking
 - Special Testing
 - Trendelenberg testing



Hip Examination

- Lying on Back
 - Look
 - Leg length

Feel

Tenderness

Move

- Log roll test
- SLR
- ROM

Special Tests

- Test for impingement
- S-I joint pain
- Neurovascular screen
- Lying in Side
 - Palpation for tenderness (GT, buttock , S-I joint, L-spine)
 - Active abduction hip



Case 1

Question A

In regards to the right knee:

(click on all the correct responses)

- There is a pre-patella bursal effusion
- The limb alignment is valgus
- 3. The limb alignment is varus
- 4. The most likely diagnosis is OA





Knee Effusion

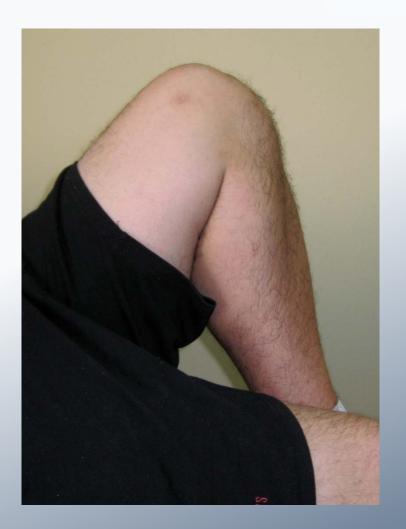
Wipe Test

Patella Tap









Range of Motion

- Active ROM
- If limited: test passive ROM
 - Locked meniscus
 - Loose body
 - Large joint effusion
 - Osteophytes
 - Pain



Straight leg raise, Extensor lag

- Tests extensor mechanism
 - Quads/Patella/Patell ar tendon
- Painful hips will find this painful





Case 2

- 42 year old male
- Slipped down slope with acute onset pain in knee
- Unable to weight bear or SLR





Case 2

- Click on all correct answers
- 1. The diagnosis is a patella fracture
- The diagnosis is a patella tendon rupture
- 3. The diagnosis is an ACL tear
- 4. The diagnosis require surgery within a 2 weeks

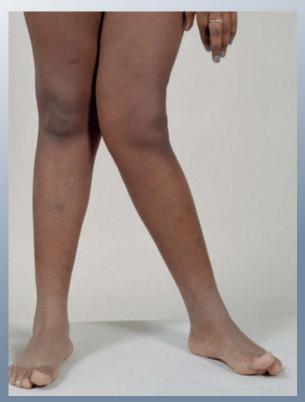






Compare to the Other Side







MCL - Valgus Stressing

- o° flexion
 - All medial stabilizers
- 30° flexion
 - MCL and capsule only





MCL Questions

- Click on all correct answers
 - 1. NSAIDs is beneficial in healing of MCL tears
 - 2. NSAIDs retards the healing of MCL tears
 - 3. Most MCL tears require surgery
 - 4. Surgery accelerates the return to sport following MCL tears



LCL – Varus Stressing

- o° flexion
 - All lateral stabilizers
 - Posterolateral corner
- 30° flexion
 - LCL



Orthocentre

Posterior Draw Test - PCL







- Posterior drawer at 90 degree of knee flexion
 - Gd I tibia anterior to femur on stressing
 - Gd II tibia aligned with femur
 - Gd III tibia posterior to femur.



Acl Tear - Anterior Drawer Test





ACL Tear - Lachman Test





ACL Tear Pivot Shift Test

Reproduction of Instability Symptoms





Meniscus - McMurrays Test

Medial



Lateral



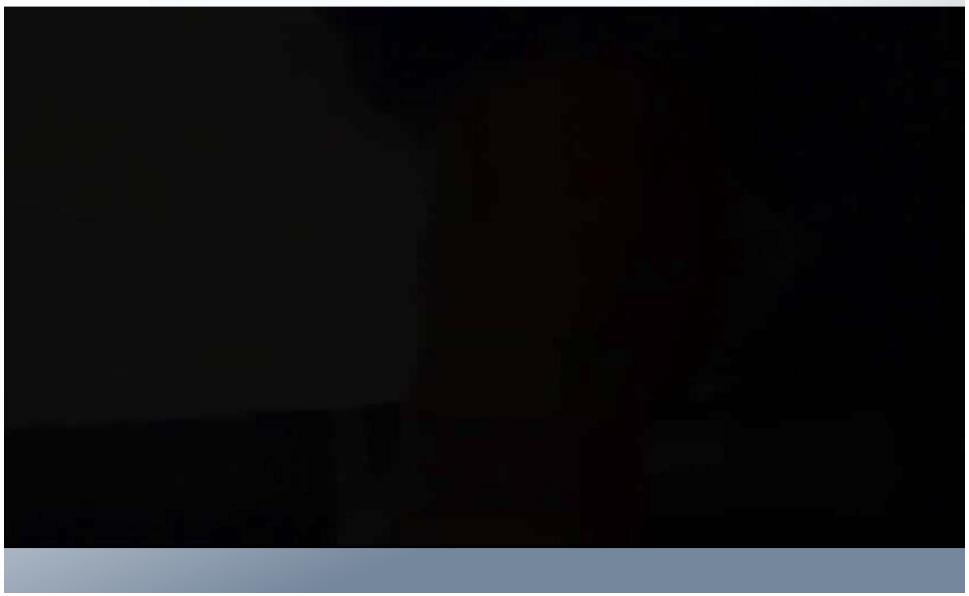


Patella Maltracking





Patella Maltracking





Patella Apprehension





Special Tests - Hip





FAddIR

- Flexion
- Addducton
- Internal Rotation
- Induces groin pain with FAI, labral tears and OA





Femoro-acetabular Impingement (FAI)

• Questions FAI is:

(Click on all correct answers)

- 1. Uncommon
- Usually has reduction in hip ROM
- 3. Usually symptomatic
- 4. Requires surgery independent of symptoms
- 5. Often bilateral





Patrick Test (Faber)

- Flexion, abduction and external rotation hip
- Positive for S-I joint if reproduces buttock pain
- Not specific





Live Case Presentation

- Troy
- 27 year old detective
- Healthy and fit
- 2006 playing soccer non-contact pivoting injury to left knee
- ACL and MCL tear
- Underwent ACL reconstruction
- Returned to full activities and sport 8 months later
- No problems until May 2014



Troy - May 2014





Troy

Question

(click on all the correct responses)

- 1. Most likely diagnosis is re-tear of left ACL
- 2. Most likely diagnosis is tear of right ACL
- 3. He is likely to have instability while jogging in a straight line
- 4. Ultrasound is a useful investigation in this setting



MRI







ACL Tears

- Most ACL tears are non-contact
- 2. The ACL of the contra-lateral knee has over 10% chance of rupture over 5 year
- 3. The re-rupture rate of an ACL graft is 5-10% over 5 years
- 4. There is no loss of hamstring strength with hamstring graft harverst



Answers



Case 1

Question A

In regards to the right knee:

(click on all the correct responses)

- There is a pre-patella bursal effusion – False (knee joint effusion)
- The limb alignment is valgus False
- 3. The limb alignment is varus True
- 4. The most likely diagnosis is OA True





Case 2

- Click on all correct answers
- 1. The diagnosis is a patella fracture False
- The diagnosis is a patella tendon rupture
 True
- 3. The diagnosis is an ACL tear False
- 4. The diagnosis requires surgery within a 2 weeks True







MCL Questions

- Click on all correct answers
 - 1. NSAIDs is beneficial in healing of MCL tear False
 - 2. NSAIDs retards the healing of MCL tears True (and increases the risk if re-injury)
 - Most MCL tears require surgery False (very rarley)
 - Surgery accelerates the return to sport following MCL tears False (prolongs time for return to sport)



Femoro-acetabular Impingement (FAI)

Questions FAI is:

(Click on all correct answers)

- Uncommon False
 (10-20% with cam lesions in asymptomatic population.
 80-90% NHL and NFL players)
- Usually has reduction in hip ROM True (loss of IR in flexion)
- 3. Usually symptomatic False
- 4. Requires surgery independent of symptoms False (although it increases the risk of OA, surgery not proven to slow its progress)
- 5. Often bilateral True





Troy

Question

(click on all the correct responses)

- Most likely diagnosis is re-tear of left ACL False (right knee)
- Most likely diagnosis is tear of right ACL True (noncontact pivoting injury)
- He is likely to have instability while jogging in a straight line True (usually only problems with pivoting/side-stepping)
- 4. Ultrasound is a useful investigation in this setting False



ACL Tears

- Most ACL tears are non-contact True (70%)
- 2. The ACL of the contra-lateral knee has over 10% chance of rupture over 5 year True
- 3. The re-rupture rate of an ACL graft is 5-10% over 5 years True
- 4. There is no loss of hamstring strength with hamstring graft harvested False (up to 20 % loss with knee flexion over 60 degrees)