GP Referred MRI Clinical Guidelines

22102020 VS 3.3

KNEE ULTRASOUND SCAN: Should **NOT BE USED** in the assessment of intra-articular pathology (ligamentous and meniscal damage).

MRI CONTRAINDICATIONS
- Pacemaker

CAUTIONS - CONTACT RADIOLOGY PROVIDER
- Metalware
- Cochlear Implants
- Claustrophobia
- Works with Metal – Orbit check

KEY

Assessment Guide

Management Plan

***POST TRAUMATIC KNEE PAIN**

Clinical Assessment

Application of Ottawa Rules
Knee radiographs are indicated when any of the following are present:
- Age 55 years or older
- Tenderness at the head of the fibula
- Isolated tenderness of the patella
- Inability to flex knee to 90 degrees
- Inability to weight bear 4 steps both immediately and in the emergency department

(Exclusion criteria: Age <16 years or initial injury 7 days prior to presentation, recent injuries being re-evaluated and patients with altered levels of consciousness, paraplegia or multiple injuries)

Ottawa Rules indication NOT present

X-Ray Indicated by Ottawa Rules

No Fracture

Assessment for Ligamentous/ Meniscal Pathology

Fracture or Suspicion of Occult Fracture

Refer Acute Service

Suspect Meniscal Lesion*
*See Box 1 for Key Indicators

Community Based Rehabilitation for >6/52*
*if no improvement

Standing X-Ray to determine level OA

If moderate to severe OA clinically and/or radiologically consider this primary diagnosis & manage with rehab

No OA

Suspect ACL / LCL Rupture or Acutely Locked Knee*
*See Box 1 for Key Indicators

MRI

Suspect MCL / PCL Rupture*
*See Box 1 for Key Indicators

Standing X-Ray
If clinically required

Community Based Rehab
(GP reassess if no improvement)

***BOX ONE:** Key factors in the history and clinical examination for the following conditions that would elicit an MRI referral under ligamentous and meniscal injuries:

1. **Meniscal**
   Injury mechanism – rotational element, squatting, cutting or twisting in younger population
   Symptoms - Pain, swelling and mechanical symptoms (catching, locking)
   Signs - Acutely locked knee, Effusion, joint line tenderness – posterior more clinically relevant (variable sensitivity 55 – 85% depending on site of meniscal pathology)
   Loss of end range extension or flexion
   Thessaly Test / McMurray's Test
2. **Anterior Cruciate Ligament (ACL) Tear**
   Injury mechanism – deceleration, change of direction on a fixed foot, rotational, twisting
   Symptoms - Rapid onset of swelling within hours, Audible 'pop' or noise within the knee at the time of injury, Feeling of instability
   Signs - Effusion often large within 2-3 hours
   Loss of end range extension
   Lachman's test positive (high sensitivity and high specificity)
   Anterior Draw test positive (high specificity and low sensitivity)
3. **Posterior Cruciate Ligament (PCL) Tear**
   Injury mechanism – posteriorly directed force to the proximal tibia (e.g. dashboard injury or fall onto flexed knee or tackle from the front)
   Symptoms – Pain swelling and feeling of instability
   Signs – Effusion, Posterior Draw test positive (high sensitivity), PCL sag sign (late sign)
4. **Postero-Lateral Complex (PLC) Injury**
   Rare but associated with other ligamentous injuries in particular LCL rupture – needs referral
5. **Medial Collateral Ligament (MCL) Injury**
   Injury mechanism – valgus stress, often from a lateral force to the knee
   Symptoms – Pain, swelling and feeling of instability
   Signs - Effusion, Laxity on valgus stress test in 30* knee flexion,
   Laxity on valgus stress test in extension indicates higher degree of injury
6. **Lateral Collateral Ligament (LCL) Injury**
   Rare in isolation
   Laxity on varus stress in extension and in 30* knee flexion