Knee Examination

Objective:

To be able to perform examination of the knee and to distinguish and identify an abnormal finding that suggests a pathology.

1. Standing:

- Expose both lower limbs from mid-thigh down
- Comment on knee alignment while standing (varus/valgus and wither physiological or pathological))
- Look for abnormal motion of the knees while walking
- Look for ankle and foot alignment and position
- Gait

2. Supine:

- Expose to mid thigh
- Look:
  - Alignment (physiological valgus, abnormal valgus, varus)
  - Skin changes
  - Varicose veins
  - Swelling
  - Muscle wasting (quadriceps)
  - Inspect the back of the knee.

- Feel:
  - Check and compare temperature
  - Feel for any lumps or bumps in the soft tissue or bone around the knee – comment if present.
  - Identify bony landmarks (femoral and tibial condyles, tuberosity, proximal fibula, patella and comment if tender
  - Identify course of collateral ligaments and comment if tender
  - Identify joint line in flexion of 80-90 degrees and comment if tender

- Move:
  - Active R.O.M and compare, normally from -5 to calf touching thigh
  - Passive ROM if abnormal.
  - Be able to approximately describe ROM in degrees

- Comment on pain or crepitus with movement

- Special tests:
  - Anterior Drawer at 90 degrees and Lachman at 30 degrees for ACL
  - Posterior Drawer at 90 degrees for PCL
  - Valgus stress at 30 degrees for MCL, if positive (pain +- opening) then repeat in extension
  - Varus stress at 30 degrees for LCL, if positive (pain +- opening) then repeat in extension
  - Tests for effusion:
    - Milking test: in extension milk then knee medially upwards to fill the suprapatellar pouch and hold fluid in pouch with one hand then run other hand laterally downwards and look for filling medially (moderate effusion)
    - Patellar tap: in extension tap the patella downward and feel the patella bounce on the femur (large effusion)
    - A warm knee can be suggestive of mild effusion.
  - Apprehension test for patellar instability: start in extension with relaxed quadriceps, push patella laterally, then ask patient to start flexing the knee to 30 degrees, at any point if patient contracts his quadriceps aggressively or becomes apprehended stop and identify test as positive

- Joint above and below:
  - Hip: can be a source of referred pain , so a quick screening while supine is required as follows:
    - Move hip to flexion passively to 90 degrees and internally/externally rotate and check for pain.
  - Ankle: pathology may affect the knee, so a quick screening while supine is required as follows:
    - Move ankle passively in dorsal/plantar flexion and check for limitation and pain. Check subtalar motion and comment if abnormal.

- Distal neuro-vascular examination:
  - Palpate distal pulses
  - Quick screening that ankle and toes are moving up and down
  - Quick screening for sensation in the foot.
  - Comment if abnormal and compare to opposite side if abnormal