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Knee arthritis

Chronic condition caused by loss of cartilage in the joint. Commonly involves the medial compartment, but the lateral compartment can be involved, especially in Inflammatory arthropathy and post-traumatic. A gradual deterioration with fluctuations is usually observed.

What to ask in the history

- Duration- pain and deformity, progression
- Pain – location, precipitants (usually activity), night or rest pain
- Swelling – may be persistent or after activity
- Stiffness – difficulty squatting
- Family history, previous injury or inflammatory/crystal/Infective arthropathy
- Treatment – NSAIDs, Physiotherapy, Hydrotherapy, other modalities

What to look for on Examination

- BMI
- Lower limb alignment – bowed leg for medial compartment disease, knock-knees for lateral (valgus)
- Effusion – suprapatella, ballotment for moderate, sweep test for mild
- ROM – usually fixed flexion deformity with limited flexion
- Patello-femoral tracking & crepitus – indicates Patello-femoral arthritis
- Pain to palpation – along joint line
- Stability – anterior drawer/Lachmans for ACL, varus/valgus correctability and end-point
- Brief hip exam – exclude referred pain, especially if knee exam equivocal.
- Pedal pulses

What investigations to order

- Standing AP, Rosenberg, lateral and skyline views
- Bloods – FBC/CRP/ESR/Urate/Rheumatoid screen if secondary causes of arthritis suspected

How to treat

- Weight loss – dietary modification, exercise program
- Physiotherapy/Hydrotherapy – important to maintain movement and muscle tone
- Lifestyle modifications – reduce wt-bearing activities, esp on uneven ground, walking aids
- NSAIDs
- Intra-articular cortisone – especially if an effusion is present, effective but duration variable, allowed 3 per year
- Braces – unload affected compartments, cumbersome, perhaps for younger patients

When to refer

- Poor response to non-operative measures
- Significant limitation of ADLs/Sleep
- Significant deformity

What Mr Winters may do

- Arthroscopy – may benefit with early disease, mainly if there is an associated traumatic meniscal tear. Can also be good to assesses severity and compartment involvement
- Uni-compartment knee replacement – good for isolated medial compartment disease, must have intact ACL, ROM 10 -100 degrees and correctable varus. Longevity not as reliable as TKR but bone preserving
- Total knee replacement- predictable results, especially with computer navigation
- Re-alignment osteotomy – reserved for young patients with isolated compartment disease, who wish to maintain high function and tolerate some residual pain