

Knee Pain Protocols

Introduction: Diagnostic Triage and Management Guidelines

1. Patient Group

Adults aged 18 years and over with routine knee problems.
Patients who have had recent surgery should be referred directly to Secondary Care

2. Diagnostic Triage and Management Guidelines

Perform diagnostic triage to exclude serious pathology.
See Section 1 for Triage and Management Guidelines

Abbreviations:

AKP / AKPS	- Anterior Knee Pain / Syndrome
IA	- Intra articular
NSAID	- Non Steroidal Anti inflammatory Drugs
OT	- Occupational Therapy
OA	- Osteoarthritis
PFJ	- Patella Femoral Joint
TKR	- Total Knee Replacement
SYSADOA	- Symptomatic Slow Acting Drugs for Osteoarthritis

Diagnostic Triage	Management Guidelines
<p>Red Flags</p> <p>Tumours</p> <p>Infection</p> <p>Patient generally unwell or febrile</p>	<p>Consider urgent referral into Secondary Care:</p> <p>If sinister pathology suspected undertake appropriate investigations e.g. FBC, ESR, CRP etc.</p>
<p>Osteoarthritis</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • > 50 years • idiopathic or 2° to trauma/previous knee surgery • Capsular pattern – more limitation of flexion than extension <ul style="list-style-type: none"> • Medial compartment disease more common → varus deformity • Joint pain after period of rest/weight bearing • Intermittent giving way or locking • Radiographic findings may include: <ol style="list-style-type: none"> 1. Joint space narrowing 2. Osteophytes 3. Sclerosis 4. Subchondral cyst formation <p>(Grade 1-4 Kellgren and Lawrence)</p> <p><u>Differential Diagnosis:</u></p> <ol style="list-style-type: none"> 1. OA Hip 2. Lumbar spine 3. Peripheral vascular disease 4. Inflammatory disease 5. Gout – acute onset of pain, local heat and swelling 	<p>The International Clinical Studies Committee 'EULAR' recommend a combination of the following management guidelines:</p> <p><u>First Line Management:</u></p> <ol style="list-style-type: none"> 1. Education 2. Physiotherapy / Exercise 3. Weight reduction 4. Use of appropriate walking aids 5. Orthotics 6. O.T. assessment <p><u>Second Line Management:</u></p> <ol style="list-style-type: none"> 7. Simple analgesia and/or NSAIDS 8. IA Steroid injections x 2 if available in primary care- consider a referral to MSK Tier 2 service 9. There is evidence that SYSADOA 'may possess structure modification properties, but more studies are required' e.g. Glucosamine Sulphate, Chondroitin Sulphate, Diacerein and Hyaluronic acid 10. IA Hyaluronic acid injections are 'Probably effective in OA Knee, but the size effect is relatively small and the Pharmo-economic aspects of the treatment are not yet established' <p><u>Secondary Care Management:</u></p> <p>Consider referral to Secondary Care if, despite First and Second Line Management, a patient presents with:</p> <ul style="list-style-type: none"> • Significant pain – including night pain • Significant disability which may restrict occupation/walking • Significant deformity or history of instability e.g. giving way or locking • Recurrent effusion not responding to aspiration or steroid injections • Significant degenerative joint changes e.g. Kellgren and Lawrence Grade 3 or 4, not responding to conservative management • Patient is relatively fit and no contra-indications to surgery exist, consider: <ol style="list-style-type: none"> 1. General medical condition 2. Chronic infection 3. Peripheral circulation

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<p>Anterior Knee Pain Syndrome</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Diffuse pain, sometimes with sharp episodes, usually of insidious onset, predominantly located around patella • Kneeling, stairs and prolonged flexion increase symptoms • Abnormal foot position e.g. over pronation is a significant predictor of AKP • Abnormal patella alignments. Also serve as a predictor for AKP • Pain often reproduced on static quads testing at 60° knee flexion • Affects younger age group • Affects females more than males • May be a history of giving way/pseudo locking 	<p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Education – avoid all pain provoking activities e.g. Sport, squatting and kneeling • Weight reduction • X-ray – sky line view useful to assess patella tracking/degenerative changes • NSAIDS/simple analgesia • Referral to Podiatry for Biomechanical assessment • Referral to Musculoskeletal Physiotherapy <p><u>Second Line Management:</u></p> <p>If symptoms persist despite appropriate treatment, consider referral to MSK Tier 2 service. Most patients with AKPS or PFJ OA can be managed in Primary Care</p>

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<p><u>Ligament Injuries</u></p> <p>1. <u>Collateral Ligaments</u></p> <p><u>Clinical features:</u></p> <ul style="list-style-type: none"> • Acute or chronic sprain • Trauma – typically flexion/rotation with valgus or varus force • Local joint line pain in acute stage capsular pattern may be present • Valgus/lateral rotation test (+) with medial collateral ligament • Varus/medial rotation test (+) with lateral collateral ligament • Possible laxity <p>2. <u>Coronary Ligaments</u></p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Acute or chronic sprain • Trauma – a strong forced rotation of the knee with or without Meniscal injury • Pain usually at medial joint line • Painful passive lateral rotation • May have (+) Meniscal tests <p>3. <u>Cruciate Ligaments</u></p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Acute injury – normally follows twisting injury with foot fixed e.g. anterior cruciate damage may occur following forced internal rotation of the tibia relative to the femur • Chronic injury – relatively common • Haemarthrosis / effusion • Instability – seldom reported in acute phase becomes apparent later particularly with loading • Positive draw test, Lachmans or pivot shift 	<p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Advice – R.I.C.E.S. • Analgesia / NSAIDS • Physiotherapy – acute or chronic lesion • Podiatry assessment <p><u>Second Line Management:</u></p> <ul style="list-style-type: none"> • Early physiotherapy treatment is very effective • Injection therapy can be used if symptoms fail to settle - if available in primary care) – consider referral to MSK Tier 2 service <p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Advice – R.I.C.E.S. • Analgesia / NSAIDS • Physiotherapy • If significant meniscal injury suspected, follow guidelines <p><u>Second Line Management:</u></p> <p>Normally respond well to Physiotherapy treatment. However, if symptoms fail to settle, consider injection therapy – consider referral to MSK Tier 2 service</p> <p><u>Investigations:</u></p> <p>X-rays are usually normal but should be taken if patient unable to weight bear to exclude osteochondral fractures or if patient reports something moving in joint to exclude loose body</p> <p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Advice – R.I.C.E.S. • Physiotherapy • Podiatry <p><u>Second Line Management:</u></p> <p>Refer to Orthopaedics if instability persists or loss of sporting function. May need reconstructive surgery</p>

Diagnostic Triage	Management Guidelines
<p>Meniscal Tears</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • TRUE locking – block to extension but knee can be flexed • Most common between ages 20 – 50 years • Medial meniscus most commonly affected • History of trauma in younger age group, can have degenerative tears in elderly • Effusion occurs – 12-36 hours after injury. If large effusion, consider other cause • Joint line tenderness / pain • Positive McMurrays 	<p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Consider X-ray referral if other causes of locking are suspected e.g. a loose body or osteochondritis dissecans • Physiotherapy initially for suspected acute tears in absence of true locking <p><u>Second Line Management:</u></p> <p>A locked knee should be referred URGENTLY to Orthopaedics</p> <p>If symptoms fail to settle with physiotherapy or diagnosis is uncertain, refer/discuss with Orthopaedics</p>
<p>Osgood Schlatters Disease</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Occurs in adolescents, more often in males • Associated with excessive sporting activity • Pain, swelling and tenderness at the tibial tuberosity 	<p><u>Management:</u></p> <ul style="list-style-type: none"> • Virtually all patients can be managed in Primary Care • Advice – moderate sporting activities • Explain benign and self limiting nature of condition – symptoms almost always resolve at skeletal maturity but enlarged tibial tuberosity may persist • Physiotherapy • Podiatry

Diagnostic Triage	Management Guidelines
<p>Ilio Tibial Band Bursa</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Onset generally over use – especially long distance runners • Pain on lateral side of knee above lateral femoral condyle • Resisted abduction of leg reproduces pain • Passive adduction of leg reproduces pain • The lower end of the ilio tibial tract can be irritated, but invariably the bursa is also at fault 	<p><u>Investigations:</u></p> <p>Xrays not routinely required unless diagnosis is uncertain</p> <p><u>First Line Management:</u></p> <ul style="list-style-type: none"> • Absolute rest from sporting activity • Physiotherapy • Local infiltration with LA & steroid – if both structures involved infiltration of both should be done at the same time followed by absolute rest for 10 days and then referral to physiotherapy – if available in primary care, consider referral to MSK tier 2 service • Podiatry referral for biomechanical assessment also footwear and running techniques need checking <p><u>Second Line Management:</u></p> <p>Consider referral to MSK Tier 2 service if symptoms fail to settle despite above measures</p>
<p>Pes Anserine Bursa</p> <p><u>Clinical Features:</u></p> <ul style="list-style-type: none"> • Onset over use especially dancers or runners • Pain just proximal to insertion of medial flexors of knee • Resisted knee flexion increases pain • This structure lies deep to the combined attachment of Sartorius, Gracillis and Semi tendinosis. It is extremely tender to palpation even in the normal knee so comparison testing on both knees should be done 	<p><u>Investigations and Management</u></p> <p>Follow guidelines above</p>