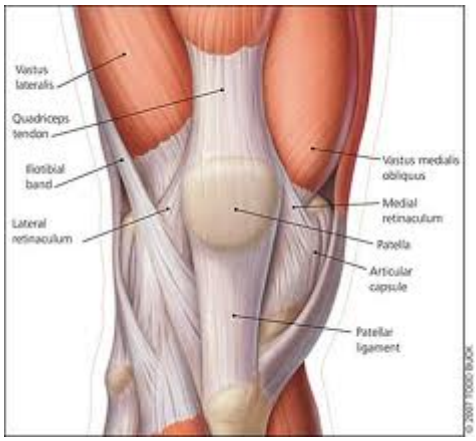
Patellofemoral Pain

Patellofemoral pain syndrome (PFPS) is one of the most common musculoskeletal injuries suffered in the adult population, accounting for approximately 25% of all identified knee injuries and nearly 10% of all visits to musculoskeletal and orthopaedic clinics. This condition is sometimes referred to as “runner’s knee” but is also seen in the sedentary population.

What Is It



The diagnosis covers a range of symptoms in, under or behind the knee cap due to poor biomechanical loading of the structures in this area. Structures involved can include the cartilage covering of the patella and/or condyles of the femur, infrapatellar fat pad and occasionally the patella tendon. Typically, patients complain of pain with running and walking, descending stairs, deep squat and after periods of prolonged knee flexion such as with sitting.

PFPS patients typically present with poor strength or recruitment of hip stabilisers, tight lateral structures of the hip and thigh, delayed onset of vastus medialis oblique (VMO) firing seen on EMG study and proprioceptive dysfunction.

Traditionally PFPS has been described as poor tracking of the patella, due to an imbalance of forces in the muscles surrounding the cap, however data to support this is inconsistent. Recent evidence suggests weakness of the hip is commonly the underlying driver of the dysfunction. The truth of the matter is likely that there is no one mechanism resulting in PFPS, but more so several maladaptive biomechanical patterns that may overload tissue in this area.

Management

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The initial phase of management is activity modification and avoidance of aggravating activities. Stretching, massage, taping, ice and anti-inflammatory medication may help manage the pain but will not solve the problem.

The mainstay of treatment should consist of a physio guided program of exercises aimed at correcting any weakness of the muscles of the lower limb as well as exercises and drills to work on improved biomechanics and loading patterns for the knee. This may involve using biofeedback to retrain the sequencing of the quadriceps muscles.

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