Lateral, Medial and Posterior Knee Pain

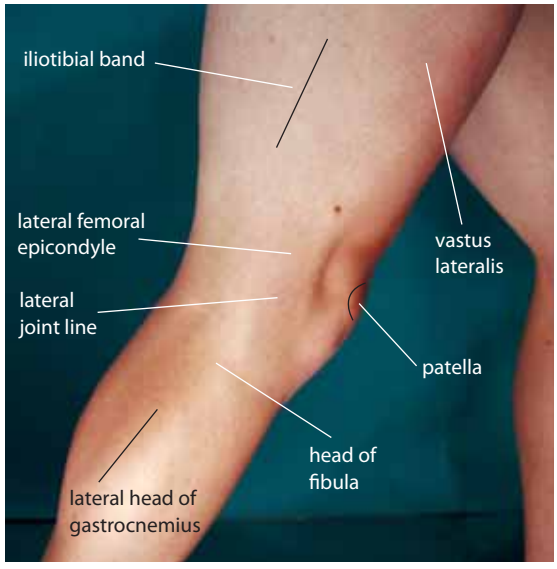
CHAPTER 29

Although acute knee injuries and anterior knee pain are very common presentations in sports medicine practice, patients presenting with lateral, medial or posterior knee pain can also provide challenges to the practitioner.

Lateral knee pain

Pain about the lateral knee (Fig. 29.1) is a frequent problem, especially among distance runners. The most common cause of lateral knee pain is iliotibial band friction syndrome (ITBFS). With repeated knee flexion/extension, the iliotibial band (ITB) rubs against the prominent lateral epicondyle of the femur. Training errors and biomechanical abnormalities can precipitate ITBFS. Patellofemoral syndrome (Chapter 28) may also present as lateral knee pain. In the older active person, degeneration of the lateral meniscus or lateral compartment osteoarthritis should be considered.

The biceps femoris tendon may become inflamed as it passes posterolaterally to the knee and inserts into the head of the fibula. This occurs in sprinters and footballers. Injuries of the superior tibiofibular



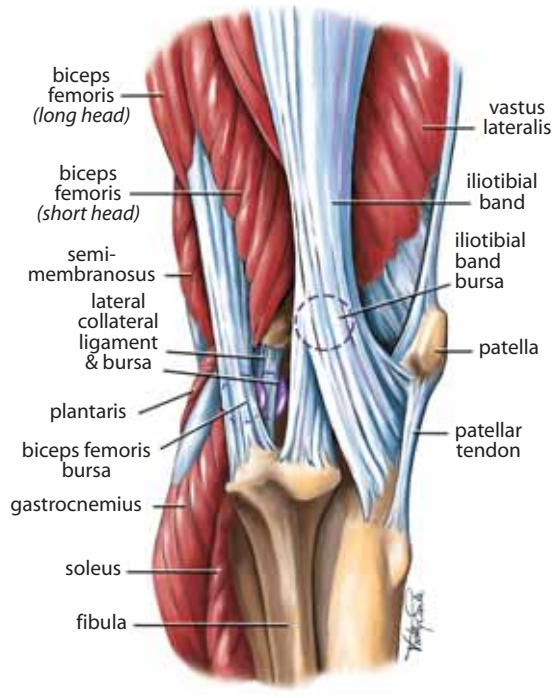


Figure 29.1 Lateral aspect of the knee

(a) Surface anatomy

(b) Anatomy of lateral aspect of the knee

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joint may cause lateral knee pain. It is not uncommon for lateral knee pain to occur as a result of referred pain from the lumbar spine. The causes of lateral knee pain are shown in Table 29.1.

History

A history of overuse may be suggestive of ITBFS or biceps femoris tendinopathy. If there is a history of excessive downhill running or running on an uneven surface, ITBFS may be implicated. If the pain tends to occur with sprinting or kicking activities, biceps femoris tendinopathy is more likely. Lateral knee pain following knee or ankle injury may indicate the superior tibiofibular joint or lateral meniscus as the site of injury.

The pain of biceps femoris tendinopathy is maximal initially on activity and settles with warming up, returning following activity or the next day. With progression of the condition, pain may persist during exercise and be sufficient to cause the athlete to cease sporting activity. ITB pain usually does not lessen with activity. Pain on sudden twisting or a history of giving way or locking may be indicative of degenerative lateral meniscus problems. Pain associated with excessive lateral pressure syndrome increases with activity. As the population of active individuals who are over 50 years old increases, the diagnosis of lateral compartment osteoarthritis must be considered.

The presence of back pain may suggest referred pain from the lumbar spine. Associated neurological symptoms such as weakness and paresthesia in the lower leg may indicate common peroneal nerve entrapment.

Examination

Full assessment of the ligaments of the knee (Chapter 27) should be included in the examination. Biomechanical examination should also be performed.

1. Observation
   (a) standing
   (b) walking
   (c) supine
   (d) side-lying
2. Active movements
   (a) knee flexion
   (b) knee extension
   (c) repeated knee flexion (0–30°) (Fig. 29.2a)
   (d) tibial rotation
3. Passive movements
   (a) knee flexion/extension
   (b) tibial rotation (Fig. 29.2b)
   (c) superior tibiofibular joint
      (i) accessory glides (Fig. 29.2c)
   (d) muscle stretches
      (i) ITB (Ober's test) (Fig. 29.2d)
      (ii) quadriceps
      (iii) hamstring
4. Resisted movements
   (a) knee flexion (Fig. 29.2e)
   (b) tibial rotation
5. Functional movements
   (a) hopping
   (b) squat
   (c) jumping
6. Palpation
   (a) lateral femoral epicondyle (Fig. 29.2f)
   (b) lateral joint line
   (c) lateral retinaculum
   (d) lateral border of patella
   (e) superior tibiofibular joint
   (f) biceps femoris tendon
   (g) gluteus medius
7. Special tests
   (a) full knee examination (Chapter 27)
      (i) effusion (Fig. 29.2g)
      (ii) McMurray's test (Fig. 29.2h)

Table 29.1 Causes of lateral knee pain

Common	Less common	Not to be missed
Iliotibial band friction syndrome	Patellofemoral syndrome	Common peroneal nerve injury
Lateral meniscus abnormality	Osteoarthritis of the lateral compartment of the knee	Slipped capital femoral epiphysis
Minor tear	Excessive lateral pressure syndrome	Perthes' disease
Degenerative change	Biceps femoris tendinopathy	
Cyst	Superior tibiofibular joint sprain	
	Synovitis of the knee joint	
	Referred pain	
	Lumbar spine	
	Neural	

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