

Table 3: Summary of features to identify on physical examination

| Problem | Feature |
|---|---|
| Malalignment | |
| Increased Q angle | Patella tracks laterally with flexion |
| Hind foot pronation (pes planus) | Foot appears to collapse inward with weight bearing; shoes show excessive wear and collapse of midsole |
| Miserable malalignment syndrome | Femoral anteversion and external tibial torsion (patellae “squint” inward with feet together) |
| Leg-length discrepancy | Pelvic “rocking” gait; patient may be unable to stand with both knees fully extended; unequal leg lengths; uneven wear on shoes |
| Muscle imbalance (caused by or cause of AKP) | Bilateral difference in muscle bulk and strength; VMO hypoplasia with delayed contraction compared with vastus lateralis on isometric test |
| Mobility and flexibility problems | |
| Patellar hypomobility | Tight lateral retinaculum; patella sits and tracks laterally; patient is unable to move patella medially more than 25% of its width |
| Patellar hypermobility | May have history of subluxation; patient is able to move patella medially more than 75% of its width |
| Subluxing/dislocating patella | History of “giving way” and patella out of place; apprehension; patients with recurrent cases may develop patellofemoral osteoarthroses ² |
| Iliotibial band tightness | Patella tracks laterally; may be tenderness over iliotibial band; positive Ober’s test |
| Tightness of hamstrings, quadriceps, gastrocnemius or soleus, or both | History of poor training diversity and stretching; poor flexibility on testing individual muscle groups |
| Tendinitis | |
| Patella: jumper’s or runner’s knee | Tenderness on inferior patellar pole; positive “tilt” test |
| Quadriceps | Tenderness along superior patellar border |
| Patella stress fracture | Rare and must be distinguished from bipartite patella; point tenderness over patellar body |
| Osgood-Schlatter disease | History of slow onset of pain usually in adolescents; tenderness over tibial tuberosity, which may be enlarged |
| Medial plica | History of relief with extension and “popping” along medial patellar border; tenderness along medial patellar border; thickening and tenderness of plica; the patient may feel a “pop” as plica is rolled under finger, recreating symptoms |
| Osteochondral lesions | Patellar malalignment usually present unless lesion is after acute trauma; tenderness with compression of patella into trochlea at specific angles of flexion; the patient may feel a grinding sensation with such compression |

Note: Q = quadriceps, AKP = anterior knee pain, VMO = vastus medialis obliquus.

[\[Return to text\]](#)