

Patellofemoral Syndrome

Assessment

Postural Assessment

- posterior view- pronation of the foot and a valgus orientation of the knee
- anterior view- with the clients feet parallel, a medial orientation of the patella (squinting patella) may be caused by internal femoral and tibial rotation.
- in their normal posture the feet appear externally rotated while the patella seems to have a medial position.
- in a lateral view hyperextension of the knees may be present as may patella alta

Gait assessment

- In an anterior view, the thigh internally rotates and adducts to midline, so the weight bearing foot is placed under the center of the pelvis
- With gluteus medius weakness, a Trendelenburg gait may be present.
- When the client is seated, hypotrophy of the vastus medialis may be noticed.

Palpation

- the medial and lateral borders of the patella reveals tenderness and possible swelling.
- The tissue just medial to the patella is palpated for a vertical taut band that may indicate a plica cord

Testing

- AF ROM of the knee may reveal excessive lateral motion of the patella in the first 45 degrees of flexion
- The patella is then lightly palpated for snapping of soft tissue over medial or lateral retinaculum while the client flexes the knee
- PR ROM the patella is palpated for crepitus and to check if the patella tracks in the same manner as in the AF ROM testing.
- Tightness of the lateral retinaculum is present when the patella is mobilized medially.
- The ankle, hip, sacroiliac joints and lumbar spine are also assessed for contributing hypomobility
- AR strength of gluteus medius may be reduced.
- A functional test for hip abductors is a single leg squat, with a weakness revealed by the pelvis dropping on the untested side.
- Length tests of hamstrings reveal reduced knee extension when the hip is first flexed to 90 degrees
- Gastrocnemius may also be short, placing the knee in slight flexion.
- The Q angle is greater than 18 degrees when the client is standing.

Special Tests

- Waldron's, McConnell's and Clarke's patellofemoral grind tests are positive
- A patellar apprehension test may be positive
- Ober's test is positive with a tight iliotibial band

Differential Assessment

- for patellar tendinitis is pain with compression at the tendinous insertion at the inferior patella and pain at the inferior patella with knee squats.

General Treatment

- The primary focus should be on the compensating structures that have contributed to the condition.
- Positioning can be prone, supine or side lying.
- Hydrotherapy can include deep moist heat on the iliotibial band and lateral retinaculum or contrast application to encourage circulation.

Specific Treatment

- General Swedish techniques are used on the low back and gluteals in the prone position.
- Hypomobile joints in the lumbar spine and sacroiliac joints are mobilized using joint play.
- Fascial techniques are used on the iliotibial band and the hamstrings (same as the iliotibial band contracture)
- Transverse fascial spreading and skin rolling are indicated for the lateral knee and retinaculum
- The patella is mobilized in a medial direction
- Specific petrissage is used on the tensor fascia lata, gluteus medius, hamstrings and gastrocnemius to reduce their tone.
- In supine, adductors and quadriceps muscles are treated with petrissage.
- Muscle stripping and ischemic compressions are indicated in TP's in quadriceps muscles (can refer pain to the knee joint) and TP's in vastus medialis (can cause weakness and buckling of the knee while walking).
- Pain free PR ROM of the knee will help with successive action
- Passive stretches and post-isometric techniques for the shortened hamstrings and gastrocnemius are interspersed throughout the massage.
- Hypomobile joints such as the hip and ankle are treated using joint play.
- Massage the distal leg and foot (using pes planus instructions)
- Repetitive effleurage to the entire leg and thigh