



Patellofemoral Syndrome

Patellofemoral syndrome is also known as chondromalacia patella or patellofemoral malalignment.

ANATOMY: The patella is a sesamoid bone, which means that it is embedded in a tendon. These are located in many areas of the body but the largest and most familiar is the patella. It is incorporated in the tendon from the quadriceps muscles which straighten out the knee from a bent to a straight position. This tendon continues down to the bump below the knee, called the tibial tubercle. The patella can be malaligned due to rotational development abnormalities where the femur or the tibia has a little twist or rotation to it, causing the patella to tilt or not track in the groove of the thigh bone or femur, which is behind the patella. Maltracking of the patella in that groove can cause pain from two sources: The patella can be unstable and not stay in the groove or it can be malaligned and not track in the groove properly and put abnormal pressure on the cartilage surface, causing it to wear out.

TREATMENT OPTIONS: Non-operative treatment has historically consisted of trying to strengthen the quadriceps muscles that pull on the patella, similar to reins on a horse and buggy.

Surgical treatment has historically consisted of either an open or arthroscopic look at the cartilage surface and trying to smooth it if there are rough flaps or fissures. There is also something called a lateral release where the lateral retinaculum, or capsule of the joint, that tethers the patella is cut on the outside border of the patella. This theoretically allows the patella to slide over into the groove to track better. The historic track record of this procedure has been quite spotty with inconsistent results, causing frustration for patients and surgeons. The approach has historically been a staged approach where a lateral release is done and if that does not work then another procedure is done to realign the patella, which either means tightening of the opposite side of the joint capsule, and/or moving the tibial tubercle, or bony bump below the knee, over to align the patella tendon and the patella better with the groove in the femur.

I would refer any patient to www.PatellaMD.com and the work of Dr. Shneider in Michigan as he explains his approach to this over many years of studying and treating this problem. He approaches this trying to determine whether the patella is unstable and does not stay in the groove properly or whether it is malaligned, and then addresses the treatment from there.

Surgical treatment of a tibial tubercleplasty and realigning the kneecap with lateral capsule release and tightening the medial or inner capsule can be a big operation with a large incision and protected weight bearing for up to six weeks while the bone heals. This is a fairly long rehab to bring back the muscles.