

A Closer Look at Osgood-Schlatter

PRESENTATION, DIAGNOSIS AND CONSERVATIVE CARE.

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Osgood-Schlatter disease, once thought to be an osteochondrosis of the tibial tuberosity and requiring casting for several months, turns out to be an extremely treatable [enthesitis](#) caused primarily by a sudden growth spurt. The tibial tubercle, an extension of the growth plate of the tibia, remains soft throughout the growth phase of the proximal tibia. The quadriceps muscles are stretched due to the rapid rate of femur elongation (remember, the muscle cells are not multiplying like the bones are), tugging on the tubercle. The apophysis, not having the strength of the tendon, will bear the brunt.

This tug was once believed to disrupt the blood supply, causing an avascular necrosis. However, more recently, it has been proven that the tubercle does, in fact, possess a rich blood supply.

Presentation / Symptoms

Usual onset of Osgood-Schlatter is between ages 11-13 for girls and 12-14 for boys. As mentioned, the growth spurt is the most likely causative factor, followed by sports activities, particularly those that involve heavy quad engagement such as soccer, biking, running and running sports.

The quads become tight from the first round of activity, followed by stiff muscles and knee pain, primarily expressed the morning after the activity. On the second day, the knee / knees can become quite painful during performance of the activity due to the extra tug of the taut muscles on the weakest spot, the [tibial tubercle](#).

This sequence can parlay itself into a painful condition that is sometimes so severe the youngster can barely bend their knees.

Radiographic Evidence

X-ray appearance of spotty, calcific patches invading the cartilage give the impression of osseous breakdown. Calcification of the osseous center is blotchy and uneven, giving a destructive appearance. Along with intense pain and swelling, this guided our ancestors in the direction of pathologies that did not exist. Comparison with the other leg came into vogue, which made no sense in the first place because cartilage changes (calcium infiltration) vary from one leg to the other.

Conservative Care

Stretch the quadriceps muscles of both legs, as both are generally involved in the activity and eventually could both become symptomatic. Traditional stretching will tax the tendons and their attachments, causing further insult to the enthesis. Therefore, we need to stretch the belly of the muscles.

Apply lotion to the quads and then perform deep-tissue muscle elongation, preferably with your elbow.

You can go in the direction of origin and/or insertion; either direction is OK. Continue going deeper and deeper for approximately 3 minutes per leg. This will be painful to the patient, but in my experience, the results are immediate and profoundly gratifying. In most cases, the young athlete will be back playing the next day, and only a few treatments are usually required.

Resources

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