STANFORD
SCHOOL OF MEDICINE
Stanford University Medical Center

DEPARTMENT OF ORTHOPEDIC SURGERY
SPORTS MEDICINE
Marc R. Safran, MD
Professor, Orthopaedic Surgery
Chief, Division of Sports Medicine

SINDING-LARSEN-JOHANSSON SYNDROME

DESCRIPTION

Inflammation of the kneecap (patella) at its lowest point. This is the site of origin of the patellar tendon. There is traction on the kneecap at this point due to action of the large, powerful thigh muscle (quadriceps), as well as with deep bending of the knee. The injury is due to repeated stress or vigorous exercise. It is a temporary condition of the patella that is uncommon after age 16. It is the children's equivalent of patellar tendinitis (jumper's knee).

FREQUENT SIGNS AND SYMPTOMS

- Slightly swollen, warm and tender bump below the kneecap.
- Pain with activity, especially straightening the leg against force (stair-climbing, jumping, deep knee bends or weightlifting) and/or following an extended period of vigorous exercise in an adolescent.
- In more severe cases, pain occurs during less vigorous activity.

CAUSES

Results from stress (single sudden or repeated) or injury of the lower patella that interferes with development, causing inflammation. This may be inflammation of the cartilage of the growing patella, death of tendon cells from repeated stress, or pulling off of the lining of the patellar bone.

RISK INCREASE WITH

- Overzealous conditioning routines, such as running, jumping or jogging
- Overweight
- Male between 10 and 15
- Rapid skeletal growth
- Poor physical conditioning (strength/flexibility)

EXPECTED OUTCOME

Mild cases can be can resolve with slight reduction of activity level, while moderate to severe cases may require significantly reduced activity and even immobilization for up to 9 months.

POSSIBLE COMPLICATIONS

- Bone infection
- Recurrence of the condition in adulthood with symptomatic bone fragments below the affected knee (ossicle)
- Persisting prominence (bump) below the kneecap

450 Broadway, M/C 6342, Redwood City, Stanford, CA 94063
Office: 650.721.7779

STANFORD
SCHOOL OF MEDICINE
Stanford University Medical Center

DEPARTMENT OF ORTHOPEDIC SURGERY
SPORTS MEDICINE
Marc R. Safran, MD
Professor, Orthopaedic Surgery
Chief, Division of Sports Medicine

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medications and ice to relieve pain, stretching and strengthening exercises and modification of activities. Specifically, kneeling, jumping, squatting, stair-climbing and running on the affected knee should be avoided. The exercises can all be carried out at home for acute cases. Chronic cases often require a referral to a physical therapist or athletic trainer for further evaluation or treatment. Uncommonly, the affected leg may be immobilized for 6-8 weeks (cast, splint or reinforced elastic knee support). A patellar band (brace between kneecap and tibial tubercle on top of the patellar tendon) may help relieve symptoms. Surgery is rarely needed (if conservative treatment fails) in the growing patient, however, surgery may be necessary after skeletal maturity if the ossicle becomes painful.

MEDICATION

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Cortisone injections are rarely, if ever, indicated. Cortisone injections may weaken tendons, so it is better to give the condition more time to heal than to use them.

HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10-15 minutes every 2-3 hours for inflammation and pain, and immediately after any activity which aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used prior to performing stretching and strengthening activities prescribed by your physician, physical therapist or athletic trainer. Use heat pack or a warm soak.

NOTIFY OUR OFFICE IF:

- Symptoms get worse or do not improve in 4 weeks, despite treatment
- New, unexplained symptoms develop. Drugs used in treatment may produce side effects.

450 Broadway, M/C 6342, Redwood City, Stanford, CA 94063
Office: 650.721.7779