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Patellar Tendonitis: Arthroscopic Surgery

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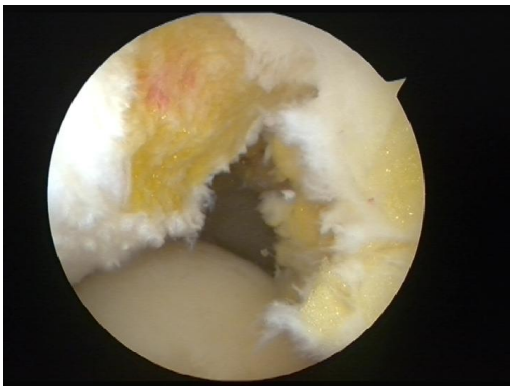

Patellar Tendonitis Arthroscopic Surgery

THE ANATOMY OF THE KNEE

The knee is a complex joint comprising; bony surfaces covered with a smooth articular cartilage layer. In the knee, between the principal two bones, the femur and the tibia, are two crescentic shaped fibrocartilage pads called "menisci" or "cartilages". The ligaments that stabilise the knee consist of the collateral ligaments; medial and lateral, lying either side of the knee and the cruciate ligaments, anterior (ACL) and posterior cruciate ligament (PCL), lying within the joint. The fibrous capsule surrounding the knee completes the stability of the joint. The patella is the bone that lies in the front of the knee. The quadriceps tendon connects the quadriceps of thigh muscle with the patella. The patellar tendon is the tendon below the knee that connects the patella to the tibia.

Patellar tendonitis is a condition in which the upper end of the patellar tendon at the lower pole of the patella becomes inflamed. This often results from excessive sport or driving. Physiotherapy (eccentric exercises) and non-steroidal anti-inflammatory drugs (NSAIDs) are commonly ineffective in allowing a full return to sporting activity.

EXERCISES AND MEDICATION PRIOR TO SURGERY

Prior to surgery it is important to strengthen the muscles of the leg as far as is possible. Regular exercises should be undertaken to do this. Static quadriceps exercises consist of tensing the muscle on the front of the thigh whilst the knee is straight. Hold the contraction for 5 to 10 seconds, rest for 5 or

10 seconds and begin again. This should be repeated 10-50 times. Whilst lying on your back the straight leg should be lifted into the air and held for 5 to 10 seconds, then lowered rested for 5 to 10 seconds and repeated 10 to 50 times. If possible these exercises should be undertaken against weight or resistance or in a gym using exercise equipment. These static exercises can also be undertaken in the first three weeks following surgery.

Anti-inflammatory tablets (Indomethacin, Voltarol, Brufen, Naprosyn, etc) must be stopped 2 days before surgery. On the morning of surgery patients should fast from midnight and arrive at the hospital at 7.20am. For afternoon surgery you will be fasted after 8am. Prior to the operation any tablets or medications you take, or allergies you may have to medications, should be brought to the attention of the surgeon. Please notify your surgeon and anaesthetist in advance if you are taking any anti-coagulants (blood thinners), hormone replacement tablets, the Pill or suffer from diabetes or any other significant medical condition.

The anaesthetist and Mr Johnson will see you before surgery. The operation is performed under spinal or general anaesthesia. There will be one or two small incisions in the front of the knee either side of the patellar tendon.

SURGICAL TECHNIQUE

Arthroscopic, telescopic, keyhole or minimally invasive surgery is the technique of performing surgery inside a joint through a telescope without disrupting the surrounding structures. Looking inside the joint with the arthroscope allows the surgeon to look directly at the cartilages, ligaments and the articular surfaces without damaging the joint. The arthroscope is a pencil thin tube containing light fibres and is a means of transmitting a picture of the inside of the joint to a video camera. The knee joint is filled with fluid allowing the surgeon to look around the brightly lit inside of the joint. The arthroscope is inserted through a small incision, about 5mm long either side of and just below the knee cap (patella). As well as the arthroscope a small metal probe is inserted into the knee to help show if there are any tears in the menisci.

Once extent of the damage to the patellar tendon or other structures in the knee has been determined, small cutting tools are inserted into the joint through the same holes that were used for the arthroscope. With the arthroscope in the joint giving the surgeon a clear view, these small cutting instruments are then used to trim away the fatty tissue around the lower pole of the patella and whilst protecting the patellar tendon, 3-5 mm is removed from the lower pole of the patella. This is done so that the patella no longer impinges or rubs on the back of the patellar tendon. The debris is removed through the same small holes as the joint is washed out. The fluid is drained out at the end of the procedure, however the knee may feel as if there is a little fluid within it for a few days.

Arthroscopy is used in order to cause as little disruption to the knee as possible, to result in a minimal of post-operative pain and allow a rapid return of function. However, arthroscopic decompression of the patellar tendon is a more painful procedure than a simpler menisectomy or cartilage operation. The knee tends to be a little more swollen and the soreness lasts for 2-3 weeks rather than days. Patients can generally return to work in

3-7 days, and to driving at the same time if patients consider themselves to be safe to drive. The results and speed of recovery is very much dependant on the nature of the damage to the knee and the extent of surgery undertaken and may as a consequence vary from this norm. There will be one or two small incisions in the front of the knee either side of the patellar tendon. A steristrip or a single suture is used to close these wounds.

Following the operation you usually wake up without or with only modest pain because local anaesthetic is inserted into the joint at the end of the procedure. This may wear off after 4-6 hours. Medication to relieve pain and/or inflammation may be prescribed. By the following morning the leg is usually comfortable whilst taking only regular anti-inflammatory medication. Generally only a few hours after your operation you will be able to get around walking without too much difficulty and sometimes with crutches. Most arthroscopic surgery patients can be discharged form hospital later the same day as a "Day Case". Sometimes when extensive surgery is performed or operations preformed simultaneously on both legs, patients are kept in hospital overnight. After patients go home, they should keep bending and lifting the knee in order to strengthen the muscles and regain movement.

If the knee becomes more swollen over the first week or more painful than during the first day, please return to your general practitioner for early review. Normally, Mr. Johnson will review you at the hospital after 2-3 weeks.

WOUND DRESSING AND SUTURES

The dressings should be removed after 5 days and the wound inspected. If there is any excessive redness or infection patients should return to the GP or the clinic. If the wounds have been closed with steristrip these may be removed at that time. If sutures were used then the dressings should be maintained for 10 days, following which you should return to the GP's clinic to have the stitches removed. A tubigrip elasticated support should be worn for 7-10 days. If dry and the sutures have been removed or dissolved then the wound can be washed, and pool exercises can be begun. If the wound becomes red, inflamed or infected then patients should return to see Mr Johnson.

MEDICATION

If you do not suffer from gastric irritation, you should take anti-inflammatory tablets for three weeks to settle down the inflammation and swelling in the knee. The anti-inflammatory tablets should be taken after eating. If nausea, vomiting or abdominal pain develops you should reduce the dosage. If despite reducing the dosage gastric irritation continues then the tablets should be stopped and you should contact your general practitioner.

PHYSIOTHERAPY

Prior to surgery quadriceps exercises should be performed to strengthen the knee. Static quadriceps exercises with a straight leg (as described above) should also be performed immediately after your operation on waking. A physiotherapist should visit you after the operation to assist you to stand and start your mobilisation. The physiotherapist will advise you on the exercise programme and supervise your quadriceps exercises. Crutches or sticks are sometimes necessary but can be discarded as soon as walking is comfortable. The physiotherapist will also assist you to try bending the knee a little. When you are comfortable and able to walk, and the nurses and physiotherapist are happy with your progress, you may be collected and taken home. This is usually 5pm for morning cases and 8pm for afternoon cases.

The exercise programme of quadriceps exercises should be continued at home. Approximately 5 minutes each hour will be ample. After 3-5 days more knee flexion should be possible. However following patellar tendonitis surgery active, regular and repetitive flexion exercises are not necessary and should not be undertaken as this can result in further inflammation in the patellar tendon. An outpatient physiotherapy session should be arranged during this period. After 7 days knee bending should begin to return to normal other than for some soreness anteriorly. Resisted exercises and light weight training should not be undertaken until after review by Mr. Johnson and only undertaken with the knee held in a straight position for the first 6 weeks following surgery. The progress is variable; so do not worry if your progress is a little slow at this stage.

RETURN TO WORK AND SPORT

If your job is sedentary and mostly sitting you may wish to return after only 3 or 5 days. If your job is physically demanding and requires standing or walking for most of the day, your return to work may take 3-4 weeks. Driving can usually be performed for short periods after 5-7 days providing that the knee is pain free and you are able to control the car with foot pedals and make an emergency stop.

Light static bike cycling, swimming, weight training or jogging may be undertaken only after 4-6 weeks on the instruction of Mr. Johnson. Return to jogging is allowed if there are no symptoms or soreness in the front of the knee after 9–12 weeks. Active running, soccer, rugby and squash are usually allowed after 12 weeks depending on individual progress.