



The injured groin

By Dr Ian Davies, Orthopaedic Surgeon, Tel ED H&M

Occasionally a fit athlete presents with pain in the region of the 'groin'. This injury is easy to identify and usually easy to treat non-operatively. However, adductor injuries may require surgery. A groin injury is usually a muscle/ tendon/ ligament injury but in the younger athlete, avulsion fractures of the ischial tuberosity may occur.

Presentation

Groin injuries often occur performing a contact/ tracking activity, usually in Australian Rules, soccer or martial arts. Other sports requiring the legs to be brought together, such as gymnastics or horse riding, may also result in this injury. Occasionally, the patient reports a "pop" during activity, resulting in pain that gradually deteriorates.

Pathophysiology

Adductor muscle tears involve inflammation and pain along the inner thigh muscles and groin. The injury occurs at the junction between the muscle and tendon or at the tendon attachment to the ischial tuberosity. Adductor longus is the most muscle involved. At the initial tuberosity graft/ligament chase between the age of 20 and 25 years, avulsion is rare after this age.

Grading

Grade one strain: mild symptoms, no loss of muscle strength and normal tendon length.

Grade two strain: tearing of fibres, some muscle weakness in length.

Grade three strain: complete disruption tears.

Common signs and symptoms

- A swollen gap in the groin or inner thigh may be noticed at the time of injury.
- Pain, tenderness, swelling, warmth, and erythema in any combination usually presents over the inner thigh and groin.
- Symptoms are often worse with movement.
- Weak kicking is noted.
- Swelling in the region of injury may occur at approximately 48 hours.
- Loss of muscle function is noted with complete disruption.
- Swaps of the injured muscle may occur.

In addition to the above, those with an avulsion fracture may report:

- crepitus
- pain when walking
- pain when sitting.

Antiology

- Overuse, especially with a sudden increase in intensity of activity.
- Increased volume, especially with kicking.
- Single episode of violent force to the inner thigh (rare common).
- Risk increases with kicking a football, contact activities, poor physical conditioning and previous thigh injury.

Further symptoms for more than three weeks indicate conservative treatment.

Initial treatment

- RICE.
- Stretching and strengthening exercises.
- Activity modification.
- Crutches for two to three days may be required.
- Cold pack 15 to 20 minutes every two to three hours.
- Six weeks before stretching and strengthening exercises.

Medication

NSAIDs or paracetamol. Consider local environmental injections.

Rehabilitation

Each of these exercises is repeated gradually increasing repetitions until there is no

Prevention

- Appropriate warm-up.
- Maintain conditioning.
- Ensure top quality footwear.
- Maintain muscle strength and endurance.

Treatment

Strain and avulsion fractures can usually be conservatively treated within two to six weeks, if treated appropriately.

Excessively, surgery may be required to establish a disrupted tendon, to treat persistent pain of a fracture or avulsion.

Range of motion and stretching exercises



■ Pull knee/leg close towards chest and stretch felt at the groin.



■ Stretching/relaxation P-20. Stretching as wide as possible then move one leg with knee towards chest upright and stretch for three to five minutes. Repeat for the other side.

Strengthening exercises



■ Hip abduction. The adductor to be strengthened is on the opposite. The leg is then lifted slowly towards the ceiling and then slowly lowered.



■ Adductors lunge. With the right knee bent, stretch on a bench or similar stable object gradually flex the opposite knee and legs away from the bench.



■ Adductors lunge. With legs spread wide, assume a lunge position and then lean back away from the side it to be stretched.



■ Hip adductors. Place a ball between the knees and squeeze.