

QUADRICEPS CONTUSION

DESCRIPTION

Bruising of the skin and underlying tissues of the thigh, including muscle, its covering fascia and occasionally bone due to a direct blow. Contusions cause bleeding from ruptured small capillaries that allow blood to infiltrate muscles, tendons or other soft tissues. The thigh is well suited to absorb direct blows, but contusions do often occur here.

FREQUENT SIGNS AND SYMPTOMS

- Swelling, pain and tenderness of the thigh, either superficial or deep
- Feeling of firmness when pressure is exerted at the injury site.
- Discoloration under the skin, beginning with redness and progressing to the characteristic ‘black and blue or purple’ bruise.
- Restricted activity of the injured leg proportional to the extent of the injury
- Knee stiffness and/or pain when trying to bend the knee.

CAUSES

Direct blow to the thigh, usually from a blunt object (another player’s helmet or knee).

RISK INCREASES WITH

- Contact or collision sports, especially football, rugby and soccer.
- Inadequate protection of exposed areas during contact or collision sports.
- Bleeding disorder or use of anti-coagulants, aspirin or non-steroidal anti-inflammatory medications.

EXPECTED OUTCOME

Usually curable with time and appropriate treatment. Healing time varies, but usually averages 1 - 2 weeks.

POSSIBLE COMPLICATIONS

- Excessive bleeding leading to disability, particularly compartment syndrome (massive swelling within the confines of the thigh resulting in crushing injury to the muscles and nerves and death of these structures due to blockage of blood to the muscles and nerves)
- Healing of the injured area with calcification (myositis ossificans) that can be painful and limit joint function.
- Infection (uncommon)
- Knee stiffness or loss of motion
- Prolonged disability, particularly with knee stiffness and/or myositis ossificans
- Delayed healing or resolution of symptoms, particularly if return to activity is too soon.

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medication, ice and compressive strapping to relieve pain and reduce swelling. Sometimes bracing or taping the knee into flexion for the first 24 – 48 hours can help limit the bruising and knee stiffness. Stretching to prevent knee and thigh stiffness, and modification of activities to allow the bruised muscles to heal. Referral to a physical therapist or athletic trainer may be advised for further evaluation and treatment, especially to regain knee motion. Non-steroidal anti-inflammatory medicines may be recommended starting 2 - 3 days after a severe injury to reduce the likelihood of developing calcification of the contusion (myositis ossificans). Uncommonly, your physician may attempt to remove a blood collection (hematoma), if one exists, with a needle and syringe to help speed recovery. Rarely, surgery is recommended to remove the clotted blood.

MEDICATION

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take for the first 3 days after injury or 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.
- Non-steroidal anti-inflammatory medications, such as Indomethacin, may be given to reduce the likelihood of calcification of the hematoma and myositis ossificans.
- Topical ointments may be of benefit.
- Pain relievers may be prescribed as necessary by your physician. Use only as directed and only as much as you need.
- Injections of corticosteroids may be given to reduce inflammation, though not usually for acute injuries.

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 2 weeks despite treatment
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.