

CHONDRAL INJURY

DESCRIPTION

A localized injury affecting a surface of the joint that involves breaking, with or without separation, of a segment of articular cartilage without injury to the underlying bone. This can occur in any joint, though it occurs most commonly in the knee, followed by the ankle, elbow, and shoulder. It occurs more frequently in adolescent males. This is a difficult problem to treat because cartilage has a limited ability to heal.

FREQUENT SIGNS AND SYMPTOMS

- Swelling, pain. There may be aching, giving way and “locking” or catching of joints. Feeling a piece of cartilage floating in the joint.
- Crepitation (a crackling sound) within the joint with motion
- Often there are injuries to other structures within the joint due to the great force necessary to cause this injury. Associated injuries include tears of the ligament and meniscus cartilage.

CAUSES

Impaction, avulsion, shearing and rotational forces due to direct trauma or injury to the joint.

EXPECTED OUTCOME

Small areas of chondral injury may not cause problems. Large and deep chondral injuries are more of a problem since cartilage does not heal. It is suggested that these injuries may go on to develop arthritis. Usually the symptoms resolve with appropriate treatment, including removal or fixing loose pieces of cartilage.

POSSIBLE COMPLICATIONS

- Frequent recurrence of symptoms resulting in a chronic, repetitive pain and swelling.
- Arthritis of the affected joint
- Loose bodies with locking of affected joint.

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medications and ice to relieve pain and reduce the swelling of the affected joint. For the knee or ankle, walking with crutches until you walk without a limp is often recommended (you may put full weight on the injured leg). Range of motion, stretching and strengthening exercises may be carried out at home, though referral to a physical therapist or athletic trainer may be recommended. Occasionally, your physician may recommend a brace, cast, and/or crutches (for the knee or ankle) to protect or immobilize the joint. For those with persistent pain after conservative treatment or loose fragments within the joint, surgery is usually recommended. Surgery may include arthroscopy to remove the loose fragments, procedures to stimulate healing into the space left empty by the loose fragment, and when possible, procedures to reattach the fragment (if large enough and not deformed). After immobilization and/or surgery, stretching and strengthening of the injured, stiff and weakened joint and surrounding muscles (due to the injury, surgery and/or the immobilization) is necessary. This may be done with or without the assistance of a physical therapist or athletic trainer.