

OSTEO ARTHRITIS

Overview

The bone ends that constitute a joint are covered with a firm smooth cartilage. In the shoulder joint it involves a humeral head and glenoid process. At the acromioclavicular joint it involves the lateral end of the clavical and the acromion process and at the elbow it involves the distal humerus and the proximal end of the radius and ulna. The articular cartilage eliminates friction nearly completely, protects the underlying cartilage against damage and allows for smooth sliding motion between bone ends. Wear and tear of the articular cartilage leads to osteo arthritis also called degenerative arthritis. This is the most common type of arthritis that occurs in the shoulder and elbow.

Causes

The process of osteo arthritis takes place over time. It might be caused by wear and tear over a period of years, repeated strain on the joint, previous injuries, mal-alignment, metabolic defects or genetic conditions. In weight-bearing joints being overweight also plays a part. Osteo arthritis in shoulder and elbow is more common in patients over 50 years of age but younger patients can develop this after dislocation of the joint or in people with a genetic tendency to develop osteo arthritis.

Symptoms

It causes a dull aching pain that alternates with acute pain episodes, stiffness and swelling of the joint and limited range of motion. Bony outgrowth or osteofytes develop over time together with gradual erosion of the articular cartilage. It may cause symptoms in the soft tissue like swelling or stiffness. Pain is typically centered over the posterior aspect of the shoulder and elbow but in the acromio-clavicular joint it is usually on top or in front of the shoulder. Osteo-arthritis can occur simutaniously in joints lying close together like the acromio-clavicular and glenohumeral joints.

Classification

When no specific cause can be identified or when it occurs due to genetic or metabolic factors it is called primary osteo arthritis. In the case of trauma with an underlying defect of the cartilage or bone, secondary osteo arthritis will develop. Specific diseases of cartilage can also influence the classification.

Treatment

Pain relief and improvement of function is the aim of treatment. Analgesic medication, anti-inflammatory medication and adjustment of physical activities are first line of treatment. Exercises to improve range of motion and to strenghten of surrounding muscle groups might be of help.

Surgical debridement might be indicated for patients that are not candicates for more extensive surgery.

Severe acromio-clavicular joint involvement may require complete removal of the acromio-clavicular joint which will lead to development of scar tissue in place of the diseased joint. For advanced osteo arthritis of the glenohumeral joint replacement of the humeral head and glenoid provides good pain relief. Joint replacement of the elbow is performed less often.