

ELBOW CONDITIONS IN THE ADOLESCENT ATHLETE

Anatomy



Medial Ulnar Collateral ligament

Background

50 to 75% of adolescent baseball players report elbow pain (higher than the reported incidence of shoulder pain). Most elbow injuries in the young athlete result from overuse or repeated stress to the joint. Although common in pitchers, they also occur in position baseball players and other adolescent “overhead” athletes.

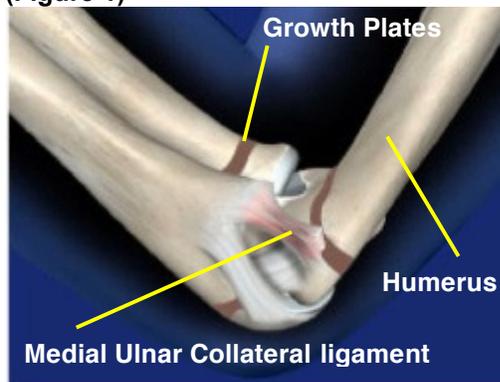
Little Leaguer’s Elbow

This is a general term relating to elbow pain in the young throwing athlete. It may be applied to several conditions, including fracture (break) of the bone, a stress reaction of the growth plate, or changes in the normal bone development due to growth plate inflammation. In general, the condition results from the repeated stress on the elbow during the throwing motion, and typically involves the inner (or medial) aspect of the elbow (see figure 1)

Athletes affected with this condition are often under the age of 12 and usually report medial (inside) elbow pain, and decreased throwing effectiveness and distance. Some athletes demonstrate a decreased ability to fully extend (straighten) the elbow. Radiographic (x-ray) changes are common, but rarely result in the need for surgical treatment.

Recommended treatment is nonsurgical. This begins with a dedicated period of rest (2 to 6 weeks), along with a scheduled anti-inflammatory (NSAID) medication. This is done in conjunction with a supervised program of physical therapy emphasizing strength and flexibility of the entire upper limb. As well, an evaluation of the athlete’s throwing motion is appropriate. Changes in throwing mechanics may be necessary to resolve the condition. The condition may redevelop, depending on how quickly the athlete returns to activity, and the duration and intensity of the activity. Rarely, splint immobilization is recommended for a short duration to ensure adequate rest.

(Figure 1)



Ulnar collateral ligament injury/insufficiency

These injuries are more common in athletes who have reached skeletal maturity (whose growth plates have closed). It also results from overuse or chronic stress to the medial (inside) portion of the elbow (see figure 1). Over time, this ligament becomes stretched, resulting in weakness and difficulty with repeated throwing, and inflammation in the elbow joint itself.

The initial treatment for this condition is also nonsurgical, with methods mentioned in the previous section. Surgical reconstruction is considered in patients who have reached adult bone development and have failed a minimum of 6 months of nonsurgical treatment. This is commonly referred to as “Tommy John” surgery.

Osteochondritis dissecans (OCD)

OCD is a condition which affects the bone and cartilage of the elbow joint. It is also seen in other areas of the body, including the knee and ankle. The cause is unknown, but may involve injury to the blood supply of the bone as a result of the repetitive stress of throwing over time. The most common area within the elbow joint to be affected is the lateral, or outer, portion of the joint. Symptoms typically develop gradually, and often consist of dull aching pain, joint swelling, limited ability to extend the elbow fully, and difficulty throwing. In more advanced cases, catching or locking of the elbow may develop

(Figure 2)

