

May Case Study: Little League Elbow

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History of Present Illness: The patient is a 13-year-old male who is an avid baseball pitcher. He was referred into the pediatric orthopaedic office by his pediatrician for evaluation of right medial elbow pain with throwing. He has had right elbow pain since the season started two months ago but has continued to play through the pain. He has had no significant swelling, no locking, clicking, or instability. He is accompanied today by both parents as well as his baseball coach. He currently plays on three different teams for baseball and hopes to play professionally one day. His dad says that he wants him to pitch in tonight's all star game.



Figure 1 A & B: Little league elbow common in young pitchers

Physical Examination: The patient is a well-appearing 13-year-old male in no acute distress. Height is 168.75 cm, weight is 106 pounds. HEENT: Atraumatic, normocephalic, nondysmorphic. Neck: Supple. Chest: Clear to auscultation. Heart: Regular rate and rhythm. Spine: Straight. Gait is normal. Examination of the right upper extremity demonstrates no significant swelling or effusion in the elbow, he has full range of motion in both the elbow and shoulder. He has laxity in the right shoulder but this does not cause him pain. He does have pain when palpating the medial epicondyle of the elbow and he also has mild pain with valgus stress to the elbow—although there is no instability. He is neurovascularly intact, normal sensation, normal strength, normal distal pulses, radial, median, and ulnar nerves are intact.

Radiographs: AP/Lateral x-rays of the shoulder were obtained in the office

Figure 2: AP x-ray of elbow showing typical Findings of little league elbow (mild widening at medial epicondyle)



Impression/Plan:

Athletes with medial epicondylar apophysitis or Little League elbow often complain of medial elbow pain, initially after throwing, that often progresses to persistent pain (even at rest). Because the medial epicondyle is the last ossification center in the elbow to close, it has the longest exposure to medial distraction forces in the elbow. Thus, medial epicondyle apophysitis is the most common elbow injury during childhood. Young patients with Little League elbow typically present with pain directly over the medial epicondyle. The pain can be exacerbated by asking the patient to flex a closed wrist against light resistance. Cases of medial epicondylar apophysitis (irritation of the medial epicondyle) can range from x-rays with normal findings to x-rays that show widening at the medial epicondyle (as in the case study above). In general, the more the widening at the epicondyle is present, the more significant the injury. Treatment first includes rest from throwing until symptoms subside. Typically, 3 to 4 weeks of rest are necessary for complete resolution. Ice packs to the elbow for 30 minutes every 4 hours for 48 hours can help eliminate the acute pain. Patients recover at different rates, so return to play should be determined on an individual basis and only when pain has fully subsided. Full strength and range of motion should be present before full return to activity. Throwing should then be reintroduced gradually, and stopped immediately if pain recurs.

Proper throwing techniques should be reinforced and practiced before each season and before return to play after injury. Physical therapists and/or pitching coaches can help ensure proper throwing mechanics and implement a preventive strengthening program. The best treatment is prevention. At the beginning of each season, players should increase the number and intensity of pitches gradually. During the season, the number of pitches thrown each week should be monitored carefully. Parents, coaches, and players should be made aware of the recommended guidelines in terms of numbers of pitches and types of pitches that are safe for young baseball players. Medial epicondylar avulsion fractures (Figure 3) should be considered if the patient describes a sudden "pop" in the elbow, followed by the acute onset of pain. Physical examination findings are usually similar to the findings for the patient with medial epicondylar apophysitis. Plain films will show avulsion of the medial epicondylar apophysis. Surgical fixation (ORIF) is usually required when there is more than 2 mm displacement of the apophysis (Figure 3B).



Figure 3: Medial epicondyle avulsion fracture 3B: s/p ORIF