

Medial Epicondylitis

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Definition

Medial epicondylitis (also known as golfer's elbow) is a degenerative tendinosis or tendinopathy of the flexor-pronator musculotendinous origin at the medial epicondyle, which is associated with medial elbow pain [1]. Medial epicondylitis is much less common than lateral epicondylitis. In fact, lateral epicondylitis has been reported to occur approximately seven to 20 times more frequently than medial epicondylitis [2]. The prevalence of medial epicondylitis is approximately 0.3–1.1% in women and 0.3–0.6% in men [3]. Medial epicondylitis affects men and women equally, and most commonly occurs in the fourth and fifth decades of life [2]. As described in the previous chapter on lateral epicondylitis, the term “epicondylitis” is a misnomer because histologically this condition has been shown to be associated with tendinous microtearing, followed by incomplete repair [4]. In 1882 medial epicondylitis was originally described by Henry Morris as “lawn-tennis elbow” [1, 5]. However, it has also been reported in many other activities that involve repetitive forearm pronation and wrist flexion, such as bowling, racquetball, football, archery, weightlifting, and javelin [6–8]. Repetitive overuse of the flexor-pronator muscle group is the most common etiology described in the literature. Although, a single traumatic event involving direct impact or eccentric contraction have also been identified as possible etiologies [1].

Diagnosis

The diagnosis of medial epicondylitis is clinical and should be based on history and physical exam findings. Patients may report insidious onset of medial elbow pain exacerbated by resistance to forearm pronation and wrist flexion [9]. When

examining overhead athletes, it is especially important to also evaluate for ulnar neuritis and ulnar collateral ligament instability, which may also coexist [1]. On physical examination, tenderness is often located over the origin of the pronator teres and flexor carpi radialis, distal and anterior to the medial epicondyle (Fig. 19.1) [9].

On physical examination, pain is reproducible with resisted wrist flexion and forearm pronation [10, 11]. As



Fig. 19.1 Point tenderness over the medial epicondyle in medial epicondylar tendinopathy

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Fig. 19.2 MET test: resisted pronation of the forearm with the elbow at 30°

seen in Fig. 19.2, the medial epicondylar tendinopathy (MET) test is performed by positioning the patient's arm 30° short of full extension and asking the patient to pronate his or her forearm while providing resistance. The test is positive if pain is reproduced at the medial elbow [12].

Differential Diagnosis of Medial Epicondylitis

- Osteoarthritis of the elbow
- Osteochondrosis dissecans
- Cubital tunnel syndrome
- Ulnar collateral ligament injury
- Cervical radiculopathy
- Little league elbow syndrome
- Ulnar nerve pathology
- Medial epicondyle stress fracture

Imaging

- Plain radiographs are usually normal but may show calcifications near the medial epicondyle [13].
- Examination of the common flexor tendon under ultrasound can help differentiate between medial epicondylitis and tendon tear. This differentiation is important because it may affect the choice of treatment [14].
- In 2008 in the Archives of Physical Medicine and Rehabilitation, Park G, Lee S, and Lee M published an article that evaluated the diagnostic value of ultrasound for clinical medial epicondylitis and found that ultrasound has a sensitivity and specificity of 95.2% and 92%, respectively [15].
- Figures 19.3 and 19.4.
- On MRI, thickening of the origin of the common flexor tendon and increased signal intensity can be seen on T1-

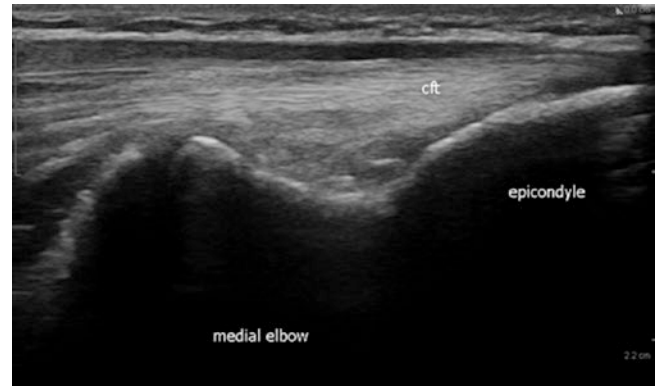


Fig. 19.3 Long-axis view of the common flexor tendon in a normal individual under ultrasound. *Cft* common flexor tendon



Fig. 19.4 Long-axis view of the common flexor tendon in a patient with medial epicondylitis. *Cft* common flexor tendon

and T2-weighted images in patients with medial epicondylitis. However, in some patients, the tendon origin on T2-weighted images is thinned with intense fluid signal intensity [16].

Treatment

- Nonsurgical treatment can be organized into three phases. Phase I starts once the patient is diagnosed and focuses on rest and activity modification [1].
- During phase I, the goal is to decrease inflammation and pain with the use of therapeutic modalities and oral non-steroidal anti-inflammatories.
- Once symptoms improve, phase II begins with gentle stretching and range of motion exercises.
- Stretching of the wrist flexors should be performed first with the elbow flexed and the forearm pronated, next with the elbow flexed and the forearm supinated, then with the elbow extended and the forearm pronated, and finally

with the elbow extended and forearm supinated. The stretches may be done passively or actively and should be held for at least 15 s [11].

- If pain continues to be controlled during stretching and flexibility improves, the patient may progress to more intense range of motion and strengthening exercises. It is recommended that patients start with isometric, then concentric, and finally eccentric exercises [11].
- Similarly to lateral epicondylitis, most cases of medial epicondylitis respond well to conservative treatments.
- During phase III, sporting equipment and technique are evaluated and adjusted appropriately. The joints above and below the elbow are also examined for any range of motion or strength deficits and treated [1].
- Supportive devices such as wrist supports, sugar-tong splints, counterforce braces, and kinesiology taping may also be used for medial epicondylitis, although their efficacy is still under review [1].
- Local corticosteroid injections and nonsteroidal anti-inflammatory medications provide only short-term (6 weeks) moderate symptomatic relief. Regarding chronic medial epicondylitis, platelet-rich plasma injections may have some benefit, but further studies are needed [17, 18].
- A combination therapy of dry needling and autologous blood injection under ultrasound guidance has been shown to be an effective treatment for refractory medial epicondylitis [19].
- If a patient fails a 6–12-month conservative treatment program and all other possible etiologies for their elbow pain have been excluded, then surgical treatment is indicated. However, in athletes, surgery may be considered earlier [9].

Return to Play

- A gradual return to play is recommended when an athlete has full strength and no pain with movement.

When to Refer

- Nonresponsive to physical therapy or conservative management
- Worsening of pain or dysfunction despite treatment
- Weakness of finger extension and paresthesia

Referral

- Physiatry
- Sports medicine
- Orthopedics

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