

LATERAL EPICONDYLITIS

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Lateral Epicondylitis or, as known by many, tennis elbow, is an overuse syndrome of the extensor muscles of the forearm that can affect anyone ranging from elite tennis players to housewives, musicians and manual labourers. Despite being linked with tennis players, hence the colloquial name, it also affects a wide array of athletes ranging from swimmers to baseball and squash players amongst others.

ASSESSMENT

Upon palpating the lateral epicondyle, and sometimes 1-2 cm distal to it, tenderness and discomfort are immediately elicited. Pain will be reproduced or increased on resisting wrist extension with the elbow extended and forearm pronation but the type of pain elicited can vary from sharp pain when the tendon is affected, to a duller pain when it's a muscular problem. The lateral epicondyle is the point of origin for the upper limb extensor muscles and thus, prolonged overuse of these extensors results in chronic eccentric overload on the tendon extensor carpi radialis brevis (ECRB). Other tendons in the proximity such as the extensor carpi ulnaris and extensor digitorum are also commonly affected. However, it's the degeneration of ECRB that has been noted as the primary culprit of this condition. A recent study carried out in 2017 established that the common extensor tendon is thicker in men and in the dominant elbow.¹ In their study, no tendon thickness was observed between study participants from different age groups. Bony spurs, which increase in prevalence exponentially with every decade of age, were another common finding in patients diagnosed with tennis elbow, while colour Doppler activity was positive in 1 in 10 asymptomatic patients.¹ This has to be kept in mind by the clinician when assessing patients.

However, the term epicondylitis is actually a misnomer as this condition is not characterized by inflammation but rather by degeneration, collagen disarray and angiogenesis,² and thus the term tendinosis rather than tendinitis is more appropriate. Tennis elbow is a clinical diagnosis and thus, most often, imaging is not necessary. However, if symptoms are not well-defined, diagnostic studies may be helpful.

Moreover, the differential diagnosis for the condition may include cervical radiculopathy, elbow overuse to compensate for a frozen shoulder, posterior interosseous nerve entrapment, degenerative changes, as well as inflammation and oedema of the anconeus muscle.²

BIOMECHANICS

Improper backhand hitting technique can immediately result in symptoms due to the force generated on the wrist in supination generating an irritation of the extensor tendons especially when done with just one hand.³ Another possibility of injury is when the player hits the ball with a bent elbow rather than with a straight one. This is generally more common in novice players and will result in a force generated from the elbow rather than from the core. Moreover, a recent study explained that improper energy flow during the tennis serve can increase the risk of overuse injuries in all of the joints of the upper limb by creating

a decrease in ball velocity and an increase in upper limb joint kinetics.⁴

Literature on tennis elbow in non-tennis players such as housewives, musicians, manual labourers and other athletes is still limited. However, the main culprit is a repetitive strain injury (overuse) of the ECRB tendon resulting in degeneration of this tendon.

TREATMENT

Conservative treatment should be attempted first. While rest from aggravating/inflammatory activity should be the first step of treatment, ice after activity as well as NSAIDs (oral and topical) may be used to aid pain relief.⁵ The same authors also suggest that forearm counterforce straps may be used together with occupational therapy and physiotherapy aimed to strengthen the forearm muscles and tendons.

Physiotherapy aims to eccentrically load the tendon to the limit without surpassing it. Stability in the shoulder complex is also essential for correct elbow function and therefore exercises targeted at stabilising the rotator cuff and the scapular muscles are also required.²

If pain is still present, invasive techniques should be considered. The use of botulinum toxin, dextrose prolotherapy, corticosteroid injection and autologous platelet rich plasma, amongst others have been recently suggested as they showed positive end results.⁵ Surgery should always be the last option in cases where functional disability and pain persist.⁶

Single administration of sodium hyaluronate injection has proved to be effective to manage moderate but not severe pain related to this condition.⁷ On the other hand, other studies found that both extracorporeal shockwave therapy and acupuncture resulted in pain relief which however, persisted for just two weeks after treatment.⁸ ❄️

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