

Epicondylitis – the pain of overuse



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Lateral epicondylitis (LE; also known as 'tennis elbow') and medial epicondylitis (ME; 'golfer's elbow'), are both overuse injuries. In all but the most intractable cases, they can be successfully treated non-operatively. LE is more common than ME and both involve a clinical diagnosis after excluding other causes.

Presentation

The patient complains of pain gradually developing just distal to the epicondyle, perhaps with radiation distally. Repetitive elbow activity is usually reported. Although there may be a well preserved range of movement, grip strength may be reduced and pain may be associated with weakness on activity.

LE - a history of repetitive loaded wrist extension or recurrent grip strength activities (wrist extension is required to allow the flexors to achieve maximal power). Overhand activities may be reported, or epicondylar pain on wrist extension against a load.

ME - pain may be increased by valgus stress at the elbow e.g. throwing or golf. Often, a contributing factor is poor technique. Most common in 4th to 5th decade of life.

Examination findings

On inspection, swelling may be seen over the affected epicondyle, usually with a point two cm distal to the epicondyle at the point of maximal tenderness, perhaps with crepitus.

LE - pain on palpation of the lateral epicondyle whilst resisting wrist extension or lateral epicondyle pain during resisted 2nd and 3rd finger extension (with the wrist and elbow extended).

ME - pain on resisted wrist flexion and pronation.

Differential diagnosis

LE - radial tunnel syndrome; posterior interosseous nerve syndrome; lateral complex ligament injury; and C7 radiculopathy.

ME - medial collateral ligament strain or medial elbow instability.

Imaging

Firstly, plain radiographs (AP, lateral and oblique) look for evidence of soft tissue calcification. Next, an ultrasound examination looking for fluid and soft tissue changes. Finally, an MRI examination may show changes in the epicondyle and tendinous attachment (see four examples).



■ Typical 'tennis elbow' brace.

Initial treatment

Patients are treated with RICE. They are advised to avoid wrist load during extension. A NSAID is used for two weeks initially then on an as needed basis. A specific "support" that applies local pressure for symptomatic relief may be of benefit (see photo). Physiotherapy for pain control may be helpful. Very occasionally, wrist splints in neutral position may be worn at night.

As injury is usually related to poor technique or incorrect equipment use, it is important to give advice on corrective action. Careful analysis of equipment use and technique should be undertaken. The advice of an experienced coach is often helpful.



■ ME injection point 2cm distal to the epicondyle (highlighted).

Later treatment

An anti-inflammatory steroid injection two cm distal to the relevant epicondyle into the area of maximal tenderness is frequently useful (see photos). Injections cease once there is symptomatic relief, with up to a maximum of three injections spaced 4 to 6 weeks apart.

Extra corporal shock wave therapy may be useful. Confirmatory ultrasound before treatment, undertaken by the treating radiologist is performed. Three treatments are given with a week between each.

Surgery

This is not usually required as non-operative treatment is usually successful.

LE - the common extensor origin is exposed, pathologic tissue excised and any tendon defect repaired. The origin of extensor carpi radialis brevis is usually the problem. Post surgery, patients are treated with a firm (not tight) bandage for five days. A formal active and active assisted range of motion (ROM) program is instituted after 10 days.

ME - debridement is undertaken with anatomic repair of medial conjoined tendons. This allows the dynamic stability provided by flexor/pronators, especially required by throwing athletes. Post surgery, again a firm bandage is used for five days. After this time, the ROM is restricted to 45° to 120° for two weeks. This allows tension on the repair to be avoided. Full ROM is allowed after six weeks and strengthening exercises are instituted after eight weeks.



■ LE similar distal injection point.

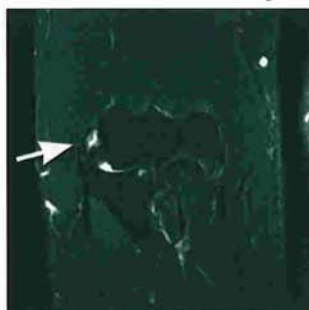
Acknowledgement: MRI illustrations courtesy of Dr Bill Bredahl (PRC).



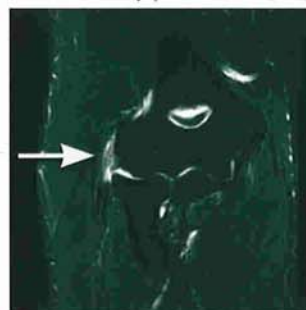
■ Normal MRI of lateral epicondyle (arrow).



■ Mild tendinopathy.



■ Moderate tendinopathy with partial tear.



■ Severe lateral epicondylitis with tear.