Tennis Elbow (Lateral Epicondylitis)

This condition is charactersied by pain and tenderness on the outside of the elbow. It occurs as a result of 'inflammation' (tendinosis) of the attachment of the extensor tendons of the wrist (these tendons bend the wrist back) and of the fingers, at the lower and outer portion of the arm (the outer 'bump of the elbow).

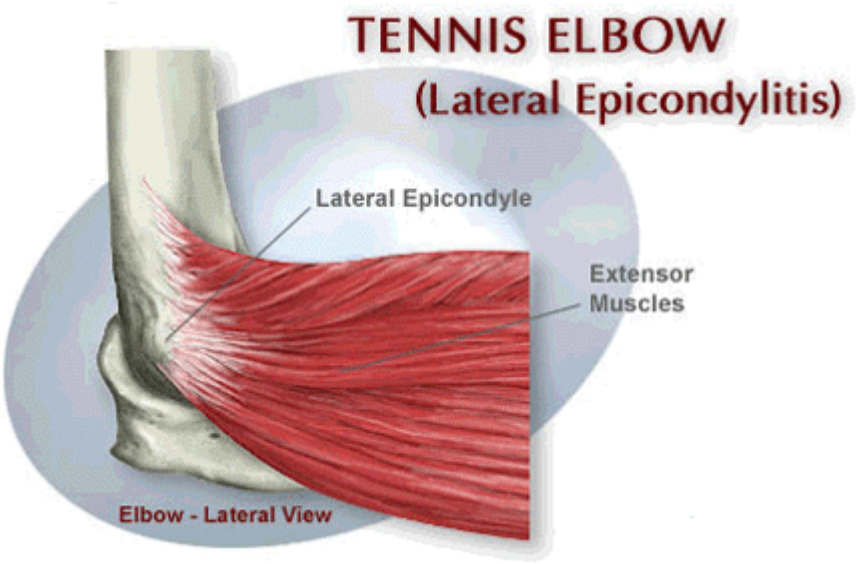

Fig 1: Shows the attachment of the extensor muscle at the outer part of the elbow which gets inflammed and painful.

Tennis elbow occurs as a result of repeated bending back of the wrist against resistance that leads to microtrauma and minor lesions and tears on the insertion of the extensor tendons depicted in the figure above.

Who is affected?

Although called Tennis Elbow at the end of the 19th century, this terms remains despite the fact that most of the people affected are not tennis players; instead other common causes are gardening, brick laying, excessive use of a screwdriver, hammering, computer typing and shaking hands.

What does tennis elbow feel like?

The main clinical symptom is pain centered on the lateral epicondyle (bony prominence on the outer aspect of the elbow) that radiates down into the forearm. The foremarm muscles may feel tight and sore. It is worsened by

manouvres like lifting and gripping, especially so when the wrist is bent backwards with the palm turned upward. Tenderness just below the epicondyle and weakness of dorsal flexion of the wrist. Simple day to day actions like turning a door handle or picking up a bottle of milk can cause severe pain.

How is the diagnosis confirmed?

The diagnosis is mainly confirmed by clinical examination.

Normally plain X-Rays are not needed at the onset of the disease, but may be requested later on by the orthopaedic specialist to exclude other problems. An ultrasound scan may be performed if acute tendon tears are suspected or to visualize local sign of degeneration like calcific deposit that are associated with worse prognosis.

How is the condition treated?

Non-operative management

90% of the patients heal spontaneously within one year.

Conservative treatment is the treatment of choice for the first phase.

Avoiding repetitive wrist dorsiflexion (bending the wrist backwards) and modification of sport or offending activities are generally the most important prescriptions.

Pain killers and local corticosteroid injections (upto 3 injections) are effective for short term pain control.

A Counterforce dynamic brace can be used; but there is poor patient compliance.

A physical therapy program (aimed to stretch and progressively strengthen the extensor muscles with pain free active and isometric exercise) has been shown to be effective in the long term.

Operative management

About 10% of cases are not responsive to conservative treatment. These patients could have symptoms more than 1 year of duration, more than 3 steroid

injections in the past, constant pain without activity, local calcification or exostosis on XRay. In these cases surgery is a good option.

Patients satisfaction after surgery has been reported very high with more than 90% of good or excellent results.

3 different surgical options are available: open surgery, keyhole surgery, or per-cutaneous techniques.

Minimally invasive techniques like percutaneous or key hole techniques have been described as less harmful with quicker recovery and return to work activities. The key- hole technique also has the advantage to recognize and treat associated intra-joint abnormalities, if they are present.