Tennis Elbow (Lateral Epicondylitis)

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This condition is charactersied by pain and tenderness on the outside of the elbow. Tennis elbow occurs as a result of repeated microtrauma to the extensor tendons (these tendons bend the wrist and fingers back) which are attached to the lateral epicondyle (the outer 'bump of the elbow).

Who is affected?
Contrary to popular belief, it is not specific to tennis players and can affect anyone whose work may strain the extensor muscles, such as those undertaking manual labour or exercise.

What are the symptoms of tennis elbow?
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 forearm muscles may feel tight and sore. It is worsened by manoeuvres like lifting and gripping, especially so when the wrist is bent backwards with the palm turned upward. 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. X-Rays are often performed to exclude other problems. An ultrasound scan may be performed if 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
The vast majority (>90%) of the patients heal spontaneously within one year. Conservative treatment is the treatment of choice for the first phase. Avoiding repetitive bending the wrist backwards and modification of sport or offending activities is advised.

Pain killers and local steroid or platelet rich plasma (PRP) injections can be effective for 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) can be effective in the long term.

Operative management
Patient satisfaction after surgery has been reported very high with more than 80% of good or excellent results.

Anaesthetic:

The surgery is typically undertaken with a general anaesthetic (fully asleep). Local anaesthetic is added at the time of surgery to improve pain relief following surgery.

Procedure:

There are a variety of different surgical techniques. The procedure is usually undertaken though

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a small 3-4cm incision but may be undertaken as a keyhole or arthroscopic procedure. The surgery usually involves a release of the extensor tendons from the lateral epicondyle. If there is abnormal scar tissue within the tendons this is removed or debrided. Irregularity of the lateral epicondyles may be smoothed.

The small incision of an open procedure is typically closed with a dissolvable suture. Keyhole or arthroscopic incisions may be closed with a single stitch or may not require closure. The wounds are covered with a clear dressing and a large wool and crepe bandage is applied for support for the first 24 to 48 hours.

Admission and Discharge:

You will normally be admitted the day of surgery and go home the same day. It may be necessary for you to stay in overnight particularly if you do not have a responsible adult to keep an eye on you overnight or if your operation is late on in the day.

Rehabilitation:

The physiotherapist will go through the rehabilitation guidance with you before you are discharged home. The arm may be used for light activities from the first day as pain allows but should be rested.

The wounds will take approximately 2 weeks to heal and should be kept clean and dry during this time. The clear dressing may be left until then.

A graduated return to activity with a subsequent exercise programme is important in determining the long-term outcome. A return to sporting activity is typically between 4 and 6 months post surgery.

Risks associated with surgery:

All operations are associated with a degree of risk but significant complications associated with a tennis elbow or lateral epicondyle release are uncommon. The following risks are those that are serious or most commonly reported in the literature.

Infection (<1%):
Infection in elbow surgery is uncommon. The risk is sufficiently low that antibiotics are often not routinely given. If an infection were to develop it is typically a superficial infection, which can be treated with oral antibiotics. Rarely does an infection develop that requires re-admission to hospital and surgery to wash the infection out.

Anaesthetic Risks:
Anaestheic complications are rare but include heart attacks (myocardial infarction), stroke and a

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clot in the leg (Deep Vein Thrombosis, DVT) or lungs (Pulmonary Embolus, PE).

Neuro-Vascular Damage (<1%):
Damage to nerves or blood vessels is rare with an open tennis elbow release. The risk of a nerve injury following arthroscopic or keyhole elbow surgery is low but injuries occur and care is required to minimse this risk.

Stiffness (1-10%):
The elbow is sensitive to injury or intervention and may respond by becoming stiff. A slight loss of extension (straightening) of the elbow may occasionally occur and persist but is rarely significant or impairing. Very rarely the recurrence of stiffness is such that a repeat procedure is indicated.

Change in symptoms:
Continued pain (5-20%) The probability of symptom improvement is high it remains possible but rare that symptoms may remain unchanged or deteriorate. Weakness of particularly grip strength and wrist extension may be reduced but it is uncommon for this to be significant.

Arthritis:
It is unlikely that the surgery itself would predispose the elbow to arthritis. However, early degenerate changes in the elbow are an alternative cause of lateral (outer sided) elbow pain and may underlie the presence of tennis elbow like symptoms.

Rehabilitation:

Exercises are started to stretch the elbow and restore flexibility a few days after the surgery. Light, gradual strengthening exercises are started about 2 months after surgery and athletic activity is usually started 4 to 6 months after surgery. Tennis elbow surgery is considered successful in up to 80% of patients however it is not uncommon to see some loss of strength.