

EPICONDYLITIS AND EPITHROCHLEITIS

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Introduction

Although more commonly known as tennis elbow (lateral epicondylitis) or golfer's elbow (medial epicondylitis), this condition is not limited to athletes as other occupational activities can lead to epicondylitis. In general, any activities that bring about repeated stress on the same forearm muscles predisposes an individual to develop such condition. This pathology is brought about by overuse of muscles and tendons of the forearm and elbow that produces microtears. These small tears initially attempt to heal but due to the constant strain applied and overuse, tendon re-injury occurs becoming a cycle which in the end results in the formation of a scar tissue that has not completely healed.

Lateral Epicondylitis

Lateral epicondylitis is the most common insertional tendinopathy of the elbow. It is five to eight times more common than medial epicondylitis. The overuse in combination with the poor vascularity of the tendons aggravate the injury. As the vicious cycle of inflammation, microtears and scar formation occur, healing becomes insufficient which can eventually lead to frank tendon rupture.

Pain and tenderness over the lateral epicondyle and the common extensor tendon origin are demonstrated. Pain is also elicited with resisted wrist extension and supination or passive wrist flexion with the elbow extended. In 25% of cases X-rays are negative, while in another 25% calcification can be visualized near the lateral epicondyle. Other diagnostic modalities (ultrasound and MRI) can demonstrate the morphologic changes with collagen degeneration (ultrasounds) and changes in both the tendons and bones (MRI).

In management of lateral epicondylitis (1) the focus is placed on preventing further breakage of tendons and facilitate healing. Resting the involved forearm is advised and application of cold compress with intake of anti-inflammatory drugs can provide relief. Others even recommend use of counter force brace and physical therapy. When pain persists cortisone injection can be given which has been shown to afford pain relief in 75-90% of patients. Newer treatments include shock wave therapy and Botex injection. Pain resolution with conservative treatment is observed in 55-89% of cases but recurrence has been reported in 18-54% of cases. Surgical options when non-operative treatment fails, include open, percutaneous or arthroscopic techniques. In open surgery, an incision over the lateral epicondyle is done followed by identification of the origin of the common extensor muscles. The extensor carpi radialis brevis (ECRB) tendon is then excised and decortication of the epicondyle is done before repairing the extensor tendons to facilitate healing. Percutaneous technique of releasing the ECRB can also be done. This can be carried out as an outpatient or office procedure using local anesthetics. Another option available would be arthroscopic lateral release. In this technique, the common extensor origin is preserved and a speedier recovery is expected.

Medial Epicondylitis

Found predominantly between the 4th and 5th decades, this pathology has equal male and female distribution as a result from stress in the flexor pronator origin and the medial collateral ligament created by valgus forces applied at the elbow. Most commonly affected would be the pronator teres and flexor carpi radialis. Clinically, pain has insidious onset and is described along the medial aspect of the elbow which is more intense during resisted forearm pronation and wrist flexion. Tenderness is localized distal and lateral to the medial epicondyle, adjacent to the area of the pronator teres and flexor carpi radialis.

It is important to rule out the presence of primary ligamentous instability or ulnar neuropathy. Once this has been achieved, ancillary diagnostic modalities and treatment regimen are basically the same as that for lateral epicondylitis. In 12% of cases where conservative therapy fails, surgical option is again the next step. The preferred technique is that described by Vangsness and Jobe (1, 2), where fibrotic tissues are excised after distal reflection of the common flexor-pronator origin is achieved. Once debridement is completed, re-approximation of the flexor-pronator complex is done. With this technique, subjective elbow function from 38 to 98% of normal has been reported. Good or excellent results were obtained in 97% of 35 patients treated, and 86% did not encounter limitation in the use of the elbow. Still, residual strength deficit as complication remains a valid concern.



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References

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 2. Jobe F et al: Lateral and Medial Epicondylitis of the Elbow. J Am Acad Orth Surg 2:1-8, 1994.
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