

OLECRANON FOSSA SYNDROME

The olecranon process is a large, thick, and curved eminence of the proximal ulna that forms the point of the elbow. When the elbow is extended, the lip of the process is received into the olecranon fossa on the posterior distal extent of the humerus. Anterior to the trochlea (the distal articulating surface of the humerus) is a small depression called the coronoid fossa that receives the coronoid process of the ulna, when the elbow is flexed. These two fossae are separated from one another by a thin, transparent lamina of bone. This bone is sometimes perforated, allowing the fossae to communicate through the supratrochlear foramen.

The synovial membrane of the elbow joint lines the two fossae, mentioned above. Under the right circumstances, this synovial membrane may become irritated, thereby producing an inflammation process that may affect one or both fossae. Of the two, the olecranon fossa is the most likely to become inflamed. The mechanics of the olecranon process insertion may expose the fossa lining to a greater chance of injury.

If the olecranon fossa does inflame, the patient may complain of sharp pain centered in the elbow joint itself and an inability to fully straighten the elbow. Sometimes, however, the patient will complain of diffuse pain in the forearm that may radiate into the hand and fingers. The patient may not be conscious of any overt pain in the elbow itself. In such cases, it is believed that interstitial swelling has developed to the extent of communicating pressure to the radial and ulnar nerves, thereby affecting their sensory distributions. In some chronic cases, inflammation has been found in either the radial or ulnar channels, and occasionally in both. Very little, if any, overt visible swelling is associated with the *Olecranon Fossa Syndrome*, in either the acute or chronic condition.

In some cases, inflammation may also be found over the site of the coronoid fossa. It is believed, by some (and not proved), that this is most likely to occur in individuals that possess the supratrochlear foramen, and that the inflammation has communicated itself through the foramina. The patient is usually unaware of any anterior elbow pain, and no overt swelling is apparent. *Coronoid fossa* inflammation, occurring independently of olecranon fossa inflammation, has been shown, by experience, to be extremely rare.

The inflammation patterns associated with the *Olecranon Fossa Syndrome* may be determined through DSR survey. If either the radial or ulnar channels are involved (or both), the inflamed zones will encompass them as well.

Treatment

Treatment should be directed at relieving the inflammation and interstitial pressure within the involved fossa.

Application:

Treatment of the *Olecranon Fossa Syndrome* should include:

- Preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.8 W/cm². Ultrasound the inflamed zone(s), utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes.
- Manipulate the tissues in and around the inflamed zone(s) to eliminate any adhesions that may be present (refer to Soft Tissue Manipulation in Tight Areas).
- Place a positive electrode over the inflamed zone (if only the olecranon fossa is involved) and a negative electrode over a proximal segment of the lateral triceps head. Preset an electrical stimulation unit to deliver a visible contraction at 7 Hz. Stimulate for 20 minutes. If the coronoid fossa is also inflamed, place positive electrodes simultaneously (split-leaded) over both the olecranon and coronoid fossae, and the negative electrode as above, then stimulate.



The high skin resistance pattern commonly associated with the Olecranon Fossa Syndrome



The high skin resistance pattern commonly associated with the Coronoid Fossa (Anterior Elbow Component) inflammation

Generally, it only takes one or two treatment sessions to successfully treat the *Olecranon Fossa Syndrome*, even when inflammation of the coronoid fossa is also present. A slow response to treatment usually indicates the presence of a more proximal occurring syndrome (the *teres major* and *Subclavian Syndromes* are examples).

Post Treatment Suggestions:

The patient should be cautioned to avoid exercises which might cause the elbow to be “snapped out straight”, like pushups, or benchpresses for two weeks, following cessation of the pain. The patient should also be careful not to snap the elbow out when doing things like shutting car doors, etc.

Trigger Points

The following trigger point formations may, singly or in combination, imitate or contribute to the pain accompanying an *Olecranon Fossa Syndrome*: Scalenus, Scalenus (minimus), Infraspinatus, Coracobrachialis, Supraspinatus (muscle), Latissimus dorsi (upper portion), Serratus posterior superior, Serratus anterior, Subclavius, Subscapularis, Pectoralis major (sternal portion), Pectoralis minor, Sternalis, Medial triceps (deep fibers), Medial triceps (lateral fibers), Triceps (long head), Distal medial triceps, Anconeus, Supinator, Extensor carpi radialis longus, and Fourth finger extensor.