BICEPS-TRICEPS LINE SYNDROME

The median and ulnar nerves make their way to the forearm via a path lying roughly in a straight line between the biceps brachii and triceps muscles. Should this pathway become inflamed, both the median and ulnar nerve distributions may be adversely affected. A patient so inflicted will complain of diffuse pain in the elbow, the anterior forearm, and posterior and anterior aspects of the hand and fingers, or in specific areas within the various nervous distributions. Description of the pain may vary from sharp pain, dull aching pain, tingling, burning, or "numbness" (the numbness may be real or the phoney numbness seen in trigger point referred pain patterns). The etiology for this problem is unknown. A DSR survey will demonstrate a distinctive pattern of high skin resistance over the central segment of the ***biceps-triceps line***, as it proceeds down the arm.

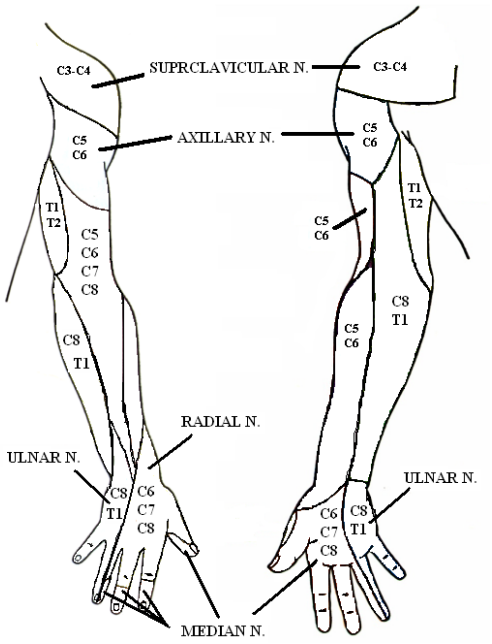
Treatment

Treatment must be directed at eliminating any inflammation and adhesions that may be present.

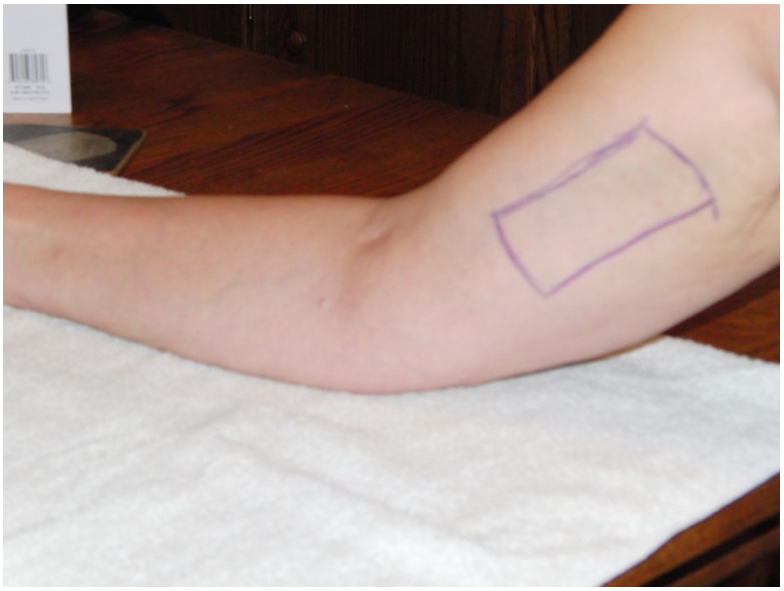
Application:

- Place a negative electrode over the biceps-triceps line (as defined by a DSR survey) and a positive electrode over the upper trapezius muscle on the involved side (if no other syndrome is present). Preset an electrical stimulation unit to deliver a visible contraction, at 7 Hz. Stimulate for 10 minutes.

- Then set the unit to deliver a medium frequency current, with a duty cycle of 10-seconds on and 10-seconds off. Adjust the amplitude to a level sufficient to produce a near tetanic contraction of the involved muscles. Stimulate for 10 minutes.



The nervous distribution for the upper extremity



The high skin resistance pattern commonly associated

with the Biceps-Triceps Line Syndrome

- Manipulate the soft tissues lying over the biceps-triceps line to eliminate any adhesions that may be present. Manipulation of this area is predictably very painful for the patient.

- Preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.8 W/cm^2. Ultrasound the inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes.

The following treatment forms have also been effective.

Variation:

- Preset an ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.8 W/cm^2. Ultrasound the inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This procedure is designed to soften the adhesions that may be present.

- Manipulate the tissues in and around the inflamed zone to eliminate any adhesions that may be present.

- Twenty minutes after the first ultrasound, preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.5 W/cm^2. Ultrasound the inflamed zone utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This is performed to “cool off” the manipulated zone by effectively halting the production of prostaglandins by the stressed tissues.

- Apply mechanical vibration, delivered at 60 to 120 Hz, to the biceps-triceps line, for two minutes. Apply the vibration at a relatively high but tolerably comfortable level for the patient. This is performed to increase capillary circulation in the involved tissues.

Variation:

- Preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.8 W/cm^2. Ultrasound the inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This procedure is designed to soften the adhesions that may be present.

- Manipulate the tissues in and around the inflamed zone to eliminate any adhesions that may be present.

- Apply cold laser (with or without simultaneous electrical stimulation provided by the laser applicator) to the inflamed zone for approximately 6 minutes. This is performed to "cool off" the manipulated zone by effectively halting the production of prostaglandins (or facilitating enzyme destruction of **all** inflammatories being produced) by the stressed tissues.

- Apply mechanical vibration, delivered at 60 to 120 Hz, to the biceps-triceps line, for two minutes. Apply the vibration at a relatively high but tolerably comfortable level for the patient. This is performed to increase capillary circulation in the involved tissues.

Generally, without a more proximally occurring inflammation (as in the *Teres Major Syndrome),* successful treatment occurs almost immediately, requiring just one or two sessions.

Trigger Points

The following trigger point formations may, singly or in combination, imitate or contribute to the pain accompanying a *Biceps-triceps Line Syndrome*: Scalenus, Scalenus minimus, Infraspinatus, Medial teres major, Lateral teres major, Coracobrachialis, Supraspinatus (muscle), Latissimus dorsi (upper portion), Serratus posterior superior, Serratus anterior, Subclavius, Subscapularis, Pectoralis major (sternal portion), Pectoralis minor, Medial triceps (deep fibers), Medial triceps (lateral fibers), Lateral triceps, Triceps (long head), Distal medial triceps, Anconeus, Biceps brachii, Brachialis (superior & inferior), Supinator, Extensor carpi radialis longus, Extensor carpi radialis brevis, Extensor carpi ulnaris, Middle finger extensor, Fourth finger extensor, Palmaris longus, Flexor carpi radialis, Flexor carpi ulnaris, Brachioradialis, Pronator teres, Extensor indicis proprius, Flexor digitorum sublimis (radial head), Flexor digitorum sublimis (humeral head), Flexor Pollicis longus, Abductor digiti quinti, and First dorsal interosseus.