Overview

Abductor pollicis brevis muscle Myofascial Pain Syndrome

Definition
The Myofascial pain syndrome (MPS) is a syndrome characterized by chronic pain caused by synergic action of muscular fascial constrictions and multiple trigger points.

Myofascial pain occur typically in distinct, isolated areas of the body, and signs and symptoms are related with the affected muscle or fascia. The muscular pain is steady, aching, and deep, the myofascial pain varies in location and in intensity from mild discomfort a\w hyritability to excruciating and lightning-like pain. Among the symptoms are referred pain, limited range of motion, and sleep disturbance.

Trigger Points

The Trigger points (TrPs) are hyperirritable spots a\w a hypersensitive palpable tight in the affected muscle and that when touched or pressured, produce tenderness and, rarely, twitching and always jumping.

The trigger points area is typically painful to compression, causing characteristic referred pain and hypersensitivity, motor dysfunction and even autonomic phenomena. For a correct diagnosis of a Myofascial Pain Syndrome is basic the detection of a taut band, the presence of spot tenderness, the presence of referred pain and reproduction of the patient's symptomatic pain (Four criteria of Gerwin for diagnosis of Myofascial Pain Syndromes).

According to Podiatrist's Guide to Trigger Points & Myofascial Pain Syndrome for a correct diagnosis is basic to detect: Regional pain complaint; Taut band palpable in an accessible muscle; Exquisite spot of tenderness in the taut band; Pain complaint or altered sensation in the expected distribution of referred pain from the tender spot; Some restricted range of motion, when measurable and in addition, in according with M.B. Yunus, at least one of the following minor criteria: Reproduction of clinical pain complaint, or altered sensation by pressure on the tender spot; Local twitch response by transverse snapping palpation of, or needle insertion into the taut band; Pain alleviation by stretching the involved muscle or injecting the tender spot in it.

Symptoms with active Trigger Points (TrPs)

Difficulty with fine motor skills of the thumb

Soreness with use of the thumb gripping objects with the pincer grip
Weakness with fine motor skills of the thumb

Weakness and atrophy of Abductor Pollicis Brevis Muscle causing thinning of the lateral contour of the Thenar Bulk (in Median Nerve Compression at the Wrist or Carpal Tunnel Syndrome)

Referral Area / Referred Pain form Myofascial Trigger Points (TrPs)

Pain around Thenar Area

Pain around Thenar Area extended around Medial Epicondyle

Pain around Thenar Area extended distally to the lateral side of second finger tip in a third of the arms

Pain around Thenar Area extended proximally to the distal one-third of the forearm along the radial aspect

Pain in dorsal first web space

Pain in the area of the distal part of Palmaris Longus Muscle

Referred pain from myofascial trigger points (TrPs) in the Abductor pollicis brevis muscle have according to Travell and Simons they are likely will follow the Referral Patterns for the Opponens Pollicis Muscle

Trigger Points Examination and Diagnosis

The Trigger Points (TrPs) are hyperirritable spots a/w a hypersensitive palpable tight nodule located in a taut band of fibers of Abductor pollicis brevis muscle and that when touched or pressured, produce tenderness and, rarely twitching and always jumping.
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The pattern of referred pain and hypersensitivity constitute the key for their identification because the Trigger Points of Abductor Pollicis Brevis Muscle produce pain locally (right where they are) as well as often referred pain to other areas.

Using immune-capillary electrophoresis and capillary electro-chromatography Jay P. Shah and others have shown that biochemical milieu of selected inflammatory mediators, neuropeptides, cytokines and catecholamines like bradykinin, substance P, calcitonin gene-related peptide, tumor necrosis factor alpha, interleukin 1&beta; (IL-1&beta;), IL-6, IL-8, serotonin, and norepinephrine in subjects with active MTPs are different from subjects with latent or absent MTPs H See also Jay P. Shah MD, Jerome V. Danoff © 2008 American Congress of Rehabilitation Medicine

Click for the common locations of Trigger Points (TrPs) in the Abductor Pollicis Brevis Muscle

Associated Trigger points (TrPs)

Trigger points of Adductor Pollicis Muscle

Trigger points of First Dorsal Interosseous of Palmar Interosseous Muscles

Trigger points of Flexor Pollicis Brevis Muscle

Differential Diagnosis
Carpal tunnel syndrome

Cervical disc syndrome

de Quervain tenosynovitis

Referred pain from myofascial trigger points (TrPs) in the Subscapularis Muscle

First carpometacarpal osteoarthritis

Referred pain from myofascial trigger points (TrPs) in the Adductor Pollicis Muscle

Referred pain from myofascial trigger points (TrPs) in the Anterior scalene Muscle

Referred pain from myofascial trigger points (TrPs) in the Brachialis Muscle

Referred pain from myofascial trigger points (TrPs) in the flexor carpi radialis

Referred pain from myofascial trigger points (TrPs) in the Posterior Scalene Muscle

Referred pain from myofascial trigger points (TrPs) in the Middle Scalene Muscle

Referred pain from myofascial trigger points (TrPs) in the Opponens Pollicis Muscle

Referred pain from myofascial trigger points (TrPs) in the pronator teres Muscle

Referred pain from myofascial trigger points (TrPs) in the subclavius Muscle
Trigger Points Release Trigg

Release Abductor pollicis brevis muscle Trigger Points (TrPs) using Spray: Click for technique

Release Abductor pollicis brevis muscle Trigger Points (TrPs) using Trigger Point Pressure: Click for technique Points (TrPs)

Trigger Points Injection

Trigger Points (TrPs) injection is performed if tenderness, pain and restriction movement remain after non-invasive treatment by spray, release and stretching.

Accurate injection of the active Abductor pollicis brevis muscle TrPs can be effective: Click for the technique by infiltrating a active TrPs in the Vastus Medialis Muscier

Corrective Actions

Stretching Exercise

Massage Therapy
Posture Evaluation and Ergonomics Drugs

Drugs of Choice

Serotonin-norepinephrine reuptake inhibitor

Calcium Channel Blockers

Muscle relaxants