ESSENDON & MOONEE PONDS PHYSIOTHERAPY CLINIC

ROXBURGH PARK PHYSIOTHERAPY CLINIC

QUALITY ENDORSED PHYSIOTHERAPY SERVICE APA

The Physio files

PHYSIO STAFF

- **Russell Visser**
  B.App.Sc. Physio M.A.P.A.
- **Graham Nelson**
  Bach Physio M.A.P.A.
  M. Manip. Physio M.M.P.A
- **Erica Whitfield**
  Bach Physio M.A.P.A.

ADMIN STAFF

- **Anne Ware**
- **Denise Gorman**
- **Sue Turnbull**

Left to right : *Denise Gorman, Anne Ware, Russell Visser, Erica Whitfield, Graham Nelson.*

Absent: Sue Turnbull

SERVICES

- Sports injuries
- Back & Neck Pain
- Headaches
- Manipulative therapy
- Post surgical rehabilitation
- Hydrotherapy
- Gym programs
- Physio ball ex prescription

OTHER

- Myotherapy & massage
- Paediatric physiotherapy

November 2005

Welcome to our sixth newsletter. The aim of this newsletter is to keep you informed about changes and services at our two clinics and to keep you abreast of changes within the Physiotherapy profession, particular with new research. We hope you enjoy our next few editions.

Research Update

Myofascial Trigger Points : The Current Evidence

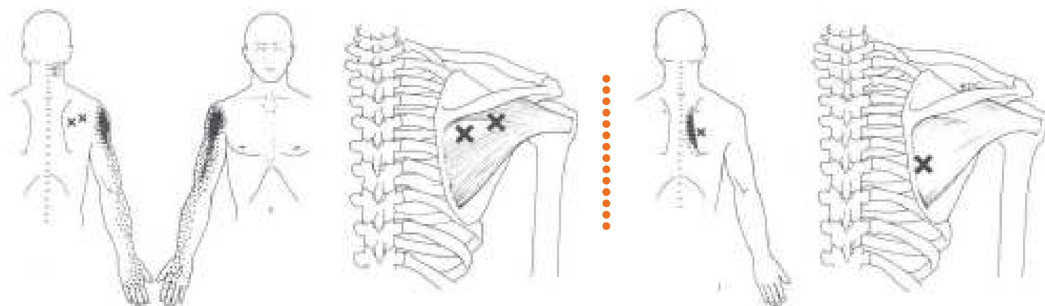
Physical Therapy in Sports 5 (2004) 1-12 Leesa K Huguenin

This literature review provides an overview of the current knowledge regarding the history, pathophysiology, mechanism of pain production and proposed treatment methods for myofascial trigger points (MTP) as isolated phenomenon, as opposed to those occurring in more generalised pain syndromes (eg. fibromyalgia, CRPS).

MTPs can be defined as localised areas of deep tenderness within a taut band of muscle. They exhibit a local twitch (fasciculation) or 'jump' sign (whole body movement) in response to digital pressure or dry needling. MTPs are able to produce referred pain either spontaneously or on digital compression. MTPs may be active or latent.

i. Active MTPs are those that may be responsible for a patient's presenting symptoms and may be associated with weakness and paraesthesia.

ii. Latent trigger points present with more shortening of muscle and pain occurs only on application of external pressure.



Trigger points in the infraspinatous muscle also showing distribution of referred pain.

Examination Findings Palpation of an active trigger point will usually reproduce the patient's symptoms, whereas latent trigger points may produce sensations unassociated with presenting symptoms.

There is a lack of valid and reliable diagnostic criteria and identification of a MTP relies on finding a local tender point within a taut muscle band, reproduction of recognisable symptoms and a local twitch response to snapping palpation or needle insertion.

Pathogenesis There are two most widely accepted theories to explain MTP aetiology:

I. Energy Crisis Theory : This postulates that increased demand on muscles, macrotrauma or recurrent microtrauma causes prolonged shortening of sarcomes. This compromises circulation and the reduced oxygen supply leaves the cell unable to produce enough ATP to initiate active relaxation. Ischaemic by products of metabolism accumulate, which are in part responsible for pain produced by sensitisation and direct stimulation of sensory nerves.

II. Motor End Plate Hypothesis : EMG studies have found that trigger points contain minute loci that produce characteristic electrical activity. These loci are located at the motor end plate zone where the motor nerve synapses with the muscle cell. The endplate noise seen on EMG is thought to represent an increased rate of release of acetylcholine (ACH) from the nerve terminal, which results in action potentials being propagated a short distance along the cell membrane. This small amount of propagation, although not enough to cause muscle contraction, may be enough to activate a few contractile elements and be responsible for a degree of muscle shortening. Both theories have not been scientifically validated.

Clinical Precipitants of trigger point formation MTP's are thought to form in response to increased or altered muscle demands, such as muscle overload often seen in pre-season sports conditioning. It may also occur from postural errors in the workplace, proximal nerve compression and post trauma. They can also be influenced by descending factors such as stress and constitutional illness.

They should be considered when assessing for sources of pain in different clinical scenarios. Sedentary workers presenting with neck pain and headache may exhibit triggers in trapezius, long extensors and scalenes from prolonged muscle loading. Also patients with lumbar disc injury may exhibit MTPs in the quadratus lumborum, erectae spinae and gluteals.

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Referral pain from trigger points also needs consideration, especially if a patient is not responding to more local treatment. MTPs are only relevant to a condition if they reproduce a recognisable pain.

Trigger Point Therapy This is divided into invasive and non-invasive techniques. Non-invasive techniques include stretching, transcutaneous electrical nerve stimulation, ultrasound and laser. Invasive techniques include local anaesthesia, botulin toxin and dry needling. Dry needling involves repeated advances of an acupuncture type needle into the muscle in the region of the trigger point, aiming to reproduce the patient's symptoms, visualise local twitch responses and achieve relief of muscle tension and pain.

Given that dry needling involves a localised noxious stimulation to the muscle, it is thought that central opioid release produces global reduction in pain perception by gating spinal cord pain impulse transmission, producing hypoalgesia at a spinal cord level.

More randomised controlled trials are required to validate efficacy and mechanism of many of the trigger point therapies.

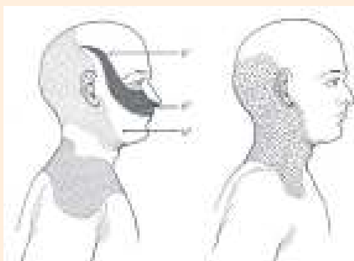
At EMPC we have begun utilising dry needle therapy as an adjunct to treatment of musculoskeletal pain, with generally good anecdotal success. It is generally used when a patient's treatment has plateaued or active MTPs are not altering with other conservative therapies (massage, stretching, heat, electrotherapy).

Case History

TMJ vs Trigeminal Neuralgia

A 32 year old female bank officer recently visited our clinic and reported an acute onset of severe facial pain extending from her right lower jaw region and temporomandibular joint region as well as numbness in the lower jaw, severe headache and intermittent right eye pain.

She described the pain as piercing and sharp and lasting up to 30 minutes of acute short-lived stabs. The onset of pain was sudden while sleeping 24 hours prior to her consultation. She could not recall a precipitating event but did some heavy lifting over the weekend and had her wisdom teeth removed four and two weeks previously which made it necessary to keep her mouth open for long periods. She had been treated in the past at our clinic for neck pain and cervicogenic headache. Her local doctor had prescribed analgesics for her pain and gave her time off work.



Sensorary distribution of the trigeminal nerve— V1 opthalmic, V2 Maxillary, V3 Mandibular

On examination she was obviously distressed but had a good range of cervical movement. The temporomandibular joint was extremely tender on the right and she had restricted mouth opening with deviation of the lower jaw to the right. She also had increased tension in the masseter muscle and upper cervical stiffness on both sides with tension in the suboccipital muscles.

The analgesics had eased her pain by 40% at night but chewing and hot and cold foods increased her pain levels. The headache persisted but was eased by her medication. I treated the temporomandibular joint with gentle posterior anterior pressures, reduced tension in the masseter muscle and mobilised the upper cervical spine.

The pain continued and she went to the emergency department of a local hospital and a diagnosis of trigeminal neuralgia was made. The doctor prescribed Carbamazepame, which is an anti convulsant drug useful in treating neuralgia. The pain eased significantly but she still had signs of TMJ and upper cervical dysfunction. I asked her to call her dentist to discuss the impact of her recent surgery.

I contacted a colleague who specialises in dental surgery and TMJ dysfunction and asked about mechanical causes of trigeminal neuralgia. He explained that trigeminal neuralgia is a demyelination type disorder with compromised blood supply. The anti convulsant medication improves the blood supply to the nerve and decreases the irritability. He did not feel there was a link between mechanical pressure on the mandibular branch of the trigeminal nerve by the TMJ: rather the TMJ signs were coexisting rather than causal.

The importance of this case history suggests that the presentation of severe short lived lancinating pain in the region of the trigeminal nerve distribution is strongly suggestive of trigeminal neuralgia rather than mechanical, temporomandibular or upper cervical dysfunction.

The effectiveness of the prescribed medication is a confirmatory sign that the injury is due to the nerve primarily. If the symptoms are severe and acute the appropriate course of action is referral to the local doctor or emergency hospital department immediately. This condition can cause debilitating pain and needs to be addressed promptly.

New Developments

New Massage Therapist

We would like to introduce Denise McFarlane, Remedial Masseur to our practice in Moonee Ponds. Denise joined our team in early September this year and is a fully qualified remedial massage therapist with over 5 years experience. She is closely associated with Skate Australia and has worked at both the State and National levels with the Australian Inline Hockey teams. She is qualified to provide sports, remedial, deep tissue and relaxation massage. Denise will liase with our professional team regarding patient management so that we offer a valued added holistic service to our patients. Denise is Workcover accredited and registered with most Private Health funds.

Please phone our clinic at Moonee Ponds on *9370 5654* for an appointment with Denise.

General practitioners lunch time lectures

The physiotherapy team provided an in service lecture to a local group of GP's recently. Graham Nelson delivered the power point presentation on " Cervicogenic headache and Cervical Triggers to Migraine and Tension type headaches," which was prepared as part of his Masters thesis.

The lecture was over the lunch period at the doctors' practice. It was aimed at educating GP's regarding the diagnostic features of cervicogenic headaches and the involvement of the cervical spine in the other types of headaches. Evidence for the role of physiotherapy in the management of these conditions was also presented. The lecture was generally well received and feedback was positive.

If you are interested in our team speaking to doctors at your practice regarding musculoskeletal conditions please call us at the clinic.

Post-Surgical Repair of Rotator Cuff

Recently at EMPC we have been treating many patients following surgical repair of rotator cuff tears. In response to a need to develop a systematic and coordinated approach to this specific patient group, we have developed a management protocol for both patients and physiotherapists to ensure consistently good outcomes for patient recovery.

Information regarding which exercises are to be performed at the various stages, taking into account healing times of the tendon will be provided, as well as education for patients regarding their injury. This will hopefully add to compliance in completing exercises.

Physiotherapists will follow a protocol for the rehabilitation adjusting treatment as appropriate to cater for individual needs. This structured approach allows for consistency between physiotherapists in our quality endorsed clinic and makes it easy to monitor and progress patients throughout their recovery.

ESSENDON & MOONEE PONDS PHYSIOTHERAPY CLINIC
827 Mt. Alexander Rd
Moonee Ponds 3039
Ph 9370 5654

QUALITY ENDORSED PHYSIOTHERAPY SERVICE APA

1 Manley Avenue
Roxburgh Park 3064
Ph 9308 9998
ROXBURGH PARK PHYSIOTHERAPY CLINIC