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SUMMARY

Myofascial Trigger Points (MTrPs) are the most common, yet misdiagnosed and inadequately treated component of non-articular musculoskeletal pain disorders.

MTrPs produce functional consequences in terms of a restriction of range of movement and weakness (probably a reflex inhibition secondary to pain) which is usually associated to easy fatigability of the involved muscle.

Myofascial Pain Syndrome (MPS) can be considered as a Shortened Muscle Syndrome which affects muscle, fascia tendon, and ligaments. The shortened muscles cause tendinitis, tenosynovitis and chondromalacia due to the increased traction, mechanically overloading the tendons and joints.

Myofascial Release Therapy focuses on releasing muscular shortness and tightness.

The superficial stimulation acts at the central level, which is very useful in the treatment of MPSs, as muscle pain arising from muscles is a more powerful stimulus for central sensitization than pain arising from the skin.

Since 2010 the treatment of algic/degenerative diseases of the Musculoskeletal System takes advantage of the use of the injectable Collagen Medical Devices.

The existence of a Collagen Medical Device specifically devoted to muscles (MD-Muscle) encouraged its use in MPS. To sum up, what I propose is a Myofascial Release Therapy using MD-Muscle:

- 1) simple and easy to learn;**
- 2) safe since it is superficial, but not less effective;**
- 3) treating a peripheral muscle but acting at a spinal segmental level;**
- 4) including the concepts typical of classic acupuncture (*Ashi points*), made more modern by the use of a specific Collagen Medical Device, MD-Muscle, also able to amplify the acupuncture points action.**

KEY WORDS

MYOFASCIAL TRIGGER POINTS, COLLAGEN MEDICAL DEVICES, ASHI POINTS, MD-MUSCLE

MD-MUSCLE IN THE MANAGEMENT OF MYOFASCIAL PAIN SYNDROME

Muscle is the largest organ in the body; approximately 40% of the human body is made of skeletal muscle (Guyton and Hall, 2010).

– Myofascial Pain Syndrome (MPS) is a common cause of pain and dysfunction in the Musculoskeletal System that accounts for 20% to 95% of patients with musculoskeletal pain complaints.

Myofascial Trigger Points (MTrPs) are the most common, yet misdiagnosed and inadequately treated component of non-articular musculoskeletal pain disorders (Shah, 2012).

MTrPs produce functional consequences in terms of a restriction of range of movement and weakness (probably a reflex inhibition secondary to pain) which is usually associated to easy fatigability of the involved muscle (Bennett, 2007).

MPS can be considered as a Shortened Muscle Syndrome which affects muscle, fascia tendon, and ligaments.

The shortened muscles cause tendinitis, tenosynovitis and chondromalacia due to the increased traction, mechanically overloading the tendons and joints (Gunn, 1997).

Myofascial Release Therapy focuses on releasing muscular shortness and tightness.

The myofascial release techniques consisting in the insertion of a needle in the trigger points, can be conducted at different depths: deep vs superficial dry needling (Baldry, 2002).

The superficial technique presents undoubted advantages in terms of safety and easiness.

Moreover, the superficial technique – i.e. needle inserted into the skin and in subcutaneous tissues – works as pain modulator through the stimulation of A-delta fibres with the activation of descending inhibitory systems (Baldry, 2002).

The superficial stimulation acts at the central level, which is very useful in the treatment of MPSs, as muscle pain arising from muscles is a more powerful stimulus for central sensitization than pain arising from the skin (Bennett, 2007).

A further feature of peripheral MPSs is that they often occur along with segmental paraspinal muscle spasm.

Therefore, superficial dry needling should be performed not only in the muscle, in the painful site, but also in the paraspinal muscles of the same spinal segment that innervates the painful muscles (Gunn, 1997).

In literature it is described an alternative to “dry needling”. It involves the use of pharmacological substances injected in the trigger points, and is called “wet needling” (Dunning *et Al.*, 2014),

Since 2010 the treatment of algic/degenerative diseases of the Musculoskeletal System takes advantage of the use of the injectable Collagen Medical Devices (Milani, 2010). The existence of a Collagen Medical Device specifically devoted to muscles (**MD-Muscle**) encouraged its use in MPS.

In the clinical practice it has been personally proved that the use of **MD-Muscle** enhancing the therapeutic effect of the superficial injection gives higher success in pain relief, quick pain relief and in shortening the window before starting other therapies such as physiotherapy.

It was also experienced that a form of effective and easy treatment firstly consists in the manual palpation to search muscle pain points, and their subsequent inactivation (regardless of whether or not they are trigger points).

This method is very similar to the myofascial pain treatment performed by the classical method of acupuncture that involves the insertion of needles in the *Ashi points* (painful points). It is interesting to note that there is one more reason supporting the injection of a Collagen MD in the *Ashi points*, since collagen fibres play an important role in acupuncture-induced analgesia, and they participate in signal transmission and transform processes (Yu *et Al.*, 2009).

To sum up, what I propose is a Myofascial Release Therapy using MD-Muscle:

- 1) simple and easy to learn;
- 2) safe since it is superficial, but not less effective;
- 3) treating a peripheral muscle but acting at a spinal segmental level;
- 4) including the concepts typical of classic acupuncture (*Ashi points*), made more modern by the use of a specific

Collagen Medical Device, MD-Muscle, also able to amplify the acupuncture points action. ■

Bibliography

- Baldry P. - Management of myofascial trigger point pain. *Acupunct Med* **2002**; 20:2-10.
- Bennett R. - Myofascial pain syndromes and their evaluation. *Best Practice and Research: Clinical Rheumatology*, **2007**; 21(3), 427-445.
- Dunning J., Butts R., Mourad F. *et Al.* - Dry needling: a literature review with implications for clinical practice guidelines, *Phys Ther Rev*, **2014**; vol. 19 (pg. 252-65).
- Gunn C.C. - *The Gunn Approach to the Treatment of Chronic Pain*. 2nd ed. New York, NY: Churchill Livingstone; **1997**.
- Guyton A.C., Hall J.E. - *Textbook of Medical Physiology*. 10th Ed. p. 67; **2010**.
- Milani L. - Un nuovo e raffinato trattamento iniettivo delle patologie algiche dell'Apparato locomotore. Le proprietà *bio-scaffold* del collagene e suo utilizzo clinico. *La Med. Biol.* **2010**/3; 3-15.
- Shah J.P. - New Frontiers in the Pathophysiology of Myofascial Pain *The Pain Practitioner*. **2012**; 22(2), 26-33.
- Yu X.J., Ding G.H., Huang H. *et Al.* - Role of collagen fibers in acupuncture analgesia therapy on rats, *Connective Tissue Research*, vol. 50, no. 2, pp. 110-120; **2009**.

Extra reference:

Myofascial pain syndrome. *OrthopaedicsOne Articles*. In: *OrthopaedicsOne - The Orthopaedic Knowledge Network*. Created Oct 20, 2011 14:35. Last modified Jun 28, **2012** 13:26 ver.5. Retrieved 2017-01-30, from <http://www.orthopaedicsone.com/x/8ABCB>.

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