

REVIEW ARTICLE

ROLE OF ORAL PHYSICIAN IN TREATING MYOFACIAL PAIN DYSFUNCTION SYNDROME- A REVIEW

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ABSTRACT:

Myofacial pain dysfunction syndrome is syndrome, which has become a topic over the decade. It has become one of the most common causes of orofacial pains, as every 5 out of 10 patients are suffering from MPDS. There are variable of symptoms present for a typical TMJ dysfunctioning including pain, reduced or limited mouth opening, tender muscles, clicking or crepitus and irregular mandibular movements. The MPDS patient gradually adapts to the symptoms even if he has been exposed to various invasive and non-invasive treatments. Since MPDS covers a wide range of symptoms, it might be difficult to diagnose and provide definitive treatment. Hence the specialist should extend his knowledge about the disorder to provide definitive treatment to the patient.

Key words: Myofacial pain dysfunction syndrome, treatment and recent trends.

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INTRODUCTION

The conventional definition of myofascial pain syndrome (MPS) is characterized by regional pain originating from hyperirritable spots located within taut bands of skeletal muscle, known as myofascial trigger points.¹

The appropriate evaluation and management of myofascial pain is an important part of musculoskeletal rehabilitation, and regional axial and limb pain syndromes. A “trigger zone” is a local zone of palpable hyperirritability in a tissue which when compressed leads to local pain and if, hypersensitive can lead to radiating pain in other regions of the face.² The definitive treatment of MPDS depends upon the symptoms of the patient. Some require relief of symptoms while in some patient the treatment of causative factor is necessary. This article deals with the various treatment modalities available for MPDS. The non-surgical treatment or the non-invasive management deals with the early symptoms of MPDS. Majority of the patients gets relief from the non-invasive therapy only as it aims to bring the joint back in healthy condition.

Management of MPDS:

The treatment modalities of MPDS is broadly classified in non-surgical and surgical treatment:

Non-Surgical Management:

Initial therapy:

Reassurance: It is very important to make the patient aware about the condition, its treatment options available and the prognosis. Reassurance of the patient is very necessary that no serious problem is there and can be managed, for early recovery of patient and prevents him from any psychogenic trauma.

Diet: Diet plays a very major role in the management of MPDS. Hard and sticky food should be eliminated from

patient’s diet to prevent the stress or strain over the masticatory muscles. The patient should be put on soft and liquid diet.

Rest: Rest is very important to relieve the strain on the muscles. It is possible by making the patient aware of the condition, unconscious postural, swallowing and grinding habits.

Pharmacological Therapy:

- Analgesics:** Opioid and non-opioid analgesics are used depending upon the degree of pain. The opioid analgesics acts on the central nervous system and induces sleep, whereas, non opioid analgesics like NSAIDS do not interact with CNS and help in reducing mild to moderate pain.
- Anti- Inflammatory:** It helps in reducing the inflammations in muscles by preventing the release of arachidonic acids.
- Muscle relaxants:** Reduces muscle strains, for e.g.- thiocholchicine.
- Anxiolytics:** It acts as a supportive therapy. Anxiolytics do not have any direct effect in reducing muscle pain but it may help in eliminating patient’s stress produced due to the disorder.
- Local anesthetics:** Reduces the pain immediately thus providing relief to the patient allowing complete muscular movement. Apart from therapeutic it also acts like a diagnostic tool. Once the area is anesthetized, it is easy to diagnose the trigger zone and its radiating path.
- Thermotherapy:** Hot and cold fermentation is best and first advised to patient. It is based on premise that heat increases the circulation and reduces inflammation. Moist heat is better than dry heat. The patient is advised to keep a moist towel over the skin surface for approximately 10-15 min for continuous fermentation.

7. **Trans-cutaneous electro galvanic stimulation:** Utilizes the principle of muscle contraction by electrical stimulations. It is based on the premise that continuous electric contraction and relaxation of the muscle helps to break the myospasm. It is effective on the peripheral large A- delta fibers to reduce the muscle pain. Tens as an adjunctive conventional therapy proves to give very good results in patients.
8. **Infrared Rays:** Infra red rays have a synergistic effect on the muscle. It increases the blood flow and induces mild anti-inflammatory reactions mediated through the histamine and prostaglandin promoting vasodilatation, changing enzymatic activity and metabolic rate.
9. **Occlusal therapy:** Even small occlusal disturbance can lead to the pain in the muscles and joint. Occlusal splints are given to the patient to relieve the occlusal disharmony. Provides equal contact of all the tooth hence providing an equal load distribution on all the teeth and prevent the jaws from adverse mechanism of bruxism, clenching and other habits. The various appliances used are bite planes, occlusal appliance, night guard, mouth guards.
10. **Other modalities:** A part from these various other modalities are also available to treat MPDS conservatively

Dry needling: Acts as an therapeutic agent to release the intracellular potassium to block nerve conduction temporarily.

Stripping massage: It is a specific stroking massage on the skin to lubricate the muscle by putting the digital pressure on the muscle in milking motion. The pressure is light on the first pass hence increasing gradually to reduce the bumpiness in the muscle.

Acupuncture: It is body's own anti-nociceptive mechanism to reduce the level of pain. Stimulation of acupuncture areas causes release of endorphin molecules by blocking the transmission of noxious impulses, hence reducing the pain sensation.³

11. **Surgical Management:**

Many patients get relieve from the conservative therapy, therefore surgery is considered to be the last resort such as condylotomy, meninsectomy, myotomy and arthroscopy.⁴

12. **Recent Trends in management of MPDS:**

Botulinum Toxin an injection: - Injection of BTX-A in the masseter and temporalis muscle fibers extra orally under electromyography guidance serves to prove effective in 9 out of 10 patients. These muscles are most commonly involved and radiate the pain to ear and temporal headache respectively, which leads to the limitation of the mandibular motion and develop MPDS.⁵

Ultrasound: - ultrasound therapy uses the transmission of the sound waves through conducting gel into the tissue leads to the breakdown of scar tissue. It increases the cell membrane permeability by altering the sodium potassium ion gradient. It increases the exchange of gases, which promotes healing and reduces inflammation.

Iontophoresis: It is a procedure of passing low amperage current to the tissue of the area involved. A pad is placed over the skin of patient and electric current is passed through it into the tissue.

Cold and soft laser therapy: Application of the low level laser therapy has been sought to promote healing, reduce inflammation. It accelerates collagen synthesis, increases vascularity, and decreases the no of microorganism and pain.⁶

CONCLUSION:

It is essential that the correct diagnosis be made before treating a case of MPDS. Merely treating the patient symptomatically does not provide long-term results, at the same time injecting trigger points and tender spots and hoping for the best does not provide satisfactory results. The patient should be counselled and trained well with jaw exercises. The proper treatment of Myofascial Pain Syndrome may be one of the most rewarding if handled correctly.

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