

Stabilization Appliance Therapy in Myofascial Pain Management - A Case Report

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ABSTRACT

Myofascial pain dysfunction syndrome (MPDS) is a painful condition. There are numerous precipitating factors that could lead to the causation of myofascial pain dysfunction syndrome and if undiagnosed or left untreated, and then it could lead to chronic pain and loss of function. There are different treatment options for MPDS. In this case report, a female patient, suffering from myofascial pain, was treated successfully with a stabilization appliance.

Keywords: Myofascial pain dysfunction syndrome, Stabilization appliance, Myofascial pain, temporomandibular joint, emotional stress

INTRODUCTION

Myofascial pain dysfunction syndrome is a chronic pain disorder. It can be defined as dysfunction of masticatory and associated muscles characterized by pain. Myofascial pain dysfunction syndrome is usually unilateral, but may be bilateral as well. Myofascial pain tends to be dull, poorly

localized, and deep. Diagnosis of MPDS can only be made by clinical examination. There are no laboratory tests, imaging studies, or standardized diagnostic criteria to make an initial diagnosis of MPDS. To make a diagnosis of MPDS, the minimum essential feature that needs to be present is a taut band, an exquisitely tender spot or nodule in the muscle, and the patient's recognition of the pain complaint with pressure on the tender nodule. There are many treatment options for MPDS. Stabilization appliance is one of them and can be extremely effective in pain management, if properly used.

Stabilization Appliance (SA):

A Stabilization appliance is a removable device, usually made of hard acrylic, which fits over the occlusal and incisal surfaces of the teeth in one arch, creating precise occlusal contact with the teeth of the opposing arch. Stabilization appliances provide a gnathologically stable occlusal environment in which the mandible can slide freely from maximum intercuspation. It is a reversible and non-invasive bio-mechanical method of pain management.



Figure 1: Stabilization appliance

CASE REPORT

A 29-year-old female patient came to the Department of Prosthodontics and Crown & Bridge of Dr. R. Ahmed Dental College And Hospital, Kolkata with a chief complaint of bilateral facial pain and restricted mouth opening for last 2 months. The onset was gradual and there was no history of trauma. She reported that she had recurrent episodes of similar pain but it had never been this bad or lasted so long. Her physician prescribed pain killers, muscle relaxant and anxiolytic drugs. But she could not get much relief by the medicines.

Clinical examination: The clinical examination revealed that her comfortable inter-incisal opening was 21mm. She could open maximally 43mm, but this was painful. Wong-Baker FACES pain rating scale was used for assessment of pain. Bilateral masseter, temporalis and medial pterygoid muscle tenderness were confirmed by palpation. Manual palpation of right masseter specifically enhanced the pain. There was no joint sound and jaw deviation during mouth opening. Chewing was difficult and painful for her. She also related that she had a stressful life and disturbed sleep at night.

Intraoral examination showed that except upper right third molar, all other third molars were extracted already. All the missing third molars were extracted because of recurrent pericoronitis. Patient had class I occlusion with no other tooth missing except the third molars. Oral hygiene was good. No significant occlusion discrepancy was present. Even upper right 3rd molar was not responsible for any occlusal premature contact with lower right 2nd molar. There was no carious or restored tooth. She had no other deleterious oral habit.

As there were no sign and symptom of temporomandibular joint disorder, so only orthopantomogram (OPG) was done to check overall bony structure. The radiological findings were insignificant.



Figure 2: Patient's OPG

Diagnosis: Myofascial pain dysfunction syndrome

Treatment: A stabilization appliance was fabricated for her. She was asked to wear it temporarily for 24 hours a day, except when eating. She was instructed to do closing muscles stretching exercises.

As she was already taking 5 mg valium once daily before bedtime for last 3 weeks, she was advised to continue the medicine for 7 days more. Her condition started to improve gradually and within 1 week, she reported that most of the pain was resolved. Mouth opening was normal and not painful. After an additional week, she was no longer experiencing pain. She discontinued the use

of the appliance after 8 weeks. Then upper right third molar was also extracted. She reported no recurrence of symptoms on recall visits.



Figure 3: Patient wearing SA



Figure 4: Patient came with a painful condition (red circle), pain was reduced within 7 days (yellow circle), and there was no pain after 2 weeks (green circle)

DISCUSSION

From a clinically practical viewpoint, if the muscle is tender to percussion and none of the other masticatory muscle disorders better describe the patient's condition, it is recommended the muscle tenderness be diagnosed as myofascial pain. Occlusal discrepancy is one of the most common predisposing factors for MPDS, but it may happen without any problem in occlusion. Poor sleep and/or increased level of psychological response (e.g. frustration, depression, tension etc.) may produce or worsen the situation. In this case, as there was no other known factor responsible for the situation, it is assumed that emotional

stress and irregular sleep may have induced the muscle hyperactivity resulting in muscular pain. Stabilization appliances increase the vertical dimension of occlusion, reposition mandibular condylar heads and decrease the load on the temporomandibular joints, establish a perfect gnathological articulation by eliminating occlusal discrepancies. The appliance can be used for a long time without any deleterious effect on patient's health. Although exact mechanism of action cannot be determined, still stabilization appliance can be effectively used as definitive therapy in these acute situations.

CONCLUSION

In myofascial pain, stabilization appliance can be used as a non-pharmacological way of pain management. But before that proper case selection is mandatory. Along with SA, other treatment options are also needed to be considered to eliminate other aggravating factors.

Declaration by Authors

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