



SIMPLE TECHNIQUE OF OCCLUSAL REHABILITATION OF A PATIENT WITH TEMPROMANDIBULAR JOINT DISEASE- A CASE REPORT.

Prosthodontics

Dr. K. Prathyusha	Reader, Department of Prosthodontics and Crown and Bridge, Madha dental college and hospital, Tamilnadu Dr.M.G.R medical university, Chennai -60069.
Dr. Ghosal Soumo	Senior lecturer, Department of Prosthodontics and Crown and Bridge, Madha dental college and hospital, Tamilnadu Dr.M.G.R medical university, Chennai -60069.
Dr. Sonal Jain	Senior lecturer, Department of Prosthodontics and Crown and Bridge, Madha dental college and hospital, Tamilnadu Dr.M.G.R medical university, Chennai -60069.
Dr. Sharmila Hussain*	Professor and HOD, Department of Prosthodontics and Crown and Bridge, Madha dental college and hospital, Tamilnadu Dr.M.G.R medical university, Chennai -60069. *Corresponding Author

ABSTRACT

Myofascial pain dysfunction syndrome is the temporomandibular joint disease of multifactorial origin. It usually presents itself as pain and tenderness of the muscles and joint. There are many modalities of treatment advised. This case report presents a simple technique of rehabilitating a partially edentulous patient with temporomandibular joint disease. The treatment provided relief from symptoms. The technique is simple to follow and can be given for patients when complete restoration of edentulous spaces is not possible. It can also be followed intermittently before final replacement is planned. As treatment of temporomandibular joint disease is an enigma, this simplified technique was effective in providing relief and correction of occlusion.

KEYWORDS

INTRODUCTION

The most common temporomandibular joint disease is pain referred to as myofascial pain dysfunction syndrome.^{1,3} The clinical condition may be present with a varied symptoms and was defined as "A collective term embracing a number of clinical problems that involve the masticatory musculature, temporomandibular joints and associated structures" (McNeil)⁴.

The signs and symptoms related to MPDS are varied but the most common being pain in the joints with associated clicking or limited mouth open⁵. It has also been associated with the headaches.⁶ The most common symptom is muscle spasm of the masticatory muscle⁷. There may be radiating pain to the cervical region and jaws⁸. Tenderness may be found over the joint or on the masseter and temporalis. The etiology of the condition is not fully understood and thought to be multifactorial. There has been a strong association of psychosomatic origin⁹.

When the condition is associated with young adults, history often relates to stress as a triggering factors. Most symptoms improve when conditions change. Costen¹⁰ (1934) proposed that mandibular over closure could be a cause for the pain. The mechanical displacement theory was given by Gerber¹¹ (1971) as possible trigger to muscle spasm and later development of temporomandibular joint disease. Dawson¹², Ramfjord and Ash 1983¹³ associated loss of teeth and irregular chewing pattern have been linked with MPDS.¹⁴

In all cases differential diagnosis should be done to eliminate other conditions. Temporomandibular disorders can coexist with other craniofacial disorders, which makes diagnosis both difficult and time consuming for clinicians.¹⁵ The cause for the disease should be evaluated before any definitive treatment is done. Generally palliative treatment is recommended during the acute phase of the disease. These include analgesics with muscle relaxants, hot fomentation, cold presses, Ultra Violet therapy and Infrared therapy. Definitive therapy includes replacement of missing teeth or in severe cases surgery for joints.

Case Report.

A twenty five year old male patient reported to the Department of Prosthodontics, Madha Dental College and Hospital, with a complaint of pain in the temporomandibular region for the past three weeks. Medical history was normal and patient gave a dental history of extraction of first lower right molar ten years ago (Fig 1). Extra oral examination of temporomandibular joint, revealed pain on palpation, clicking and deviation on opening. The Masseter and Temporalis

showed tenderness on palpation with slight stiffness. Medical history was insignificant and dental history revealed that the patient as extracted his right first molar ten years. Extra oral examination revealed that there was deviation of the mandible to the left on opening. There was tenderness and clicking in the temporomandibular joints. Intra oral examination revealed closure of space of the missing right molar with mesial migration of the second molar and premature contacts on lateral movements.

Treatment.

The patient was put on non-steroidal anti-inflammatory drug with muscle relaxant and advised give cold fomentation. A hard splint was made and patient advised to use the splint to in order to give rest to the joint and to change muscle engram (Fig 2). The patient was taught myofunctional exercises after the acute phase of the disease was over. At the end of third week patient reported with absence of symptoms and using Dawson's technique the mandible was guided to centric relation as the muscle engram changed due to the splint therapy. On palpation there was no tenderness in the Masseter and Temporalis. Impressions made to make a customized intra oral device were done. In the maxillary cast a transparent plate was fabricated to which a tracing pin was attached. In the mandibular cast a flat plate was applied with soot to act as the tracing device (Fig 3). This customized intra oral tracing device was used to record the protrusive and lateral movements. A face bow transfer was done and cast articulated on Hanau articulator (Wide VUE 010885000). The protrusive record was used to set the condylar guidance and the Bennett angle was set using the formula. The centric relation was made to coincide with maximum intercuspation as a new occlusal pattern had to be set to have a harmonious occlusion (Fig 4).

A wax up (GC inlay wax medium) was done on all the premolar and molar without increase of the vertical dimension. The contacts were corrected and lateral interferences were removed. A template was prepared on the wax pattern using vacuumed pressure molding plastic sheet. (Fig 5) The template was filled with posterior composite filling material (3M Espe Filtek Z250 shade B2) and used to the contour the surfaces. The patient was asked to use these restorations for three weeks (Fig 6). At the end of the period there was no interferences and as the symptoms were absent, ceramic onlays were replaced as permanent restoration.

DISCUSSION.

Myofascial pain dysfunction syndrome is a common disease with multifactorial origins. The absence of the first molar is a frequent occurrence in partial edentulous young adults. The early loss of this

tooth could result in migration of teeth and result in occlusal interferences.¹⁶ The diagnosis and treatment plan for the patient should be done based on severity of the symptoms and a thorough clinical examination. However, there is no definitive consensus on the exact management of cases and many dark and unsolved areas in the treatment options. Use of unproven adjunctive tests and devices may present risk for clinicians and patients of reaching either false-positive or false-negative diagnosis.¹⁷

The use of splint therapy was useful in reducing muscle tenderness and pain.^{13,18,19} After the symptoms the rehabilitation was done in a non-invasive manner. The use of placebos and non-invasive techniques of management seem to be as effective as invasive techniques.^{20,21} Most of them currently advocate use of minimal invasive techniques for treatment as costly and invasive techniques as the actual effectiveness of these modes is questionable.^{22,23}

CONCLUSION.

This case report presents a simple and novel way of management of temporomandibular pain which can be used in cases where patient cannot afford full mouth rehabilitation or extensive treatment procedures. The treatment was effective in symptomatic relief of pain for the patient.



Figure-1 Pre operative Intra oral view showing the mesial migration of the second molar.



Figure-2 Splint therapy



Figure-3 Customized intra oral tracing device.



Figure-4 Wax pattern to recreate occlusal contact.



Figure 6- Post operative occlusion with composite resin.

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