

CHRONIC HEADACHE AND TEMPOROMANDIBULAR DISORDER THE SIGNIFICANCE OF A CONSERVATIVE THERAPY

Nadia Al-Ghannam, BDS* and Anders Johansson, DDS, PhD**

هذا التقرير يوضح العلاقة بين اضطرابات المفصل الفكي الصدغي وآلم الرأس . ويظهر الدور الهام لطبيب الأسنان في علاج الأفراد الذين يعانون من آلم الرأس المتكرر.

آلم الرأس المزمن عام الحدوث ويشمل حوالي ٢٠٪ في معظم المجتمعات في الولايات المتحدة، تقريباً حوالي ١٠-٥٪ من الافراد يسعون للمعالجة من آلام الرأس الحادة . وتعتبر الخسارة الاقتصادية كبيرة بالنسبة لعدد المرضى الذين يعانون من آلم الرأس وعدد ساعات العمل المفقودة .

أعراض ومظاهر اضطرابات المفصل الفكي الصدغي شائعة في معظم المجتمعات . ووجدت علاقة قوية بين آلم الرأس واضطرابات المفصل الفكي الصدغي . وبصورة رئيسية آلم الرأس الذي يعود لأسباب نفسية له علاقة بوجود اضطراب في نظام العضلات الماضعة، وكذلك ألم الشقيقة يمكن أن يكون مرافقاً لذلك .

استخدمت طرق مختلفة لعلاج اضطرابات المفصل الفكي الصدغي وعلى الأطباء أن يكونوا حذرين لأن بعض العلاجات الموصوفة تنقصها القيمة العلمية .

في نوفمبر ١٩٩١ مريضة سعودية عمرها ٤٥ عاماً راجعت كلية طب الأسنان - جامعة الملك سعود تعاني من آلم في الرأس مستمر وشديد ولده ١٠ سنوات . وسابقاً راجعت قسم الأذن والأنف والحنجرة في مستشفى الملك خالد الجامعي، حيث أجري لها فحص سريري وتخطيط للرأس ولم يظهر أي دلالات هامة .

إضافة إلى ذلك فقد شوهدت من قبل قسم طب الفم في كلية طب الأسنان والفحوصات التي أجريت لها والتصوير الطبقي الشعاعي للمفصل الفكي الصدغي لم تظهر أي شيء غير طبيعي في المفصل الفكي . وقد عولجت باعطاء المسكنات ومضادات الاحتقان لمدة أسبوع . وهذا لم يشفي المريضة من آلامها وقد حولت إلى عيادة الدراسات العليا للمعالجة .

فضلاً عن أن المريضة تعاني من آلم الرأس في الجانب الأيمن، كان عندها فرقة في المفصل الفكي الصدغي . ولم تكن لدى المريضة أي شكوى طبية عامة .

وتعتبر المريضة آلم رأسها بأنه شديد، وكان عليها المواظبة على أخذ المسكنات يومياً . ولم نجد أي مشكلة اجتماعية لدى المريضة .

وأظهر الفحص الفموي أن لدى المريضة فقد جزئي للأسنان الخلفية في كلا جانبي الفك السفلي . وكانت العضلات الصدغية والجناحية الجانبية مؤلمتين بالجلس ويوجد فرقة في المفصل الفكي الصدغي . والأسنان الأمامية السفلية أبدت انسحالاً معتدلاً . وحركات الفك السفلي كانت طبيعية .

ولم يكن لديها نقاط تماس مبكر في الوضع الخلفي للفك أو في منطقة التوازن، وكانت صحة فم المريضة جيدة وكذلك حالة النسج الداعمة . تمت معالجة المريضة بعمل جهاز رفع عضة وكذلك صنع لها صفيحة متحركة سفلية بدأت حالتها بالتحسن بعد ثمانية أسابيع وبعد ٦ أشهر تقريباً لم يعد هناك آلم في الرأس .

Received 16/02/94; revised 12/05/94; accepted 18/10/94

*Graduate Student in Prosthodontics, Department of Restorative Dental Sciences, King Saud University, College of Dentistry.

**Assistant Professor and Consultant, Department of Restorative Dental Sciences, King Saud University, College of Dentistry, P.O. Box 60169, Riyadh 11545, Saudi Arabia.

Address reprint requests to Dr. Nadia Al-Ghannam

This case report illustrates the interrelationship between temporomandibular disorders (TMD) and headache. It highlights the important role of the dentist in the management of individuals suffering from recurrent headache. It also emphasizes that clinician's prescription for TMD therapy should be scientifically and conservatively based.

Introduction

Chronic headache is an almost universal finding with a reported prevalence of the order of 20% in most communities.¹ In the United States, it has been estimated that 5-10% of the population seek treatment for severe headache.² Thus, the estimated socio-economic costs due to the number of patients suffering from headache and accompanying lost man-hours are enormous. Signs and symptoms of temporomandibular disorders (TMD) are common in most populations.³ A strong relationship between TMD and headache has been reported.⁴ It is mainly the tension-type of headache that is related to the presence of dysfunction of the masticatory system, although the "common migraine" type may also be associated. Various treatment strategies are applied for TMD and the clinician should remain aware that some of the more commonly prescribed therapies lack scientific validity.⁵

Case Report

Medical history

In November 1991, a 45-year-old Saudi female attended the College of Dentistry, King Saud University, with a 10-year history of severe continuous headache and tinnitus. She had previously been seen in the ENT Department at the King Khalid University Hospital, where a clinical examination including a cephalogram had been performed. However, no significant findings were reported. In addition, she had been seen in the Department of Oral Medicine, College of Dentistry, but the examination, which included both orthopantomogram and tomograms of the temporomandibular joints (TMJ's), failed to reveal any abnormality of the jaws or the TMJ's. Treatment was nevertheless initiated by prescribing an analgesic/anti-inflammatory drug for one week. As this did not relieve the patients symptoms, she was referred to the Graduate TMJ Clinic.

Apart from complaints of headache on the right side, clicking of the TMJ, and tinnitus, no other significant findings were reported in the medical his-

tory. The patient considered her headache to be severe, and she had to take analgesics on a daily basis. There were no significant findings in the social history.

Clinical examination

The patient had a partially edentulous dentition with bilateral loss of the mandibular posterior teeth. Temporalis and lateral pterygoid muscles were tender to palpation, clicking of the right TMJ was present, and the mandibular anterior teeth exhibited moderate attrition. Ranges and patterns of mandibular movements were normal. There were neither occlusal interferences in or around the retruded contact position, and nor any working or non-working side interferences. Generally, the patients oral hygiene was good, and the caries and the periodontal status were equally good.

Diagnosis and treatment

Findings in the medical history and clinical examination justified a tentative diagnosis of headache due to temporomandibular disorder with neuromuscular background, with common "tension headache" as a differential possibility. The treatment plan consisted of:

1. Counselling about the relative harmlessness of the condition and its good prognosis.
2. Construction of a full coverage hard acrylic occlusal splint for the mandibular arch with a bilateral tissue-supported posterior extension [Figs. 1a, b, c and 2]
3. Follow-up after 2 weeks, 8 weeks, 6 months and 1 year.
4. Construction of a mandibular removable partial denture.

At 2-week follow-up, the patient reported that the splint was comfortable. She had used the occlusal splint every night, with some daytime use as well. The frequency of headache was slightly decreased, but the number of masticatory muscles tender to palpation was not reduced. At the 8-week follow-up the patients condition had substantially improved, both subjectively and clinically. The latter was evaluated by the reduction in number of

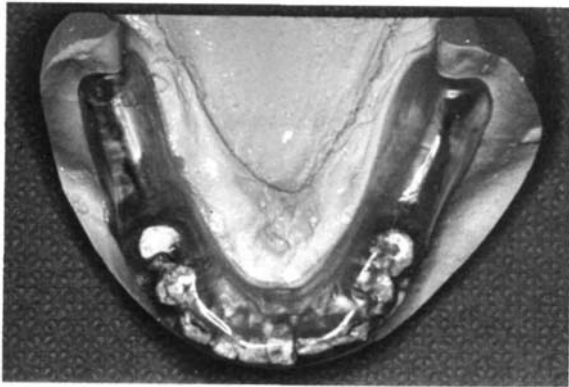


Figure 1a. Hard acrylic mandibular occlusal splint covering all the teeth as well as the posterior edentulous areas bilaterally.



Figure 2. The occlusal splint inserted in the mouth. Note the flat acrylic occlusal surface which facilitates easy gliding mandibular movements, and would be important in patients suffering from bruxism.

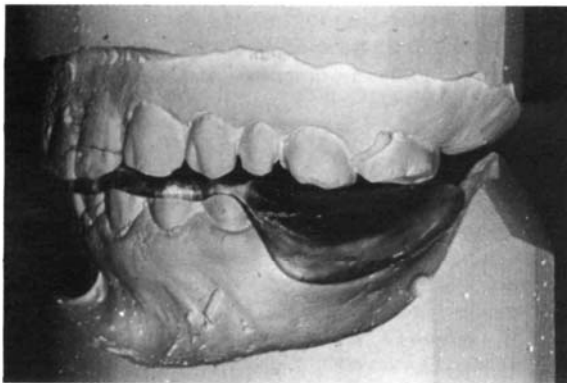


Figure 1b. Left lateral view of the splint which shows the provision of posterior occlusal contacts by the occlusal splint.

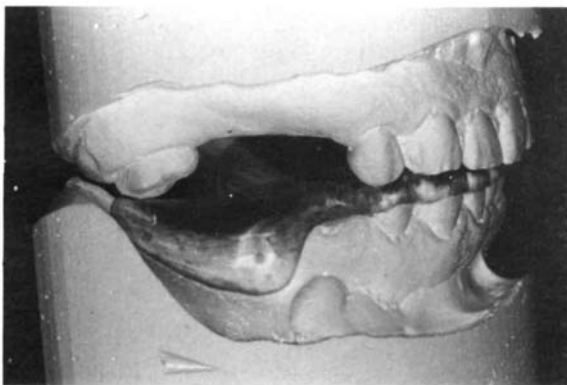


Figure 1c. Right lateral view of the splint. Although only one maxillary molar was present, it is evident that the tissue-supported posterior extension of the splint provides good occlusal stability on that side.

muscle sites tender to palpation.

At the 6-month reassessment visit, the patient appeared visibly pleased with the treatment outcome. Her experience of headache was reduced to almost nil. Her tinnitus had also subsided. She was no longer having to take analgesics, and used the occlusal splint on a regular basis, which she felt had improved her sleep as well. The same satisfactory treatment result was maintained at the 1-year follow-up.

When the patient was advised that the planned removable partial could be constructed, she expressed disinterest. The reason she gave was that her headache, which had been her main problem, had ceased and that she had no difficulty in mastication. Accordingly, she was advised to gradually reduce the use of the occlusal splint, but if the headache returns she should resume its use on a more regular basis. She was also encouraged to visit the TMJ clinic, if necessary.

Discussion

Generally, the management of TMD has a good prognosis and most treatment studies report a clinical success rate of the order of 70-90%.⁶ The management of this case was quite successful, but it is important to consider differential diagnostic aspects in the treatment of headache, which can sometimes be a symptom of a serious illness needing immediate medical treatment. In this case, however, the findings in the history and the clinical examination were supportive of TMD as the pri-

mary etiology of the patient's condition.

To date, no clear association of occlusal factors with signs and symptoms of TMD has been scientifically demonstrated.⁵ Consequently, the contradictory treatment results reported from studies using occlusal equilibration in the treatment of TMD are not surprising. Its effectiveness may well be attributed to the placebo effect.⁷ Therefore, a conservative and reversible approach, that is, counseling, occlusal splints, muscle exercises, in the management of TMD should be advocated.

In well-controlled clinical studies, it has been consistently shown that an occlusal splint is very efficient and superior to the effects seen with placebo treatment or in untreated controls.⁷ The clinical efficacy of an occlusal splint, while not in question, still remains unexplained and the need, if any, for follow-up therapy is much debated.⁸

In patients with TMD as well as lost posterior support, as in the case reported, the occlusal splint should additionally provide molar support. Ideally, follow-up definite therapy should include the provision of a removable partial denture in order to improve masticatory function, and reduce TMJ loading. The risk of development of TMJ osteoarthritis may also be reduced.⁹ However, our patient did not accept such an option, and was instead called for regular assessments and invited

to contact the TMJ Clinic should there be any recurrence of the problem.

References

1. Lance JW. Mechanism and management of headache. London: Butterworth, 1978.
2. McNeill C. Craniomandibular disorders. Guidelines for evaluation, diagnosis and management. Chicago: Quintessence, 1990.
3. Carlsson GE. Epidemiological studies of signs and symptoms of temporomandibular joint-pain-dysfunction. A literature review. Aust Prosthodont Soc Bull 1984;14:7-12.
4. Magnusson T, Carlsson GE. Recurrent headache in relation to temporomandibular joint pain-dysfunction. Acta Odontol Scand 1978;36:333-38.
5. Mohl N, Orbach R. The dilemma of scientific knowledge versus clinical management of temporomandibular disorders. J Prosthet Dent 1992;67:113-20.
6. Carlsson GE. Long term effects of treatment of treatment of craniomandibular disorders. J Craniomand Pract 1985;3:337-42.
7. Dahlström L. Conservative treatment methods in craniomandibular disorder. Swed Dent J 1992;16:217-30.
8. Clark G. Interocclusal appliance therapy. In: Mohl N, Zarb G, Carlsson GE, Rugh JD eds.: A textbook of occlusion. London: Quintessence, 1988;271-84.
9. Kopp S, Carlsson GE. The temporomandibular joint: problems related to occlusal function. In: Mohl N, Zarb G, Carlsson GE, Rugh JD eds.: A textbook of occlusion. London Quintessence, 1988;235-48.