Open Journal of
Clinical & Medical
Case Reports

Volume 2 (2016)
Issue 1

ISSN 2379-1039

Behavioral Therapy as an Early Intervention of Acute Local Myalgia and Headache Attributed to Temporomandibular Disorder

Fiammetta Cosci, MD, PhD
Department of Health Sciences, University of Florence, Italy
Tel: +39-055-275-5066; Fax: +39-055-623-6047. Email: fiammetta.cosci@unifi.it

Abstract

Introduction: Temporomandibular disorders (TMDs) are generally thought as conditions comprising both psychosocial and neuro-physiologic entities; notwithstanding this, their treatment is commonly based on physical interventions, which are usually proposed when the clinical feature is chronic. However, there is some evidence that cognitive behavioral skills training is an early intervention effective in patients with acute TMD pain.

Case description: We report the case of a 39-year-old woman with acute local myalgia and headache attributed to temporomandibular disorder secondary to allostatic overload who received a 4-session behavioral therapy. The intervention induced the remission of symptoms.

Discussion: Behavioral therapy seems to be helpful as an early intervention in acute local myalgia and headache attributed to TMD patients. Further studies and large-scale implementation are warranted.

Keywords

Behavioral therapy; Early intervention; Acute; Temporomandibular disorder; Pain

Introduction

Temporomandibular Disorders (TMDs) are a collection of symptoms and signs involving masticatory muscles, the temporomandibular joints, or both [1]. Their prevalence ranges from 8% to 15%, in women; and from 3% to 10%, in men [2]. Their etiology is still unclear although it is generally thought that they are conditions comprising both psychosocial and neuro-physiologic entities [3, 4]. The treatment of TMDs is mainly based on physical interventions, usually proposed at the chronic stage. However, some studies found an efficacy of psychological interventions similar to the physical treatment [5] and there is some evidence of positive effects of cognitive-behavioral therapy (CBT) in chronic TMD patients [6] and in acute TMD patients [7].

Case Report

X. is 39-year-old woman with no personal history of physical or psychiatric disorders who asked for a visit to the dentist because of masseter tenderness, jaw opening limitations, morning headache, tooth hypersensitivity, and tooth pain on digital palpation. The symptoms began 2 months before and hadworsened in the previous 4 weeks. She visited the dentist who made a panoramic radiograph of the

oral cavity finding no specific signs or damages; then the dentist interviewed X. on possible clenching during the day or while sleeping and on her daily level of stress. The patient reported that she was unaware of clenching and to be highly stressed due to the commitment with her job and family. The dentist attributed the acute local myalgia and headache to a temporomandibular disorder, informed X. that often people clench without being aware of it, encouraged her to stop clenching and to reduce the daily level of stress. Two weeks later the clinical feature was unmodified and X. asked for a psychiatric evaluation. X. was first interviewed via an unstructured clinical interview oriented towards symptoms and then assessed via the MINI International Neuropsychiatric Interview (MINI) [8], the Diagnostic Criteria for Psychosomatic Research (DCPR) Interview [9], and the semi-structured interview for the clinical assessment of allostatic load [10]. The patient satisfied the diagnosis of allostatic overload [10]. The psychiatrist formulated the diagnosis of TMD secondary to allostatic overload and proposed a 4-session behavioral intervention. During the first session, the patient was informed about the negative effects of stress and the body reactions to it. She was also informed that clenching is a bodily reaction to stress that can worsen the individual daily life and the sleep quality. Thereafter, X. was invited to pay attention to the daily moments of highest stress and to take note of them in a diary. At the second session, she reported not to have had daily peak of stress but a chronic stress mainly due to the commitment with her family and work. The psychiatrist invited X. to observe and take note on the diary of her posture at fixed intervals of time (i.e., every two hours) during the day. In case she found tension or rigidity in the body, she was invited to switch into another posture. At the third session, the patient had noted on her diary to be frequently clenching at work and referred to have frequently used the strategy to change posture, thus relaxing. Indeed, she reported lower masseter tenderness, no more jaw opening limitations, rare morning headache, reduced tooth hypersensitivity and reduced tooth pain on digital palpation. At this point, the psychiatrist asked X. to take note in her diary of the area of the body affected by tension/rigidity. At the fourth session, the patient reported two main areas affected by tension/rigidity: jaw and back. The psychiatrist assessed again the patient via the MINI, the DCPR interview, and the semi-structured interview for the clinical assessment of allostatic load and no diagnosis was found. X. was encouraged to continue monitoring her body and relaxing. After 1 month, X. was completely free from symptoms (i.e., no diagnosis according to the MINI, the DCPR interview, and the semi-structured interview for the clinical assessment of allostatic load; no symptoms related to TMD) and maintained this condition at 2 years follow-up.

Discussion

There is emerging evidence that cognitive-behavioral therapy is an effective early intervention in patients with acute temporomandibular disorder-related pain [7]. In this vein, a modified version of the intervention used by Gatchel and colleagues [7] was proposed to X.. Table 1 describes the skill training used by Gatchel et al. [7] and the techniques here used. The main difference was that we proposed a 4-session rather than a 6-session therapy and we did not use cognitive restructuring. The choice of 4 sessions was done because behavioral therapy rather than CBT was administered. The choice of behavioral therapy instead of CBT was done to let the patient unlearn the dysfunctional behavior (e.g., clenching) which apparently caused the TMD and not only to reduce the pain and the jaw symptoms as observed by Gatchel et al. [7].

Considering the 4 sessions one by one, the first session had the aim to develop self-monitoring

skills and awareness of the daily level of stress. At the second session, the psychiatrist asked X. to monitor the whole body, not only the jaw muscle, for two reasons: a. psychosomatic manifestations tend to involve more than one body area or apparatus; b. pain patients tend to have attentional biases and selectively process sensory-intensity information; thus processing biases could maintain and exacerbate stress and illness behavior. For the same reasons, at third session the psychiatrist asked X. to take note in her diary of the areas of the body that were rigid or tense.

Although already in 1970s it was observed that the therapy for TMD in the future may become largely behavioral in nature, TMD is still mainly treated via physical interventions at the stage of chronicity. The present case report suggests that TMD might be characterized by dysfunctional behaviors which can benefit from an early intervention of behavioral therapy.

Table

Cognitive behavioral skills training used in Gatchelet al. [7]	**Behavioral techniques proposed to X.**
Six 1 –hour sessions based on:	*Four 1-hour sessions based on:*
education on mind-body relationship emphasizing stress and the body reactions to stress	education on mind-body relationship emphasizing stress and the body reactions to stress
relaxation training in ideal and everyday settings	self-monitoring of daily stress taking notes of the highest moment of stress in a diary
distraction and pleasant activity scheduling as means to reduce the impact of pain on activities	self-monitoring of posture and areas of the body affected by tension/rigidity at fixed intervals of time taking note in a diary. relaxation in everyday settings as coping strategy (i.e., if some tension or rigidity is present, change posture) taking note on the diary
cognitive restructuring	maintenance of skills
self-instructional training	
maintenance of skills	

Table 1: Overview of the psychological techniques used by Gatchel et al. [7] and in the present case report

References

1. Schiffman E, Ohrbach R, Truelove E, Look J, Anderson G, Goulet JP, et al. Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) for Clinical and Research Applications: Recommendations of the International RDC/TMD Consortium Network* and Orofacial Pain Special Interest Group. J Oral Facial Pain Headache. 2014; 28:6-27.

2. LeResche L. Epidemiology of temporomandibular disorders: Implications for the investigation of etiologic factors. Crit Rev Oral Biol Med. 1997; 8: 291-305.

3. Schwartz SM, Gramling SE. Cognitive factors associated with facial pain. Cranio. 1997; 15: 261-266.

4. Suvinen TI, Reade PC, Kemppainen P, Kononen M, Dworkin SF.Review of aetiological concepts of temporomandibular pain disorders: Towards a biopsychosocial model for integration of physical disorder factors with psychological and psychosocial illness impact factors. Eur J Pain.2005; 9: 613-633.

5. Roldán-Barraza C, Janko S, Villanueva J, Araya I, Lauer HC. A systematic review and meta-analysis of usual treatment versus psychosocial interventions in the treatment of myofascial temporomandibular disorder pain. J Oral Facial Pain Headache. 2014; 28: 205-222.

6. Turner JA, Mancl L, Aaron LA. Short- and long-term efficacy of brief cognitive-behavioral therapy for patients with chronic temporomandibular disorder pain: a randomized, controlled trial. Pain. 2006; 121: 181-194.

7. GatchelRJ, Stowell AW, Wildenstein L, Riggs R, Ellis E 3rd. Efficacy of an early intervention for patients with acute temporomandibular disorder-related pain: a one-year outcome study. J Am Dent Assoc.2006; 137: 339-347.

8. Sheehan DV, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, et al.The Mini-International Neuropsychiatric Interview (M.I.N.I.) the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. J Clin Psychiatry. 1998; 59: 22-33.

9. Porcelli P, Sonino N. Psychological Factors Affecting Medical Conditions . A New Classification for DSM-V. Adv in Psychosom Med. vol. 28. Basel: Karger. 2007.

10. Fava GA, Guidi J, Semprini F, Tomba E, Sonino N. (2010).Clinical assessment of allostatic load and clinimetric criteria. PsychotherPsychosom. 2010; 79: 280-284.

Manuscript Information: Received: November 24, 2015; Accepted: January 18, 2016; Published: January 19, 2016

Authors Information: Fiammetta Cosci, MD, PhD
Department of Health Sciences, University of Florence, Italy

Citation: Cosci F. Behavioral therapy as an early intervention of acute local myalgia and headache attributed to temporomandibular disorder. Open J Clin Med Case Rep. 2016; 1065

Journal: Open Journal of Clinical and Medical Case Reports is an international, open access, peer reviewed Journal focusing exclusively on case reports covering all areas of clinical & medical sciences.

Visit the journal website at **www.jclinmedcasereports.com**

For reprints & other information, contact editorial office at **info@jclinmedcasereports.com**