The Addition of Pharmacological Treatment to Physiotherapy in Pain Reduction of TMD-myalgia Patients

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ABSTRACT

Background: Myalgia is the most common cause of Temporomandibular Disorders (TMDs) pain, which has a dull and mild character. In some patients with high somatization, it can present itself as severe pain, which can complicate the treatment. Additional pharmacological treatment may thus be needed. Case Report: Two female patients came with similar symptoms but different pain intensities. The first patient had a high intensity of pain, which became severe during examination. The second patient had more complaints but showed typical symptoms of myalgia. Both received physiotherapy sessions, but for the first patient, we added analgesics to help the patient endure physiotherapy. Conclusion: Additional pharmacological treatments, especially analgesics, can be used in helping myalgia patients with high somatization to undergo physiotherapy.

Keywords: myalgia, pharmacology, temporomandibular disorders, temporomandibular joint, treatment

Background

Temporomandibular disorders (TMD) are a group of conditions affecting the masticatory muscles, the temporomandibular joints (TMJ), or both. Pain, functional limitation, and joint sounds are the cardinal signs for which patients seek care.¹ Myalgia is the most common cause of pain in patients with Temporomandibular disorders (TMD). It presents itself as dull, mild, remitting, self-limiting, and fluctuating pain.¹ A report from a TMD specialty clinic showed that 55% of their patients met the criteria of having chronic myofascial pain or myalgia.²

Physiotherapy is the treatment of choice for myofascial pain treatment, because it relieves musculoskeletal pain, restores normal function by coordinating muscle activity, and promotes the repair and regeneration of tissue.³ The use of pharmacological treatments in accompanying physiotherapy is often used, though there is no guidance on when and how to deliver the mode of treatment.⁴ This case report describes two cases of patients with myofascial pain complaint who underwent physical therapy with and without the addition of pharmacological treatment.
Case Report 1

Male patient of 40 years of age complained of clicking sound with sharp pain on both TMJs. Pain was felt as sharp following clicking sound, and there was also tense feeling in the cheek area and around the ears especially after every meal. Patient scored his pain as 8 on VAS scale. Patient was afraid to move his jaw due to the pain. Patient did not have any systemic complaints. During examination, palpation on the masseter and palpation area provoked his pain complaint (Fig. 1). There was a limitation on maximal mouth opening (28 mm), and patient refused to open wider as he felt a severe pain around the cheek area. Clicking was detected on both joints on both mouth opening and closing movement. The diagnosis of this case was myalgia with myogenous limited mouth opening and anterior disc displacement with reduction on both joints. The treatment approach was divided into two parts, which are (1) counselling on the etiology of pain and clicking sound, and (2) physical therapy which consisted of massage and mobilization therapy. Patient was instructed to take analgesics on the day of the first appointment of physical therapy. The additional medication was also given on the second appointment of physical therapy as patient was still afraid of pain on jaw movement. After the third appointment, patient could do the physical therapy on his own which increased his mouth opening to 40 mm without feeling any pain. Patient was no longer disturbed by his joint sound.

Figure 1. Palpation was done on masseter area according to Diagnostic Criteria of Temporomandibula (DC/TMD) protocol

Case Report 2

Female of 40 years of age came with a blocked feeling on mouth opening and pain around right cheek area. Pain started around 5 years ago on the right ear, and felt like a sharp pain (VAS scale 2) which increased in intensity on chewing and talking. Patient also complained of intermittent blockage on jaw movement which started around 1 year ago. Patient did not have any systemic complaints. Clinical examination revealed painless mouth opening of 29 mm, but patient could open until 45 mm when instructed. Palpation on the right masseter provoked her pain complaint (VAS scale 4). Palpation on the right TMJ did not cause any pain, but crepitus sound was detected during opening and closing jaw movement. The diagnosis of this case was myalgia with myogenous limited mouth opening and a possibility of arthrosis on the right TMJ. The treatment approach was divided into two parts, which are (1) counselling on the etiology of pain and movement limitation, and (2) physical therapy which consisted of massage and mobilization therapy. Patient was not given any medication on all of her physical therapy appointments. After two physical therapy sessions, patient could already open until 40 mm, and her pain was decreased (VAS scale 2). Patient was instructed to come every 6 months to evaluate her right joint condition.
Discussion

This report discussed about two patients with the same pain diagnosis but received different treatment. The first patient was given additional medication before underwent his physiotherapy appointments, while the other was not given any. The exercises which are commonly included in myofascial physiotherapy are muscle massage, muscle stretching, gentle isometric tension exercises against resistance, guided opening and closing movements, correction of body posture, and relaxation techniques. Based on a clinical study, 85% of myofascial pain patients no longer experienced pain and 60% had improved mouth function in 6-month follow-up after physiotherapy. However, pharmacological treatment is still recommended for initial use in myofascial pain treatment, especially in combination with physiotherapy.

Medications that are widely used are analgesics, non-steroid anti-inflammatory drugs (NSAIDs), muscle relaxants, benzodiazepines, and low-dose antidepressants. Questions then arise whether medications add value to the overall success of pain management by means of physiotherapy and what the rationale is for giving such medications. In many chronic pain cases, patients will either be prescribed analgesics or have already been taking them. Both non-opioid analgesics and NSAIDs act by inhibiting prostaglandin synthesis and they are effective in reducing pain and tension feeling accompanying chronic pain patients. NSAIDs are only given if inflammation is the dominant component in the clinical finding.

Since analgesics are only prophylactic drugs, they have to be accompanied with a more definite treatment such as physiotherapy. In fact, many combine both approaches, as to increase the patient’s adaptation and adherence to the physiotherapy treatment. Clinical reasoning to give additional analgesics in combination with physiotherapy in this case basically depends on patients’ condition. The first patient in this case report complained of high intensity of pain (VAS Scale 8), although on examination it revealed that it was pain of myogenous origin. This may indicate that patient had high somatization which can complicate treatments, especially in physiotherapy where pain is expected to be provoked during certain movements.

Other medications can be used, though it is not commonly practiced in cases such as the two presented in this case report. For example, muscle relaxants affect skeletal muscle function and are used to decrease muscle tone. One of the medications, Cyclobenzaprine, has been used widely in fibromyalgia and tension-type headache treatment. The use of muscle relaxant in combination with physiotherapy was, however, lacking evidence. Other medication, Benzodiazepines, possess sedative, hypnotic, anxiolytic, anticonvulsant, analgesic, muscle relaxant, and amnesic actions, which are useful in chronic myofascial patients with a high psychological component and/or sleep problems.

A study by De Nucci et al. on the efficacy of Triazolam in TMD patients’ pain management showed that there is a significant improvement in sleep quality and alterations in patients’ sleep architecture. Nevertheless, they did not find any improvement in patients’ pain complaint as measured by muscle palpation with an algometer, in scales for sensory intensity and the affective component of pain, or in daily pain diaries. The study also recommended the use of benzodiazepines for myofascial pain patients to be restricted to 2 to 4 weeks, due to many side effects, dependence risk, and withdrawal syndrome. In the early years, antidepressants were chosen because they were thought to relieve the depression component of chronic pain. Although it is well known that relieving depression is likely to decrease pain, some antidepressants appear to have analgesic properties of its own. Both benzodiazepines and antidepressants are not commonly used in combination with physical therapy and there are no studies which observe the combination efficacy.

Conclusion

There is not a single study that directly observes the efficacy of additional pharmacological therapy to physiotherapy in chronic myofascial pain cases. Most of the medications were used when physiotherapy was not a treatment option of pain management. They were also used in a short term and mainly as a prophylactic
treatment. However, analgesics are often used in the initial phase of physiotherapy to help patient adapting to the exercise.

References