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RESEARCH ARTICLE

DRY NEEDLING TECHNIQUE IN MYOFASCIAL PAIN - CLINICAL CASE REPORT.

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Abstract

Myofascial pain characterized by the presence of myofascial trigger points (TP) that can cause local pain and referred pain, that is, perceived in a different location. TP is a palpable nodule and a painful point of compression, which, in addition to local pain, promotes pain. It is called referred pain when pain caused by TP also affects other regions, such as: other muscles, teeth, gums, TMJ and ears. It is of fundamental importance the anatomical knowledge of the muscles, since it facilitates the localization of the TP and palpation, as well as the functional knowledge of the muscles, since the TP can be activated when the patient makes a certain movement / gesture, this facilitates the correct diagnosis. When the procedures performed reach the TP areas, muscle pain is rapidly eliminated, restoring function and normal muscle length. One of the most widely used treatments has been dry pressing, the theory is that the needle through mechanical trauma stimulates the release of intracellular potassium, which blocks the transmission of nerve impulses temporarily. The needle also breaks the adhesions of the fibers that may exist. The objective of this work is to report two cases of myofascial pain treatment using the dry needling technique. Where, Ms D.S.R and Ms O.H.S.R. attended the UNIFEB clinic, with symptoms of muscular pain and difficulty opening the mouth and chewing, dry needling was performed and there was instant improvement of the pain picture, and improvement in movements that were previously limited.

Introduction:-

Temporomandibular Disorders (TMDs) involve a series of changes, painful or not, in the Temporomandibular Joint (TMJ) region, chewing muscles, or both [1]. TMD pains, especially those in the temporalis muscle (temples) or in the joint itself, can produce a sensation of pain in the head due to the location of these structures. It should be clear that such manifestation is not a primary headache, that is, those of neurological origin. In the case of TMD pain, a classic manifestation is the worsening of pain with the use of the jaw to speak, to feed, among others [2].

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One of the most debated topics today is chronic orofacial pain that according to the World Health Organization (WHO) [1] it is estimated that this type of pain reaches 30% of the world population. According to the Brazilian Society for the Study of Pain, women feel more pain and are at greater risk of experiencing numerous painful conditions. In this way, pains in the neck and shoulders, abdomen, tension-type headaches, migraine after puberty, temporomandibular joint (TMJ) disorders are more common in women.

In men, the risk of painful manifestations of this type is lower and one of the great novelties in the research is the signaling that testosterone protects males in relation to TMJ pain, where a difference in the biological mechanisms of TMJ pain is also observed with respect to other parts of the body [3]. In Brazil, it is estimated that 50 million people feel this type of pain, and that at some point 15 to 25% of people will suffer from chronic pain, and in individuals over 65 this rate can increase to 50% .

Myofacial pain syndrome is the most common musculoskeletal dysfunction (6), this is common in clinical practice where about 10% of the population has one or more disorders of the musculoskeletal system [4,5,6,7]. This syndrome is characterized by localized or referred muscle pain that is originated in a myofascial trigger point [9]. The term trigger point (TP) describes a nodule in the musculature located mainly at the end of the muscle insertion, where a hypersensitive and painful area is formed [8,10]. However, the mechanisms of TP formation are hardly evident. It is known that local muscle pain is related to the activation of muscle nociceptors for a variety of endogenous substances including neuropeptides, arachidonic acid derivatives, inflammatory mediators and others.

The therapeutic approach of myofascial pain syndrome is extremely difficult due to the difficulty of diagnosis, which occurs in only 15% of cases [12]. The treatment for myofascial pain syndrome is broad and has many techniques, most commonly used: ischemic pressure (IP), dry needling (DN), wet needling, passive stretching, stretching and spraying, TENS, massage [12], ultrasound and laser [8, 14, 15]. In these techniques DN and IP appear to be very effective in the treatment of myofacial pain syndrome [15,16,17].

The DN, a technique similar to acupuncture, is an effective treatment for pain relief. This technique may increase pain threshold and range of motion on return of pain. Hsieh et al. [16] provided evidence that acute dry-needle inactivation of a primary TPs inhibits activity in satellite TPs located in their pain reference zone.

Thus, this study compares the efficacy of dry needling in the treatment of myofascial pain in addition to reducing pain and analyzing the influence on quality of life. The present study is justified aiming at the effectiveness of dry needling therapy when applied in cases of myofascial pain. Therefore, the present study aimed to report clinical cases of myofascial pain treatment with the dry needling technique,to demonstrate the importance of the dental surgeon in the diagnosis of temporomandibular disorders.

Case Reports:-

The present work has a descriptive character as object of study the clinical cases and the bibliographic survey, through a systematized review of scientific materials as articles found in databases available in electronic medium, such as: Scielo, Bireme and Google academic.

Cases:-

1. Ms. O. H. S. R., melanoderma, attended the UNIFEB clinic, with symptoms of muscular pain and difficulties to open the mouth and chew, performing dry needling with instant improvement of the condition. Patient reported constant headache and limited movement (Figure 1).
2. Ms. D.S.R., leucoderma, attended the clinic of UNIFEB, with symptoms of muscle pain and difficulties to open the mouth and chew, performing dry needling with instant improvement of pain. Patient still reported going through emotional problems and making use of medication for treatment (Figure 2).

The materials used were: fine monofilament sterile needles; Pen for marking trigger points; 70% alcohol and sterile gauze for site asepsis;

Ethics:-

The current resolutions of the National Health Council - Ministry of Health (CNS / MS), which regulate human research standards (Resolution CNS 196/96), were followed. Before the beginning of the study, the protocol will be submitted to the Research Ethics Committee of the University Center of the Teaching Foundation of Barretos.

Discussion:-

According to Schmidt et al. [1], temporomandibular dysfunction (TMD) is a type of orofacial pathology arising from disorders of the masticatory system as well as in its underlying structures, which may present with muscular or articular characteristics. This, in turn, is located near the ear and is responsible for the connection between the jaw and the skull. It presents functions such as chewing movements, facial expression and speech.

The etiology of TMD is complex and multifactorial in relation to its predispositions, involving emotions, traumas, postures and muscular hyperactivity. It presents an evolutionary course varying in days, months and years, aggravating itself with parafunctional habits, characterized by not presenting normal functions of the masticatory system [3].

The main symptoms of TMD are related to otalgia, headache, dizziness, pain in the face and / or TMJ region, tinnitus, TMJ noises, cracking and crackling, and movement-related disorders. Patients may still present inappetence, fatigue, sleep disturbance, labor difficulties and loss of quality of life [3,4].

Pain is an unfeasible experience and its importance is recognized by exerting biological function, manifesting protection to the organism. Patients who present chronic pain, because they report pain in long periods and complain of therapeutic failures, result in the presence of signs of depression and behavioral changes. They cease to be understood as warning signs and are observed as a biopsychosocial process that affects daily life in general [3,5].

Dry needling is a relatively new method in the arsenal of painkillers. Its widespread use began after Lewit's publication more than 30 years ago [6-9]. Since the beginning of the 21st century, serious scientific attention has been given to this method [10,11]. The dry needling technique emerged empirically, in different schools and conceptual models, were developed including the radiculopathy model which is a form of deep dry needling and the myofascial trigger point model is a form of superficial needling [12-14]. Patients with cardiovascular problems and bleeding or those who are taking drugs for the blood thinner will not be allowed to use the dry needling technique [15-17].

Conclusion:-

Needle treatment has been shown to be very effective for immediate pain relief, requiring follow-up for TMD treatment.

Conflict of Interest:-

The authors declare no conflict of interest.

Figure 1:- Image of Case 1 showing the act of dry needling.

Figure 2:- Image of Case 2 showing the act of dry needling.

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