

Manual Therapy as a Proposed Treatment for Chronic Migraine

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Introduction

According to the World Health Organization (WHO) at least 47% of adults have suffered from headaches in the last year. Worldwide, only a minority of the headaches is diagnosed correctly [1]. Ignorance on the part of the professionals and the underestimation of this pathological entity are factors that make it difficult to diagnose it, and consequently, the treatments prescribed to the patients are inadequate. The headache, in addition to causing pain, impact negatively on the quality of life of the person, incapacitating him for the accomplishment of activities daily and causing socio-economics problems [1].

The International Society of Headaches (IHS) published in 2013 the third edition of the International Classification of headaches, dividing in primary and secondary and between primary headaches, in which the pain is unique or main symptom are: migraine, tension headache, trigeminal-autonomic headaches and other primary headaches (headache, physical exertion, external pressure). On the contrary, secondary headaches, pain is a consequence of some other process. This group highlights the headaches attributed to head trauma, cervical, vascular disorders and psychiatric disorders [2].

The IHS determines that migraine is a primary headache which in turn can be divided into: migraine with aura, migraine without aura, chronic migraine, migraine complications, probable migraine and episodic syndromes that may be associated with migraine [2,3].

The concept of "chronic migraine" (MC) was first included in the second edition of the IHS 2004. As early as 2013, the IHS defined CM as the headache that occurs for 15 or more days a month for more Of three months, and that, at least for 8 days presents migraine headache characteristics. It mainly affects people between the ages of 20 and 50, with a predominance of females [2,3].

In 1992 Nigam et al. [4], 76 patients with daily headache episodes, 50 women and 11 men, aged 14 to 66 years, were studied of which 61 (76.25%) had previous history of episodic migraine. And of those 61, up to 33 (54%) had episodes related to the hormonal factor (menstrual cycle, birth control pills, birth and pregnancy) before the attacks became daily. So the MC represents the natural evolution of migraine from its episodic form. It is a

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chronic process that can last for months to even years, depending on each patient. The increase in painful episodes may be due to lifestyle, (stress, depression...), conditions of comorbidity, genetic factors, drug use [3-6].

The prevalence of MC varies depending on the study and the diagnostic criteria that have been used. Prevalence is estimated to be around 2% of the population (setting a range of 0.9-5.1%). According to the Global Burden of Disease Survey of 2010, it is the seventh leading cause of disability in the world and the third most prevalent disorder [5].

A thorough collection of patient data is necessary for the correct diagnosis of MC [2,6-8]. Diagnosis is the starting point that will allow professionals to identify the problems as well as their magnitude, identify the needs and obtain an understanding of the real situation of patients. In addition, it is through the diagnosis that the professional can define what intervention strategies are necessary to solve the problem.

Treatment of MC

The treatment of MC will aim to reduce the frequency, intensity and duration of migraine attacks, not forgetting the individualized management of comorbidities and risk factors associated with

each case. From the therapeutic point of view, the MC approach can be classified as pharmacological and non-pharmacological. Within the non-pharmacological treatment, manual therapy may be a tool that contributes to decrease the problem of MC.

In the year 2000, Peter et al. [8], conducted a study with 127 participants to test the efficacy of manipulative spinal therapy in patients with migraine. The study lasted for six months, of which two months were dedicated for data collection, two months for treatment and two months for follow-up. Patients were divided into two groups, one treatment and one control. Study participants should have at least one episode of migraine per month. The results were statistically significant, seeing improvements in the frequency ($p < 0.05$), duration ($P < 0.01$), disability ($P < 0.05$) and reduction in medication consumption ($P < 0.001$), comparing with the group control. More than 80% of patients determined stress as the main trigger for migraines.

Later, Gert et al. [9] performed a systematic review in Medline and Embase to test the efficacy of manual manipulative therapy in chronic headaches (tension headache, migraine and cervicogenic headache). Nine articles were included, including a total of 683 patients, comparing manipulative therapy with other interventions or placebo. The conclusion was that manipulative therapy was more effective than massage in cervicogenic headaches but that in migraines and tension headache had the same effect as prophylactic medication. To investigate the relationship between pericranial sensitivity and predisposition to migraine.

Elena et al. [10] conducted a study of 98 patients with migraines and 32 healthy patients. It evaluated the presence of pericreaneal trigger points and found that 93.9% of patients with migraine and 29% of healthy subjects had trigger points ($P < 0.0001$). In addition, they verified that the palpation of a trigger point caused an episode of migraine in 30.6% of the patients. The conclusion was that pericranial sensitization is typical of migraine and that the location of these points of pain is important when applying other treatments, be it massage, dry puncture or acupuncture.

In 2011, Chaibi et al. [11] performed a review of articles that used manual therapy in migraines. The included studies suggested that massage, physical therapy, relaxation and manipulative therapy were just as effective as prophylactic treatment. As a result it was obtained that the massage was more effective reducing the intensity (34%) and the frequency (30%) of the episodes comparing with the control group. Studies that applied physiotherapy and relaxation showed a 50% reduction in migraine intensity, compared with prophylactic treatment that showed a 44% reduction in intensity. Several studies using manipulative manual therapy showed that the manipulative group reduced the frequency of episodes by 22-35%.

In 2012 Younes et al. [12] carried out a study on the application of massage and spinal manipulation in patients with migraine. They selected 10 patients with migraine and assessed their pain before and after treatment. The treatment consisted of a massage in the neck and in the upper part and a manipulation of the neck. The range of pain reduction ranged from 68.10 to 18.56% and eight of the 10 patients noted a 50% reduction in pain after the intervention.

Thuridur [13] carried out a study to check whether or not craniosacral therapy relieves the symptoms of migraine. Twenty patients participated in six sessions of craniosacral therapy and were evaluated four times with the headache impact test (HIT-6), the study lasted four weeks. The authors concluded that craniosacral therapy may alleviate migraine symptoms, finding that HIT-6 scores were significantly lower after treatment. ($p = 0.004$). That is, the patients in the study had an improvement in pain, social participation, general activity, vitality, intellectual activity and biological suffering. This treatment could be considered as a potential therapy in improving the quality of life of patients with migraine.

From all of the above, it follows that migraine affects a large number of people and it is necessary a control of the factors that if the predisposing factors are not controlled, to avoid that the migraine is chronicized. The impact of migraine on the life of the person, is the reason why those affected seek complementary treatments to the pharmacological symptom relief, especially the muscular tensions of the cervical and pericranial. Manual therapy such as craniosacral techniques, spinal manipulation or myofascial manipulation have proven to be an effective intervention strategy in the treatment of MC. Being aware of the impact that chronic migraine has on the quality of life of the person, it is necessary for the professionals to acquire the commitment to carry out new investigations, in which they develop and establish which treatment strategies are effective and decrease the symptomatology derived from chronic migraine.

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