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An Osteopathic Treatment Experience on Fibromyalgia Syndrome Patients

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The fibromyalgia syndrome

The fibromyalgia syndrome, or fibromyalgia, is a common form of chronic, widespread musculoskeletal pain, associated with stiffness and weakness, yet with no meaningful specific blood chemistry changes, even at radiological level. The syndrome is also associated with the presence of pain-producing areas which are sensitive to finger pressure (so-called *tender points*), symptomatic sleep disorder, joint stiffness and fatigue, and quite often with anxiety and depression.

The fibromyalgia syndrome mainly affects muscles and their junctions with bones. While it can possibly resemble a muscular condition, it is not a form of arthritis, nor does it cause joint deformity.

The fibromyalgia syndrome affects around 0.5 percent of the world male population, and 3.5 percent of women, most commonly at adult age. Its causes are unknown to the present day and are probably linked to multiple factors.

As no laboratory or radiological test can diagnose the fibromyalgia syndrome, the criteria for its diagnosis were defined in 1990 by the American College of Rheumatology. They refer to a widespread, generalized pain, lasting at least three months, and to the presence of at least 11 touch-sensitive, pain producing points (*tender points*). Due to the general nature of such symptoms and to their similarity with those of other conditions, many patients often have to undergo complex and repeated exams before being diagnosed with fibromyalgia.

Until now, no reference drug treatment has been found, let alone a definitive cure. The only therapy usually prescribed to patients is a symptomatic treatment.

An anatomical and physiological introduction to our treatment experience

A review of osteopathic literature and of a few works on osteopathy and the fibromyalgia syndrome indicated that cerebral spinal fluid and its flow are related to the wellbeing of fibromyalgia syndrome patients, as they were the only target of treatment common to all the study protocols examined.

A subsequent study on the sole treatment of cerebral spinal fluid showed that the following anatomical and physiological structures are involved: as for the third brain ventricles, thalamus, hypothalamus, and consequently hypophysis and the hypothalamic-pituitary axis; for the floor of the fourth brain ventricle, the somatic motor nuclei of cephalic nerves.

As fibromyalgia syndrome patients have an altered reaction to external stimuli (hyperalgesia, anxiety, depression, sleeping disorders...), we thought it apt to administer a treatment for the thalamus as well as for the somatic motor nuclei of cephalic nerves and for the hypothalamic-pituitary axis. This is due to the fact that alterations in afference causes an altered afferent reaction. We therefore deemed that working on the fluctuations of cerebral spinal fluid would directly and indirectly act on thalamus, hypothalamus and the somatic motor nuclei of encephalic nerves.

Objectives of the study

In designing the study which forms the object of this thesis, we have decided to focus exclusively on the craniosacral osteopathic treatment of patients with fibromyalgia syndrome, in order to prove that craniosacral rebalancing and cerebral spinal fluid treatment reduce pain symptoms in patients.

Materials

Eleven patients with fibromyalgia syndrome (as diagnosed by rheumatologists or psychiatrists) have been selected for this study. They were all following, and all continued to follow for the whole duration of the study, a conventional drug therapy.

Patients were divided in two groups. The first (*study group*) was treated according to an osteopathic protocol especially developed by the authors, while the second group was a *control group*.

The Study Group was made up of 8 female patients, aged 43-57, and the second was composed of 3 female patients, aged 45-54.

Assessment method

In order to assess the effectiveness of our osteopathic method, considering the lack of blood chemistry tests to track the development of fibromyalgia, we selected 3 self-assessment questionnaires: 2 specific for fibromyalgia syndrome – the FIQ and FAS surveys –, and a non-specific one, focusing on psychological and physical wellbeing – survey SF-36. We also decided to test the tenderness of tender points (well-determined pain producing spots on the body, generally used to diagnose fibromyalgia).

The Osteopathic Protocol

The protocol was followed for all patients in the Study Group, and foresaw 3 osteopathic sessions at a one-week interval, plus a fourth meeting to be held a week after the last session with the aim of filling in the questionnaires and re-assessing tender points.

The pivotal element of the osteopathic treatment administered to the patients of the Study Group was craniosacral treatment, with a special focus on cranial mobility and the ease of cerebral spinal fluid fluctuations.

At each session, all patients have been assessed twice, at the beginning and end of the session, with 3 tests: the Barral listening test, the parietal bones test and the test on the synchronic movement of occipital and sacral bones.

If, at the first test on the first session, the patient had a craniosacral inversion or compression, we confined our work to correcting that imbalance, following two specific protocols. For patients with inversion (1 on 8), the normalization procedure was carried out through an embryological treatment, with a precise sequence of rigorously timed osteopathic manoeuvres. For patients with compression (7 out of 8), the normalization procedure was based on a precise sequence of biokinetics techniques.

The second and third sessions were devoted to craniosacral osteopathic treatment, as laid down in the reference protocol. The fourth was only meant to evaluate results.

After the normalization of inversion / compression, the osteopathic protocol foresaw the treatment of the reciprocal tension membrane (RTM), a series of techniques to unblock the cerebral spinal fluid (CSF), and two different techniques to compress the fourth and third encephalic ventricles (CV-4 and CV-3, respectively).

The second group of fibromyalgia patients (earlier defined as *control group*) was recruited via the same system (selection by a rheumatologist) with the only aim of filling in SF-36, FIQ and FAS questionnaires for comparison and collecting data on tender points tenderness without osteopathic treatment.

Patients in the second group received no osteopathic treatment at all during the study (four weeks) and continued their conventional drug therapy.

Results

The data obtained from the surveys (SF-36, FIQ and FAS) and from the tender points exams, as collected at the beginning and end of the study from all patients of both the Study Group and the Control Group, were statistically elaborated.

The results show that, following the cycle of osteopathic treatment described in the protocol, an objective improvement of all parameters has been recorded for patients in the Study Group.

An average value was calculated for every parameter.

At the beginning of the study, patients in the Study Group recorded an average of 16 tender points out of 18; at the end of the protocol, that number was down to 12. Patients in the Control Group instead recorded no changes in the average number of tender points (15 out of 18) during the same four weeks.

An analysis of the average values of the SF-36 survey shows that treated patients have improved by 17.2%, compared to an improvement of 3.6% in patients in the Control Group in the same period of time.

As for the FIQ survey, patients in the Study Group recorded an average improvement by 21.4%, compared to a 2.1% improvement in the Control Group.

According to the FAS survey, treated patients recorded an average improvement of 30%, compared to a 0.3% improvement of non-treated patients.

Yet, in spite of the objective improvement witnessed by the surveys' data and by the assessment carried out on tender points, during an informal talk in the last session, all patients affirmed they still felt badly and they perceived no meaningful betterment after the treatment. At the end of the talk, when they were shown the data confirming the opposite, their most common reaction was astonishment.

Conclusions

The analysis of the data, even if obtained from a small number of patients, undeniably leads to the conclusion that the osteopathic protocol evaluated in the study is adequate and attains the objectives we had set.

Nonetheless, the gap between the objective data on the health of patients treated with osteopathy and their perception cannot be ignored.

It is therefore clear that the treatment aimed at restoring the proper fluctuations of the cerebral spinal fluid is necessary but insufficient to significantly improve the physical and psychological health of fibromyalgia patients.

This finding was also shared with a psychologist, who advised to repeat the study by adding a targeted psychological support protocol to the osteopathic treatment.

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