

ORIGINAL RESEARCH

# Effects of Major Ozone Autohemotherapy on Physical Functionality and Quality of Life in Fibromyalgia Syndrome: A Prospective Cross-sectional Study

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## ABSTRACT

**Context** • No specific treatment exists for fibromyalgia syndrome (FMS), and usually patients continue to experience pain indefinitely and their quality of life decreases. Major ozone autohemotherapy (MAH) is a complementary treatment for FMS that stimulates the body's antioxidant system.

**Objective** • This study aims to prospectively evaluate the effects of MAH on pain, quality of life, and general health status in FMS.

**Design** • The research team designed a prospective cross-sectional study.

**Setting** • The study took place at the algology clinic at Mersin University in Yenişehir, Mersin, Turkey.

**Participants** • Participants were 40 patients with FMS, aged 18 to 65, who were admitted to the clinic between February 15 and August 15, 2019.

**Intervention** • Participants completed 13 sessions of major ozone autohemotherapy (MAH), two sessions per week in the first five weeks and one session per month for the remaining three months. In the following three months, the last administered dose was repeated.

**Outcome Measures** • Patients completed the Fibromyalgia Impact Questionnaire (FIQ) and the Quality of Life-short form (SF-36), at baseline (PRE), at five weeks after 10 sessions of MAH (PT), at 9 weeks after 11 sessions (PT1), and postintervention at 17 weeks after 13 sessions (PT3).

**Results** • Significant improvement in FIQ and SF-36 scores was observed in all periods compared to the previous period ( $P < .05$ ). Between two consecutive measurements the most prominent improvements in both FIQ scores ( $P < .001$ ) and SF-36 scores was observed between baseline and the PT period ( $P < .001$ ). Significant improvement also occurred in all SF36 subscale scores between PT and PT3 ( $P \leq .02$ ).

**Conclusions** • The study was the first to demonstrate the efficacy of MAH for fibromyalgia patients as found using FIQ and SF-36 questionnaires repeated at certain intervals. The study found that MAH provided improvements in quality of life and general health status for FMS patients. (*Altern Ther Health Med.* 2021;27(5):8-12).

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FMS is a condition characterized by widespread musculoskeletal pain as well as complex symptoms involving various systems, including fatigue, headaches, memory disorders, and sleep and mood disorders. In 2015, its estimated prevalence among the general population appears to ranged from 1.3 to 8%.<sup>1,2</sup> According to the literature, FMS is more prevalent among women aged 20 to 55.<sup>2</sup> No specific treatment exists for FMS, and usually patients continue to experience pain

indefinitely and their quality of life decreases. Some evidence exists that oxidative stress increases in the pathogenesis of fibromyalgia. It's unknown whether or not this increase is a causal factor or a condition secondary to the disease.<sup>3</sup>

Ozone is used as a complementary therapy in the treatment of circulation disorders and chronic diseases such as fibromyalgia. It has been shown to cause mild, temporary, and controlled oxidative stress in a patient's body, which stimulates the antioxidant system and modulates the immune system.<sup>4-11</sup> Data in the literature related to ozone therapy for FMS is limited. Only two studies had been published on the subject prior to the current study.

Tirelli et al's study evaluated FMS participants only with a numeric rating scale (NRS) for pain and with the Fatigue Severity Scale.<sup>12</sup> The researchers performed the tests at baseline and immediately postintervention after 10 sessions of major ozone autohemotherapy (MAH). The study is the