

A New Treatment Modality for Fibromyalgia Syndrome: Hyperbaric Oxygen Therapy

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Fibromyalgia syndrome (FMS) is characterized by longstanding multifocal pain with generalized allodynia/hyperalgesia. There are several treatment methods but none has been specifically approved for this application. We conducted a randomized controlled study to evaluate the effect of hyperbaric oxygen (HBO) therapy in FMS (HBO group: $n = 26$; control group: $n = 24$). Tender points and pain threshold were assessed before, and after the first and fifteenth sessions of

therapy. Pain was also scored on a visual analogue scale (VAS). There was a significant reduction in tender points and VAS scores and a significant increase in pain threshold of the HBO group after the first and fifteenth therapy sessions. There was also a significant difference between the HBO and control groups for all parameters except the VAS scores after the first session. We conclude that HBO therapy has an important role in managing FMS.

KEY WORDS: ALGOMETER; HYPERBARIC OXYGEN THERAPY; FIBROMYALGIA; PAIN THRESHOLD; VISUAL ANALOGUE SCALE

Introduction

Fibromyalgia syndrome (FMS) is a chronic musculoskeletal disorder. It is characterized by widespread pain, tenderness at specific anatomical sites (i.e. tender points) and clinical manifestations such as fatigue, sleep disturbance and irritable bowel syndrome.^{1,2} Its prevalence is 1 – 3% and it occurs predominantly in females, commonly between the ages of 40 and 50 years.³

The most frequently reported musculoskeletal or fibrous connective tissue symptoms are aches and pains, stiffness, swelling in soft tissues, tender points and muscle spasms or

nodules.² There is a global decrease in pressure pain threshold rather than specific changes limited to the tender points.⁴ The aetiology of FMS is still not known although it is thought that the disease is caused by several interacting factors such as muscle overload, poor spinal posture, disturbed sleep, psychogenic factors, local hypoxia^{5,6} and reduced concentrations of high-energy phosphate. Fassbender and Wegner have hypothesized that local hypoxia causes degenerative changes in the muscles in FMS.⁵

There is no proven effective long-term management programme for FMS.² Hyperbaric oxygen (HBO) therapy has been used