High-frequency bio-oxidative ozone therapy found effective for masticatory muscle pain management

NEWS
Pain Management

A recent study by T. Celakil et al. has found ozone therapy as an effective treatment option for masticatory muscle pain management. The objective of the study was to estimate the effect of bio-oxidative ozone application at the points where greatest pain occurs in patients with chronic masticatory muscle pain. Masticatory muscle pain (MMP) is the muscle pain experienced by about 12–14% of the adult population due to chronic non-dental orofacial pain.

According to the Research Diagnostic Criteria for temporomandibular disorder (RDC/TMD), a total number of 40 women were enrolled after the diagnosis of myofascial pain dysfunction syndrome. Then patients were randomly categorized into two groups: patients who received the ozone therapy at the point of greatest pain, the ozone group (OG; n=20) and patients who received the sham ozone therapy at severe pain, the placebo group (PG; n=20). A total of six sessions were carried out in which ozone and placebo were applied three times per week. After treatment, mandibular movements were inspected, masticatory muscle tenderness was determined, and pressure pain threshold (PPT) values were acquired. Subjective pain levels were assessed using visual analogue scale (VAS) at baseline one month and three months' period. A significant decrease in pain intensity and increase in PPT values from baseline to one month and three months was noted in OG group when compared with PG group. PPTs of the temporal (OG 24·85 ± 6·65, PG = 20·65 ± 5·43, p = 0.035) and masseter (OG = 19·03 ± 6·42, PG = 14·23 ± 2·95, p = 0.007) muscles at 3 months of control (T2) were significantly higher in the OG group and PPT value of the lateral pole was also significantly higher at T2 in the OG group (OG = 21·25 ± 8·43, PG = 15·35 ± 4·18, p = 0.012). There were no significant differences in mandibular movements between treatment groups except right lateral excursion values at T2 (OG = 8·90 ± 1·77, PG = 6·85 ± 2·41, p = 0.003); however, OG significantly showed better results over time. Overall improvements in VAS scores from baseline to 3 months were 67·7% (OG) and 48·4% (PG).

It was thus, inferred that ozone therapy could be accepted as an alternative treatment modality for the management of masticatory muscle pain. However, sham ozone therapy (placebo) also showed significant improvements in the tested parameters.

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