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Management of MRONJ patients with Oxygen-Ozone Therapy: The results of an effective protocol at ASST FBF Sacco Hospital, Milano

Abstract: Medication-related osteonecrosis of the jaw (MRONJ) is a side effect of some certain medications used in metabolic and oncological pathologies involving the skeletal system. This prospective clinical study aimed to evaluate the effectiveness of the applications of the oxygen-ozone mixture in patients with MRONJ. The treatment protocol included 10 preoperative applications of the oxygen-ozone mixture, debridement of the necrotic tissue using piezoelectric surgery instruments and post-operative 10 applications of the oxygen-ozone (20 applications in total). The objective was to evaluate healing of the osteonecrotic lesion both clinically and radiologically. The study included 46 lesions in 44 patients. The average follow-up was 42 months. For the evaluations, patients were divided into groups considering age [<40, 40-60, >60], underlying pathology [oncology, osteoporosis, and arthritis], sex [male, female], and lesion location [maxilla, mandible].

According to the results, 32 lesions out of 46 without any recurrence. 16 sites healed without any need for intervention. 5 patients discontinued therapy due to worsening of their health. 4 patients are still under treatment. 5 out of 46 sites did not heal. Statistically, the results were not influenced by variables such as sex, age, location of the lesion and staging of MRONJ. Significantly better results were obtained in patients with osteoporosis. The progress was worse for oncological patients. Healing was significantly less in patients that received intravascular administrations. In 50% of the resolved cases, healing occurred with the spontaneous expulsion of the necrotic fragment and the planned surgical interventions were cancelled. According to the results, healing of MRONJ lesions was observed in 72% of patients. In conclusion, oxygen/ozone therapy with Piezoelectric surgery debridement, can be considered as an effective treatment for MRONJ patients, with advantages such as low biological cost, being extremely safe and it is free from collateral risks and not contraindicated for patients with MRONJ.

Biography :

2020: II Level Professional Master in Oxygen – Ozone Therapy, Faculty of Medicine and Surgery,
Department of Internal Medicine and Medical Therapy - University of Pavia

2011: Theoretical and practical course in Oxygen Ozone therapy

96/97: Advanced course "Intercepted Orthodontics - University of Pavia

95/96: Advanced course "Multidisciplinary approach to the orthodontic patient" - University of Milan, S Raffaele

1991 Post-graduate School in abdominal surgery and digestive endoscopy - University of Milan

1986 Degree and Habilitation in Medicine and Surgery - University of Milan

1979 Scientific Diploma obtained at the XII Liceo (Rassel) in Milan

Responsible and promoter of the Project "Treatment of maxillary osteonecrosis from drugs with oxygen-ozone therapy and surgical debridement, authorized by the Ethics Committee. Still in progress

From 2023 to date: Acting Director of the SC Dentistry and Stomatology Sacco ASST FBF Sacco