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NON-SURGICAL MANAGEMENT OF STAGE I MRONJ: A CASE REPORT TREATED ONLY BY MEDICAL AND LOW-LEVEL LASER THERAPY

SECTION: 2B

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Background.

Medication-Related Osteonecrosis of the Jaw (MRONJ) is the most severe and debilitating side effect in patients treated or in treatment with anti-resorptive and anti-angiogenic drugs for oncologic diseases or osteoporosis.

In literature, the treatment/management of low stage MRONJ is reported to be focused on infection control, pain reduction and prevention of progression and recurrences of necrotic bone formation. Low-Level Laser Therapy (LLLT) is one of the most successful adjuvant procedures promoting tissues healing also in the oral cavity. Authors report on a case of MRONJ in a patient with history of multiple myeloma receiving also Zoledronate, managed by non-surgical treatment which consisted in medical and LLLT therapy only. The aim of the study was focused on the effectiveness of LLLT on mucosal and residual bone healing as treatment strategy for early (low stage) MRONJ.

Patients and methods.

In July 2023, an 81 years-old female patient referred to the Complex Unit of Odontostomatology of the University of Bari "Aldo Moro", complaining a gingival lesion characterized by pain, swallowing and pus discharge of one month duration. Patient was edentulous and her medical history revealed a recurrence of a stage III multiple myeloma treated with Daratumumab, Bortezomib and Zoledronate (11 i.v. infusions monthly, interrupted 15 days before referring to our observation for the suspicion of MRONJ). The intraoral examination revealed the presence of bone exposure in the I quadrant. Consequently, with the suspect of MRONJ, patient underwent panoramic radiogram and computed tomography to better define the necrotic area dimension and perform staging.

As lesion was classified as Stage I, according with American Association of Oral and Maxillofacial Surgeons, authors agreed for a non-surgical treatment protocol, starting with 3 cycles of antibiotic therapy (Ceftriaxone 1g daily I.M. and Metronidazole 250mg twice a day per os) for 7 days with a drug-free period of 10 days between each cycle and clinical follow-ups every month. In September 2023, at the end of antibiotic therapy, clinical follow-up revealed the absence of necrotic bone due to its spontaneous expulsion, as referred by the patient. Expulsed bone sample was sent for histological examination. Therefore, authors decided for a LLLT to better provide the mucosal and residual bone healing. LLLT was performed every 5 days with a Diode Laser (Wavelength 980nm-Lasotronix-Poland) in continuous emission at 1 Watt and with a dedicated handpiece for photo-biomodulation; lesion was irradiated for about 2 minutes in defocalized modality. Patient underwent Laser Therapy until the complete healing of the tissues and is still under clinical and radiographic follow-ups every three months.

Results.

Patient showed a complete clinical and radiographic healing of the soft and hard tissues after two months. No further therapies were necessary as confirmed by the final radiological investigations. No recurrence was observed in the following months during follow-up.

Conclusions.

LLLT confirmed its effectiveness regarding pain and infections reduction in patients with low stage MRONJ, in particular with photo-biomodulation, hard and soft tissues show a rapid and complete healing. Eventually, with this treatment modality patients could avoid surgical procedures and it might be possible to improve their life conditions.

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