

ONJ UPDATE 2024

Torino, 24 febbraio 2024

MRONJ OF THE JAWS: MINIMAL INVASIVE TREATMENT. OUR PERSONAL SUGGESTIONS

SECTION: 4B

Bellantoni G*, Sandri GF, Finotello L, Abati S, Vinci R

AFFILIATION:

Dental School, Dept. of Oral Medicine and Dept. of Oral Surgery, University Vita-Salute San Raffaele and IRCCS San Raffaele Hospital – Milan, Italy.

BACKGROUND: Over the years various protocols for MRONJ have been presented in the literature; there is however no unanimous agreement about the gold standard treatment for osteonecrosis of the jaws. The goal of the MRONJ treatments should be the control of the infection and progression of bone necrosis, and the control of pain.

PATIENTS AND METHODS: The treatment protocol adopted in the Oral Surgery Unit of the Department of Dentistry, IRCCS San Raffaele Hospital, Milan has been applied to the treatment of 28 patients from January 2021 to November 2023. An extra- and intra-oral dental examination in addition to a level I radiographic examination (OPT) was performed in all patients; furthermore, a CBCT was performed in stage I, II, III [1]. The medical history showed positive results for the use of Alendronic and Zoledronic acid (oral, intravenous) and Denosumab (subcutaneous), for at least one year (drug intake range 1-9 years) in all treated patients. The lesions were located in the mandible (20 cases) and in the maxilla (8 cases). The patients were staged as stage 0, I, II, III [2]. Specifically, 2 patients were in stage 0; 11 patients in stage I; 12 patients in stage II; 3 patients in stage III (extraoral fistulas, mandibular fracture). All patients were treated by the same operator according to the same therapeutic protocol. Antibiotic and antiseptic prophylaxis was performed 7 days before surgery with Amoxicillin 1000mg (1 tablet/12 hours) and CHX 0.2% mouthwash (3 rinses/day). Surgical management, under local anesthesia, involved the debridement of the necrotic bone area through a mucoperiosteal flap, without interrupting bone continuity using a combined technique with low-speed surgical handpiece, multilayered burs and Lucas surgical curette, until obtaining bleeding from the healthy basal bone substrate. Finally, bone cavity irrigation with chlorhexidine was performed, hemostatic collagen sponges were placed, and the flaps were sutured to achieve primary closure. Once discharged, patients were treated with Amoxicillin 1000 mg tablets (1 tablet/12 hours) and CHX 0.2% mouthwash (3 rinses/day) until mucosal continuity was obtained. After achieving mucosal healing, laser biostimulation sessions were performed using a diode laser (Raffaello DMT, 600 mm fiber, $\lambda=980$ nm, continuous emission, $P=0.5$ W/cm², 4 cycles), once a week for 4 weeks. Follow-up were conducted at 7, 14, 21, and 28 days after the surgery. A radiographic examination (OPT) was performed at 3 and 9 months.

All stage 0, I, and II patients achieved complete healing, with restitution ad integrum of the soft tissues and disappearance of the necrotic area. In stage III patients, surgical debridement led to a reduction in the necrotic area, with partial closure of extraoral fistulas in all patients.

CONCLUSIONS: In this study, a conservative surgical protocol for the management of MRONJ was presented, which allowed a complete healing in stage 0, I, and II. The success of this protocol demonstrates the effectiveness of combining diverse expertise, comprehensive patient evaluation, and continuous monitoring to ensure optimal healing and patient care. Clinical studies are needed to confirm and improve the validity of the present protocol to treat MRONJ.

REFERENCES:

1. Campisi G., Bedogni A., Fusco V. "Raccomandazioni clinico-terapeutiche sull'osteonecrosi delle ossa mascellari (ONJ) farmaco-relata e sua prevenzione". SICMF – SIPMO. Versione 2.0/2020
2. Ruggiero, S.L., et al. "American Association of Oral and Maxillofacial Surgeons' position paper on medication-related osteonecrosis of the Jaws—2022 update." *J. Oral Maxillofac. Surg.* 2022, 80.5: 920-943.