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DENTAL IMPLANT TREATMENT AND ONJ

SECTION: 1B

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BACKGROUND Medication related osteonecrosis is the most recently described nosological entity in dentistry. The first reports are from 2003 while the first classifications are from 2007. At the beginning, the pathology was related to bisphosphonates BRONJ. Currently, it is related to many other pharmacological classes therefore called MRONJ or just ONJ. There is a fundamental division between osteometabolic (low dose, LD) and oncological (high dose, HD) patients. In addition to the aforementioned bisphosphonates, other drugs are involved in the pathological phenomenon: RANK ligand inhibitors, antiangiogenics, tyrosine kinase inhibitors, immunomodulators, and biological target drugs. According to many authors, the prevalence of ONJ is under-reported in Italy (1). Recently, the complete digitization of the AIFA adverse occurrence report form has made the procedure immediate. Implantology is a risk factor even because of the epithelial violation, than surgical procedures. Two profiles related to ONJ associated with implantology are then outlined: the presence of implants as a risk factor for ONJ or implant surgery as a risk factor (2).
Some guidelines and recommendations are available such as SIOMMMS of 2016, which report a total of 12 cases described of spontaneous ONJ associated with implants, with a risk of implant loss of 0.88% (therefore substantially lower than that reported in the patient not on therapy), also claiming that "there is no contraindication to perform implants during BF therapy" (3). The SIPMO/SICMF Recommendations of 2020 are of a different advise, according to which, under certain conditions, in LD patients, implant treatment cannot be excluded. However, they argue that there is a long-term risk that cannot be assessed. Another international document is the AAOMS consensus update of 2022, which converges with the Italian recommendations.
Aim of the study is to report a series of patients with ONJ associated with endosseous implants.

PATIENTS AND METHODS A literature review was carried out to understand the pathology. Consecutive patients who had access to our department, who were diagnosed with spontaneous ONJ on endosseous implants according to the SIPMO/SICMF 2.0 criteria, were collected.

RESULTS 16 patients were collected: 9 LD patients (5 patients stage 1, 3 patients stage 2 and 2 patients stage 3; 7 alendronate and 2 denosumab) and 7 HD patients (4 patients stage 1, 2 patients stage 2 and 1 patient stage 3; 5 multiple myeloma and 2 breast cancer; 4 zoledronate, 2 denosumab and 1 imatinib). The most frequent site was the mandible in both LD patients (7 out of 9 cases) and HD patients (5 out of 7 cases). One LD patient had bimaxillary ONJ. The most frequent sex was female in LD patients (9 out of 9 cases) and male in HD patients (4 out of 7 cases). The total number of implants involved was 29 (19 in LD patients and 10 in HD patients).

CONCLUSION The risk of spontaneous ONJ associated osseointegrated endosseous implants is rare, however, with an underestimated prevalence. The long-term risk of ONJ appears to be unassessable, according to SIPMO/SICMF and AAOMS.
It is mandatory to perform a correct anamnesis and furthermore to report any osteonecrosis to AIFA. In the future, it would be useful to correlate, even with multicenter studies, given the prevalence, the drug used and the implant morphology, specifying the surface and/or the connection.

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