

ONJ UPDATE 2024

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Abstract Submission FORM

MRONJ RADIOLOGICAL FIGURES AT COMPUTED TOMOGRAPHY (CT) EVALUATION: *RAD-ONJ* OBSERVATIONAL STUDY. PRELIMINARY REPORT

SECTION: *5B*

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Background. Osteonecrosis of the jaw (ONJ), renamed Medication-Related Osteonecrosis of the jaw (MRONJ) since 2014, is a disease of recent recognition (2003), characterized by alterations that include clinical signs and symptoms (not limited to bone exposure) and simultaneous jawbone radiological destruction, better evaluated by Computed Tomography (CT) scan^{1,2}

Patients and methods. We designed an observational (retrospective and prospective) study to systematically investigate the presence rate of various signs of CT semeiotics, predefined in an appropriate table (i.e., focal and diffuse osteosclerosis, sequestrum, cortical disruption, periosteal reaction, osteolysis, etc.) in patients with MRONJ, diagnosed according to the criteria of the Italian SIPMO-SICMF Recommendations (2020)². Data downloading utilized a user-friendly tool, REDCap (*Research Electronic Data Capture*). Patient population: patients with diagnosis of MRONJ according to Italian Recommendations SIPMO-SICMF², followed by Maxillofacial Unit, Oncology Unit and Hematology Unit of Alessandria Hospital. Main inclusion criteria were: clinical-radiological diagnosis of MRONJ and availability of at least one CT scan (or Cone Beam CT scan) next to MRONJ diagnosis time (within three months before or after MRONJ onset).

Results. Preliminary results: between March 2022 and December 2023, we examined data of 120 patients with MRONJ; 5 patients were considered not eligible due to lack of adequate CT images. Clinical data and radiological features of 115 patients were uploaded and are under examination.

Characteristics: 41 M, 74 F; median age (at MRONJ onset) 69.6 years (Q1-Q3: 62.3-77.4). Main disease (for which patient received drug inducing MRONJ): metastatic cancer or myeloma in 91 patients (2 suffering also with osteoporosis); osteoporosis and other non-malignant disease in 24. Among cancers, 40 were breast cancer, 23 prostate cancer, 11 myeloma, 7 renal cancer, 5 lung cancer, 5 others. The treatment supposed to be related to MRONJ onset was: bisphosphonates (alone or with other agents) in 105 case, denosumab (alone or with other agents) in 23, other drugs alone (antiangiogenics: one bevacizumab, one sunitinib) in 2.

At the moment, we reviewed 160 MRONJ sites (70 patients had one MRONJ area, 30 two MRONJ sites, 10 patients three areas).

Conclusions. The sample of examined MRONJ cases appears sufficient to proceed in evaluation of radiological features and draw conclusions about the investigated issue. We are going to investigate: differences between cases related to bisphosphonates and to denosumab; differences between low dose and high dose drugs; comparison between AAOMS stage (clinical only) and SIPMO-SICMF stage (clinical-radiological staging system)^{1,2}.

REFERENCES:

1. Bedogni et al Italian position paper (SIPMO-SICMF) on medication-related osteonecrosis of the jaw (MRONJ). *Oral Disease* 2024 at <https://doi.org/10.1111/odi.14887>
2. Campisi et al. Raccomandazioni clinico-terapeutiche sull'osteonecrosi delle ossa mascellari (ONJ) farmaco-relata e sua prevenzione at https://www.sipmo.it/wp-content/uploads/2020/08/SICMF-SIPMO-2.0_web-cover-2020.pdf

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