ONJ UPDATE 2024
Torino, 24 febbraio 2024

Abstract Submission FORM

MRONJ IN PATIENTS WITH OSTEOPOROSIS AND NON-MALIGNANT DISEASES: 184 CASES IN A REGIONAL NETWORK EXPERIENCE

SECTION: *1C – Osteoporosis and non-malignant diseases*

*Karimi Dora[1], Gambino Alessio[1], Arduino Paolo[1], Broccoletti Roberto[1], Appendino Paolo[2], Brucoli Matteo[3], Fasciolo Antonella[4], Fusco Vittorio[4]

AFFILIATION:

1. Department of Surgical Sciences- CIR Dental School -University of Turin, Turin, Italy
2. Oral care Unit, Ospedale Mauriziano, Turin, Italy
3. Maxillofacial Unit, Università del Piemonte Orientale and Novara Hospital, Italy
4. Maxillofacial Unit, Azienda Ospedaliera-Universitaria "SS Antonio e Biagio e Cesare Arrigo", Alessandria, Italy
5. Research and Innovation Department DAIRI- Azienda Ospedaliera-Universitaria "SS Antonio e Biagio e Cesare Arrigo", Alessandria, Italy

Background. Medication-related osteonecrosis of jaw (MRONJ) is a severe adverse drug effect, consisting of progressive bone destruction in the maxillofacial region, mostly caused by antiresorptive agents - including bisphosphonates and denosumab– and/or by antiangiogenic drugs[1]. Antiresorptive agents, also known as Bone Modifying Agents (BMAs) have demonstrated efficacy in limiting the osteolysis that occurs in many disorders characterized by increased bone resorption, including bone metastases and bone metabolic disorders. Incidence and/or prevalence of MRONJ in these categories of patients remain uncertain, with lack of solid epidemiologic data in large populations. As an almost unique experience, the aim of this work is to retrospectively describe number of registered cases and main features of MRONJ cases observed at main hospital oral care centres, in a time span of 15 years (2007-2021), in patients with non-malignant diseases, and observed in Piedmont and Valle d'Aosta territory (4.4 million inhabitants).

Patients and methods. Data were retrospectively collected from Oral Medicine, Oral Surgery and Oral Maxillofacial Surgery Units, from January 1st 2007, to 31st December 2021. The main parameters collected were: sex; age of patients at MRONJ diagnosis time; main disease for which BMAs were prescribed; received treatment: either bisphosphonates alone, or denosumab (60 mg q6 months), or bisphosphonate(s)/denosumab sequence; localization of MRONJ (mandibular and/or maxillary involvement).

Results. Over the 2007-2021 timespan, data from 184 patients were acquired; 173 (97.3%) were females; mean age was 75 years (range 37-94; standard deviation 9.81). Underlying disease was reported as osteoporosis in 161 (88%) patients, rheumatoid arthritis in 9 (5%), osteoporosis and rheumatoid arthritis in 8 (4%), or other bone disorders in 6 (3%), including lupus, Paget's disease, giant cell arthritis, etc.

Out of 184, 149 patients (81%) were treated with only one drug and 35 patients (19%) were treated with two BMAs in sequence.

In patients receiving one drug, the bisphosphonates most administered were alendronate (94), ibandronate (22) and risedronate (10). Ten patients were related to denosumab alone; the remaining 13 cases received clodronate, or neridronate, or pamidronate, or zoledronic acid alone.

In patients receiving sequence of drugs, the most used association were: alendronate followed by denosumab (10 cases), alendronate and ibandronate (5), and denosumab with ibandronate (5); the remaining cases were related to different combination of bisphosphonates with another bisphosphonate (12) or with denosumab (3).

Sites of MRONJ were in mandible (68.5%), maxilla (24.5%), or maxillary and mandible (7%).

Throughout the 15 years period of investigation, an increasing trend emerged, with a median of 11.5 (range 0-14) yearly MRONJ cases in the 2007-2014 period, increased to 17 (range 7-21) yearly MRONJ reported events in the 2015-2021 period.

Conclusions. MRONJ cases observed our oral care centres increased in frequency over the last 15 years among patients affected by bone metabolic disorders. Further studies are warranted to investigate the incidence and prevalence of MRONJ in patients undergoing low-dose bisphosphonates and low-dose denosumab.

*On behalf of oral care centers of: Turin, Novara, Alessandria, Asti, Cuneo, Orbassano, Aosta, Casale Monferrato, Vercelli

REFERENCES:

1. *Bedogni et al . Qeios 2023 at www.qeios.com/read/PBUJ6Z*

Il titolo non deve essere superiore a 130 caratteri (spazi inclusi); l'abstract deve essere scritto in Times New Roman carattere 10. Numero minimo di parole: 400 inclusi titoli, autori e affiliazioni; numero massimo di parole: 600 inclusi titoli, autori e affiliazioni. Inserire al massimo 3 note bibliografiche. L'abstract (tutto in inglese titolo e testo) deve essere contenuto all'interno della prima pagina del form.