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MRONJ IN PATIENTS UNDER LOW-DOSE BONE MODIFYING AGENTS FOR CANCER TREATMENT-INDUCED BONE LOSS: A CASE SERIES

SECTION: *1C*

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Background. MRONJ is an adverse drug reaction mainly reported in two main categories of patients assuming Bone Modifying Agents (BMAs): cancer patients with bone metastases (BM) or multiple myeloma, commonly receiving high doses of BMAs (HD-BMAs), and patients suffering from osteoporosis receiving low doses of BMAs (LD-BMAs).

MRONJ risk categories have gradually changed due to the introduction of new medications to the market and the approval of supplementary indications for drugs already in use. Consequently, new categories of patients at risk of MRONJ were detected, including cancer patients without BM receiving LD-BMAs to reduce the risk of non-metastatic bone fractures due to Cancer Treatment-Induced Bone Loss (CTIBL).

CTIBL is the most common adverse event of patients affected by breast cancer (BC) or prostate cancer receiving adjuvant endocrine therapy. LD-BMA therapy is prescribed to them for CTIBL prevention, exposing them to MRONJ risk.

The study aims to describe the features of 7 BC patients under LD-BMAs for CTIBL with MRONJ, comparing them to 10 patients under LD-BMAs for osteoporosis with MRONJ.

Patients and methods. Patients were enrolled between May 2021 and December 2023 at the Oral Medicine Unit "V. Margiotta" of the University Hospital "Paolo Giaccone" in Palermo (Italy). Patients underwent clinical-radiological examinations. MRONJ was diagnosed and staged according to the Italian SIPMO-SICMF recommendations, based on clinical-radiological signs.

Results. The mean age of BC patients assuming LD-BMAs for CTIBL and patients assuming LD-BMAs with osteoporosis was 74.6 ± 5.2 years and 76.9 ± 6.8 years, respectively.

Regarding the BMAs, in CTIBL group, 2/7 patients received denosumab and 5/7 bisphosphonates; in osteoporosis group, 1/10 patients received denosumab and 9/10 bisphosphonates.

The mean duration of BMA therapy at the time of MRONJ development in CTIBL and in osteoporosis groups was 62.8 ± 70.6 months and 100.7 ± 78 months, respectively.

Regarding MRONJ stage, in CTIBL group, 3 patients were diagnosed in stage I, 1 in stage II, and 3 in stage III; while in osteoporosis group, 2 patients were diagnosed in stage I, 5 in stage II, and 3 in stage III.

The mandible was the most frequently affected site (4/7, 57.1% in CTIBL group versus 6/10, 60% in osteoporosis group).

Bone exposure was observed in four cases in CTIBL group (57.1%) and in eight cases in osteoporosis group (80%).

Conclusions. Patients assuming LD-BMAs for CTIBL prevention are an emerging category still poorly considered and often underestimated. The present preliminary study indicates that in this sample these patients develop MRONJ at a younger age and after a shorter BMA exposure duration compared to osteoporotic patients. This may be due to the systemic risk factors related to cancer disease, as well as the absence of specific prevention protocols tailored for this patient category. Additionally, in both groups, the prevalence of advanced MRONJ stages at the time of diagnosis indicates a poor early diagnosis. So, this study highlights the importance of MRONJ prevention for all types of risk categories, including patients under LD-BMA for CTIBL, as a borderline group, since at any time they can develop BM and therefore switch from LD-BMAs to HD-BMAs, increasing the MRONJ risk development.

REFERENCES:

1. *Mauceri R, Coppini M, Attanasio M, Bedogni A, Bettini G, Fusco V, et al. MRONJ in breast cancer patients under bone modifying agents for cancer treatment-induced bone loss (CTIBL): a multi-hospital-based case series. BMC Oral Health. 2023 Feb 4;23(1):71.*
2. *Campisi G, Bedogni A, Fusco V. Raccomandazioni clinico-terapeutiche sull'osteonecrosi delle ossa mascellari (ONJ) farmaco-relata e sua prevenzione. Palermo: New Digital Press; 2020.*
3. *Bedogni A, Mauceri R, Fusco V, Bertoldo F, Bettini G, Di Fede O, Lo Casto A, Marchetti C, Panzarella V, Saia G, Vescovi P, Campisi G. Italian position paper (SIPMO-SICMF) on medication-related osteonecrosis of the jaw (MRONJ). Oral Dis. 2024 Feb 5. doi: 10.1111/odi.14887. Epub ahead of print. PMID: 38317291.*