Bisphosphonate related osteonecrosis of the jaws in Italy: an observational report of 24 cases

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BACKGROUND: Bisphosphonates (BPs), drugs inhibiting the osteoclast function, are widely used. They are prescripted for several oncological and not diseases involving the skeletal system. Although providing excellent results, the increase in the use of bisphosphonates led to emerge a complication related to their administration, described with the term of Bisphosphonate-related osteonecrosis of the jaw (BRONJ). The most of patients affected by BRONJ are oncologic patients that frequently assume high doses of these drugs (incidence 1% to 15%), while the incidence in osteporosis patients is estimated at 0.001% to 0.01%, due to absolutely lower doses of bisphosphonates. Among the risk factors for BRONJ development, the oral surgery procedures seem to play an important role, so that the prevention strategies include elimination or stabilization of oral disease prior to undertake a protocol of antiresorptive therapy with BPs. The present observational study aims to describe the preliminary data resulting from a sperimental protocol, still in progress, developed at IRCCS "Casa Sollievo dalla sofferenza" for prevention, diagnosis and therapy of BRONJ.

METHODS: Clinical and radiological evaluation of 24 patients with BRONJ was performed in the period between 2011 and 2014. Data about age, sex, systemic pathology and modality of the pharmacological therapy with BPs were collected. An eventual presence in the medical history of oral surgery procedures was annotated. A protocol of tertiary prevention consisting of antibiotic therapy or/and surgical treatment was also undertook. The results were evaluated after a certain period of time.

RESULTS: The observed group was composed of 13 males and 11 females with an average age of 73,1 years old. A history of oral BPs administration emerged in 6 (25%) patients, one case (4%) was treated with intramuscolar injections, while the other 17 (71%) patients reported endovenous treatment. The mean duration of treatment with oral BPs was 44.8 months, whereas the intravenous treatments lasted 29.8 months in average. The most used molecule was zoledronic acide. Only 8 (33.3%) patients referred a previous oral procedure. In 22 cases a medical treatment was chosen with appropriate antibiotic therapy. After treatment, only about half of the patients experienced improvement or resolution of the osteonecrotic lesion, while the others had no improvement or showed worsening of the initial condition.

CONCLUSIONS: The present study reports data from 24 patients who developed maxillary osteonecrosis following a period of bisphosphonate intake. Only 8 (33.3%) patients referred a previous oral procedure. The epidemiological data, however, are limited because the number of patients examined.