### A SIMPLE SURGICAL-MEDICAL PROTOCOL TO CARRY OUT DENTAL EXTRACTIONS IN PATIENTS IN THERAPY WITH BISPHOSPHONATES: OUR EXPERIENCE


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**Aim.** Bisphosphonate Related OsteoNecrosis of the Jaw (BRONJ) is described as an adverse event related to amino-bisphosphonate (NBP) therapy, occurring as a result of reduced bone resorption and bone turnover. One of the most significant risk factor associated with the onset of BRONJ is tooth extraction even if not yet supported by definitive scientific evidences. The aim of this study is to propose a simple surgical/medical protocol to carry out dental extractions in patients in therapy with NBPs in order to minimize the BRONJ risk.

**Materials and methods.** Eighty-eight patients currently or previously treated with NBPs were selected for extractions of compromised teeth. Patients were divided into two groups on the basis of the risk of BRONJ. Patients were subdivided in high risk (HR) group (i.v. NBPs administration) and in low risk (LR) group (i.m./oral NBPs administration >36 months or oral NBPs < 36 month plus other risk factors). Tooth extractions were carried out using the following surgical-pharmacological protocol: 1) exposure of the alveolar bone through the creation of surgical edges; 2) nontraumatic avulsion, courettage of the area, irrigation of the alveolus with a local antibiotic and 3) closure by primary intention. Furthermore, all patients received a pre- and post-operative pharmacological therapy. The antibiotic systemic therapy was different for HR and LR patients. For HR, the antibiotic systemic therapy based on administration of ampicillin and sulbactam by i.v. and metronidazole per os (1 day pre-operative and 7 days post-operative); for LR patients, amoxicillin and clavulanic acid and metronidazole per os (1 day pre-operative and 7 days post-operative). For both groups, the use of antiseptic (chlorexidine 0,2% mouthwashes 7 days pre-operatively and 15 days post-operatively) and sodium-hyaluronate (post-operative local application for 15 days) were also prescribed. A follow-up of at least 4 months was needed. Data were included in Microsoft Excel® spreadsheet. A descriptive statistical analysis was performed.

**Results.** Sixteen (18.2%) of eighty-eight were treated with i.v. NBPs, twelve (13.6 %) with intramuscular NBPs and fifty-nine (67.1%) with oral NBPs. One patient was treated with either oral and intramuscular NBPs. After two hundred thirty-one tooth extractions performed, there was no evidence of BRONJ in eighty-two (93,18%) patients treated at follow-up (225 tooth extractions; 97.4%). In six (6.81%) patients of HR group, it has been diagnosed BRONJ according to Bedogni et al: five of these patients were treated with endovenous NBPs for at least 6 months (mean±SD: 27.6±13.14) and one patient with oral NBPs for 36 months. Neither of these patients reported other systemic risk factors.

**Conclusions.** The proposed surgical-medical protocol obtained the complete healing of wound and the absence of radiological signs of BRONJ in more than 90% of patients after tooth extractions. It appears to be a valid choice for patients treated with NBPs who need tooth extraction, in terms of prevention of BRONJ.