TITLE: EVALUATION OF ZOLEDRONIC ACID IN THE TREATMENT OF BONE DISEASES WITH HIGH RISK OF FRACTURES

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BACKGROUND: Zoledronic acid (ZOL) administered as a 5mg intravenous infusion anually is indicated for the treatment of bone diseases such as Paget disease and osteoporosis with a high risk of fracture. It is strongly advised that patients treated with ZOL receive adequate calcium and vitamin D (calcium/vitD) supplementation. PURPOSE: To evaluate use of ZOL in patients with bone diseases and high risk of fractures. MATERIALS AND METHODS: We retrospectively review all patients who started treatment with ZOL between January 2015 and July 2017. Use of ZOL and its adequacy to the recommendations was evaluated by the analysis of following variables: pre-infusion: creatinine clearance (CrCl;MDRD) and serum calcium levels prior to administration, paratohormone levels (TPH) in case of hypercalcemia, previous treatment with calcium/vitD and dose adjustment in case of hypocalcemia; and post-infusion: ionized calcium levels and calcium/vitD dose adjustment. Sources of information: athosPRISMA™ (patient selection), Diraya-Clinical-Station (clinical reports and analytical data) and Diraya-Prescription.V5 (medical prescriptions). Statistical analysis was performed using the SPSS Statistics v.22 program. RESULTS: 126 patients were evaluated, 85.7% female (n=108), with a mean age of 67.6 years (SD: 11.3). 86.5% of patients (n=109) had previous analysis with determination of CrCl (no one with CrCl≤35ml/min). Previous calcium levels: not determined in 29.4% of patients (n=37), adequated in 66.7% (n=84) and needed correction in 4% (n=5): 3 with hypercalcemia (1 case did not have TPH determination and started and continued treatment with calcium/vitD supplement); 2 with hypocalcemia (1 case with previous calcium prescription). 40.5% of patients (n=51) received previous calcium/vitD supplementation. 2 patients the calcium/vitD dose was previously adjusted. Ionized calcium levels were not determined after ZOL infusion for its subsequent dose adjustment in any patient. CONCLUSIONS: Most of patients had CrCl and serum calcium levels previously determined. However, less than a half of them received prior calcium/vitD supplementation. Adequate follow-up was not performed after ZOL administration. It is evidenced the need for an adequate use of ZOL, thereby it is proposed the elaboration of a protocol of use to guarantee suitability and health assistance quality of ZOL treatments.