DENOSUMAB-INDUCED HYPOCALCEMIA IN PATIENTS WITH METASTATIC BONE DISEASE


Background
Denosumab is a human monoclonal antibody used for prevention of skeletal-related events (SREs) in patients with bone metastases from solid tumors. Although antiresorptive therapies reduce the risk of SREs, it also reduces the release of calcium (Ca) from bone into the bloodstream. In September 2014, the Spanish Agency for Medicines and Health Products issued an alert for the risk of severe hypocalcemia in patients receiving denosumab recommending monitor Ca levels and adequate Ca and vitamin D supplementation.

Objectives
To determine the prevalence of hypocalcemia induced by denosumab.

Material and methods
- Retrospective review of patients undergoing treatment with denosumab from April 2013-October 2014 at a general hospital.
- Demographic and clinical data were obtained from Pharmacy’s Service records, patient medical history and laboratory software.

Results

Denosumab

28 patients

Initial Ca = 9.1±0.5mg/dL
53.6% male
62.6±14.2 years

57% received Ca and vit D supplementation

Hypocalcemia was more common in patients who did not received Ca and vit D vs those who did (6 vs 4)

35.7% hypocalcemia

1 patient grade III
1 patient grade IV
3 patients grade I
5 patients grade II

* 3 patients had impaired renal function at baseline (GFR<35ml/min)

Conclusions
- Hypocalcemia is a common side effect of denosumab despite adequate calcium and vitamin D supplementation.
- Having the limitation of the small sample size, we recorded less hypocalcemia in patients taking Ca and vitamin D.
- Ca levels should be closely monitored during denosumab treatment.

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