



INITIAL RESULTS WITH ZOLEDRONIC ACID IN A REFRACTURE PREVENTION PROGRAM

BERNARDO STOLNICKI

HOSPITAL FEDERAL DE IPANEMA - RJ SERVIÇO DE ORTOPEDIA DEPARTAMENTO DE DOENÇAS OSTEOMETABÓLICAS

Objective

To describe the initial results with the use of zoledronic acid 5 mg in PREVREFRAT (Refracture Prevention Program).

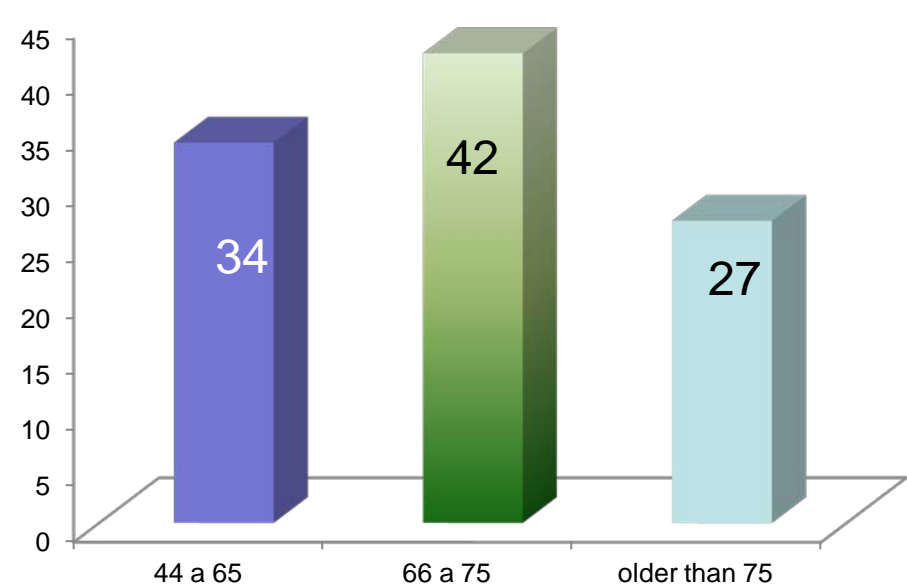
Methods

From April 2011 to April 2012, 103 patients with minimal trauma fractures were assigned to receive yearly intravenous zoledronic acid at a dose of 5 mg and calcium and vitamin D supplementation. The patients features, fractures, risk factors, associated diseases, BMD values related to fractures, vitamin D levels, adverse events and incidence of new fractures are reported.

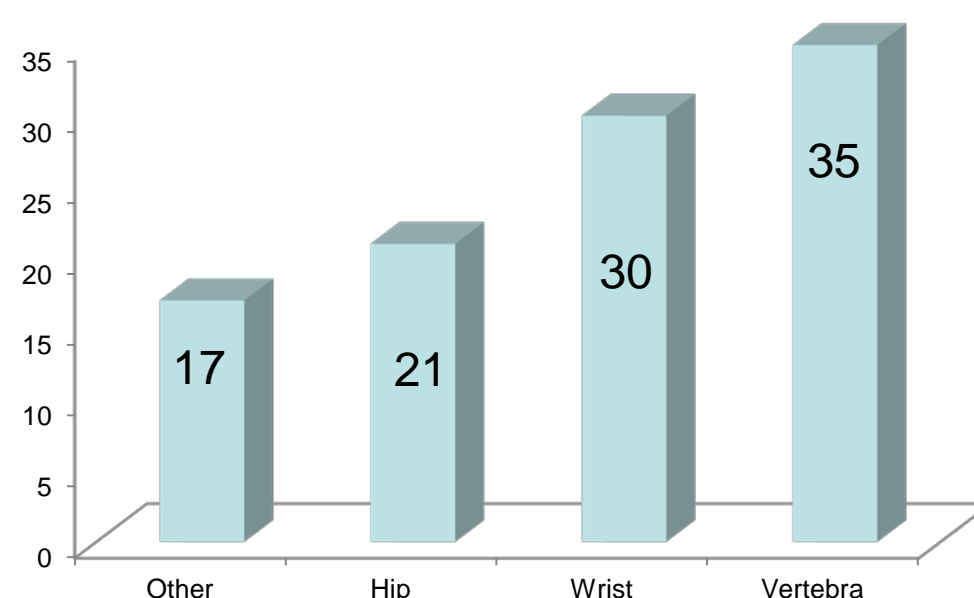
Results

95 women and 8 men with minimal trauma fractures received yearly intravenous zoledronic acid at a dose of 5 mg.

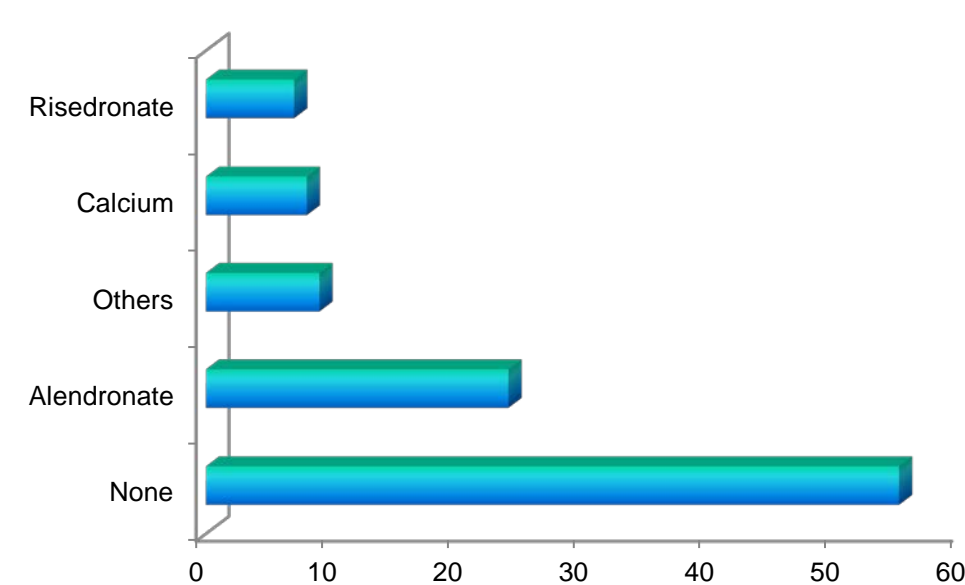
The age (Graphic 1) and main fracture (Graphic 2) distribution is showed. The main fractures were vertebral fracture (33.9%), wrist fracture (29.1%), hip fracture (20.3%), and other fracture (16.5%). 55 patients (53%) had no previous treatment for osteoporosis (Graphic 3). 78% of the patients had vitamin D insufficiency or deficiency (Graphic 4). According to WHO criteria, 69% were classified as osteoporosis, 29% as osteopenia and 2% normal (Graphic 5). The main risk factors were fragility fracture (all patients), parent fractured hip (17), early menopause (14) and glucocorticoids (5).



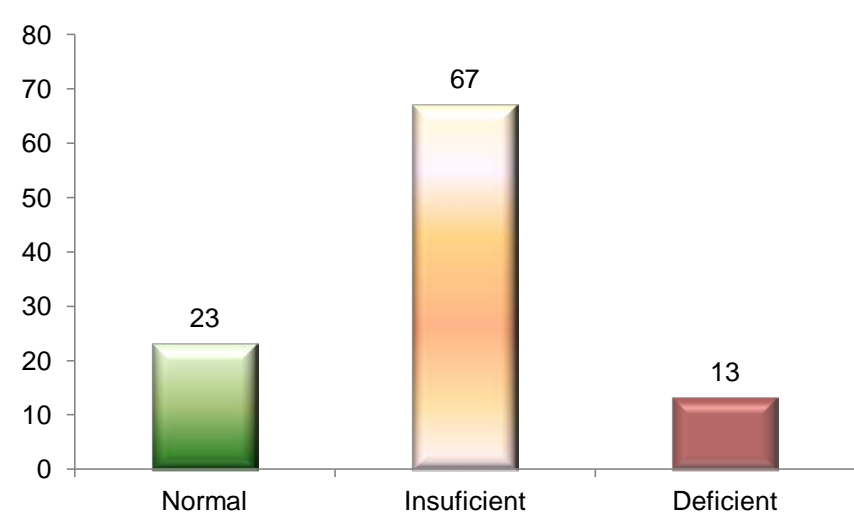
Graphic 1 Age



Graphic 2 Main Fracture



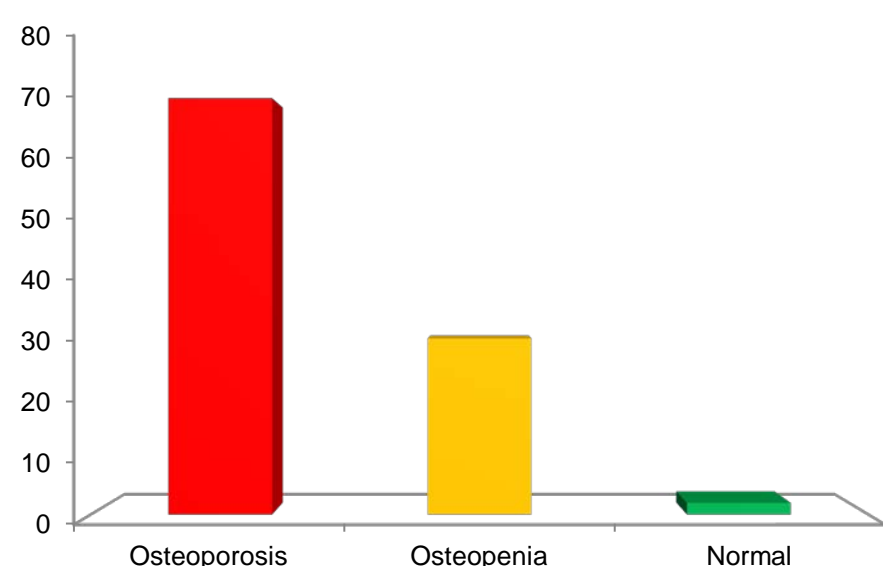
Graphic 3 Previous Treatment



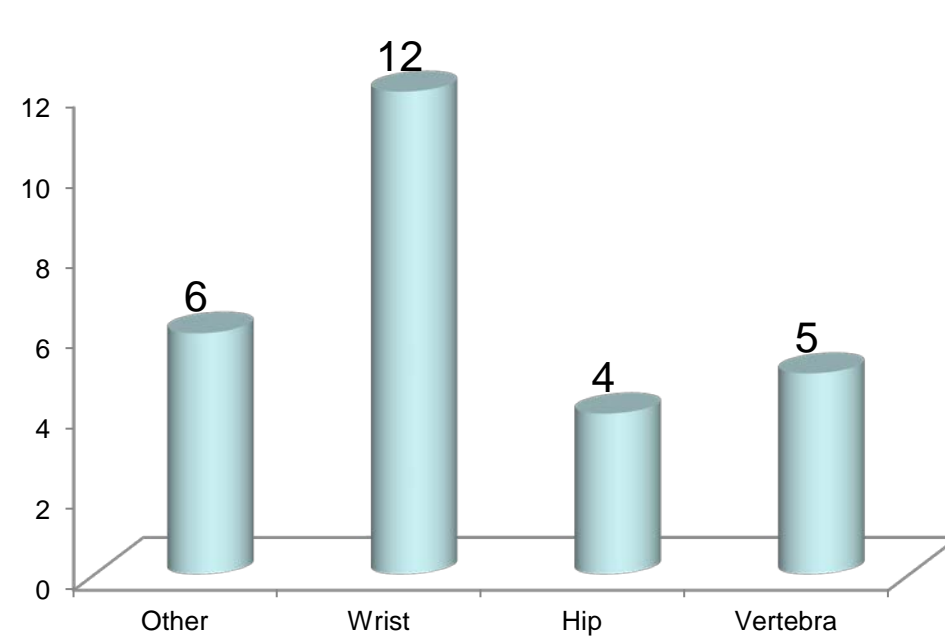
Graphic 4 Vitamin D levels

66,6% of patients with non-vertebral fractures had prior fractures.
52,4% of patients with hip fractures had prior fractures.
70,1% of patients had radiographic vertebral fracture.
59,7% of patients had more than one fracture.

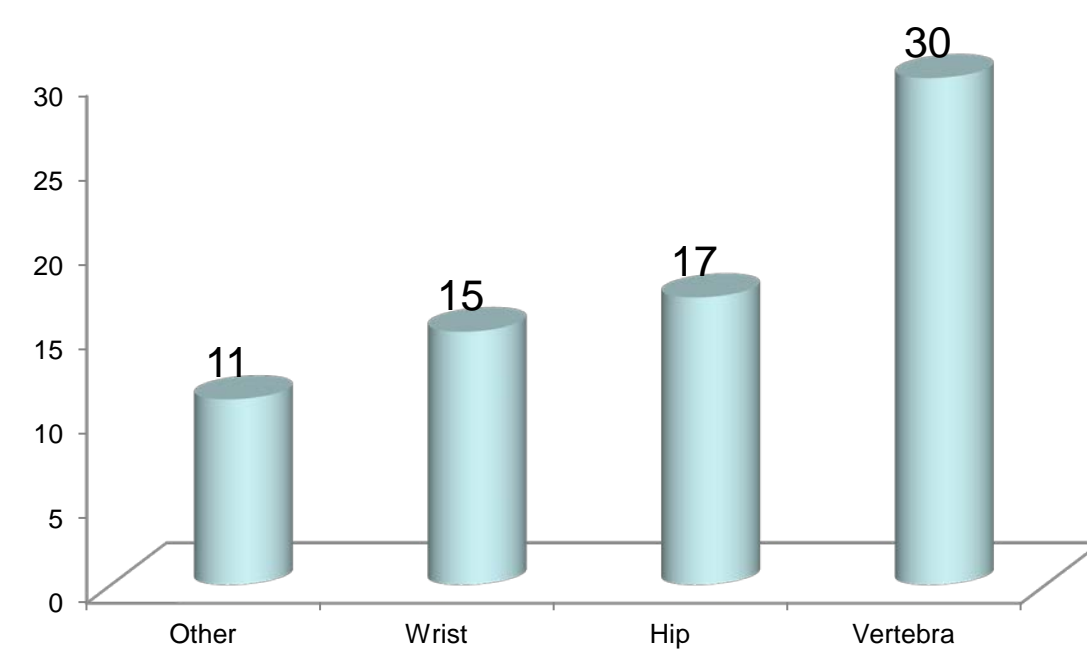
In the BMD normal group were 3 wrist fractures. The fracture distribution in the osteopenia (Graphic 6) and osteoporosis (Graphic 7) groups is showed.



Graphic 5 WHO BMD



Graphic 6 Main Fracture Osteopenia



Graphic 7 Main Fracture Osteoporosis

Three secondary fractures occurred.

- Female (67yo, -3 SD L1-L4, -2.5 SD Femoral neck, Vit D 7.7) had a new wrist fracture 45 days after infusion.
- Female (82 yo, -4 SD L1-L4, -3.5 SD Femoral neck, Vit D 4.0) had a new shoulder fracture 74 days after infusion.
- Female (71 yo, -4.8 SD L1-L4, -4.1 SD Femoral neck, Vit D 15) 14 years using glucocorticoids and 4 years using ALN, had a new subthrocanteric fracture 15 days after infusion.

All patients received paracetamol (1500/day, during 3 days) after the intravenous zoledronic acid dose. Ten cases of flu-like were found.

Adverse effects not directly related to zoledronic acid use were: one case of avascular necrosis of the femoral head 19 months after femoral neck fracture, one case of death (intestinal cancer) and one non-fatal stroke (patients had a previous one).

Conclusion

The high percentage of patients with non-vertebral and hip fractures who had previous fractures reinforces that it is possible to decrease the rate of secondary fractures, showing that liaison services as PREVREFRAT are rewarding.

Despite the short follow-up, the low rate of new fractures using a high persistence and compliance drug is encouraging.