NERIDRONATE IN THE TREATMENT OF THALASSEMIA-INDUCED OSTEOPOROSIS

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More than the 50% of thalassemic population has osteoporosis and an increased fracture risk. The aetiology is multifactorial and culminates in an altered bone remodelling characterized by an accelerated bone resorption despite the optimal hormonal replacement therapy. This represents the rationale for the use of the most potent bone antiresorptive drugs, the bisphosphonates. In fact previous studies showed good results with the use of alendronate, but with poor compliance due to oral administration and high level of drop-outs.
To evaluate the effects of neridronate intramuscularly and cyclically administered, on bone remodelling markers and BMD in this particular form of osteoporosis.
Study population was formed by 30 thalassemic patients (mean age 29+-7 yr, with BMD < -2.5 DS), randomly divided in two groups to assume for 12 months Neridronate 25 mg i.m. every month and 1 gr of Calcium and 800 IU of Vitamin D every day (group A, 15 patients) or only calcium and vitamin D (group B, 15 patients). At base line and after 12 months we measured vertebral and femoral BMD by DXA (Hologic QDR 4500). Moreover at base line, at 6 and 12 months bone remodelling parameters (ALP and D-PYR) were evaluated.
Group A, treated with Neridronate, showed a significant increase of BMD with respect to placebo both at lumbar (5%, p=0.01) and femoral level (+4%, p=0,01). Bone remodelling indexes significantly reduced after 6 months and remained suppressed after 12 months with respect to basal values only in group A.
On the basis of our data the administration of Neridronate 25 mg monthly, intramuscularly, is efficacious in the treatment of thalassemia-induced osteoporosis, well tolerated and with a optimal compliance.