Vitamin D in the treatment of patients with osteogenesis imperfecta.

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The main clinical sign of osteogenesis imperfecta is osteoporosis with violations of bone marrow microarchitectonics and increased of osteo resorption. The basis of treatment of osteogenesis imperfecta is antiosteoporotic therapy, including active metabolites of vitamin D, which slow down osteoclastogenesis, contribute bone formation and reduce the level of markers of osteoresorption.

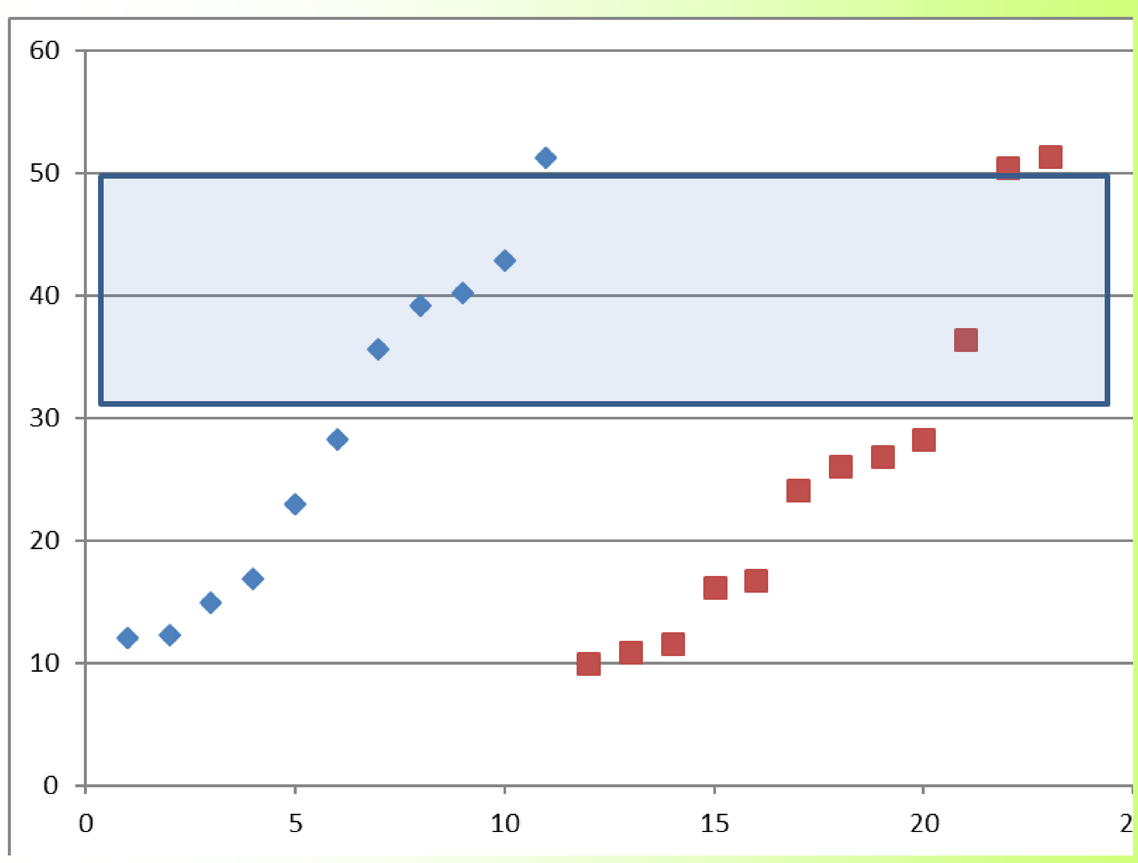
Methods

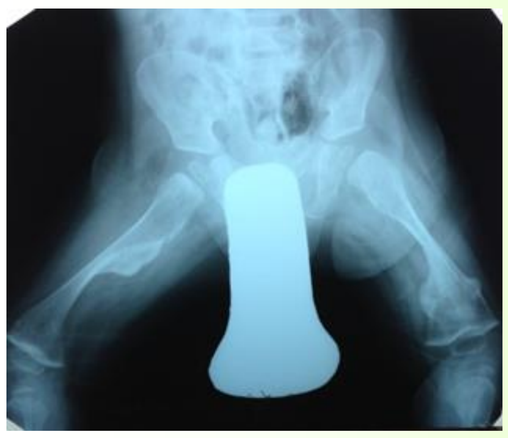
We investigated the level of 25 (OH) vitamin D3 (hydroxycholecalciferol) using the immunochemical method on the Architect and 2000 analyzer. using the ABBOT Diagnostics (USA) test system in 26 patients with OI from 1 to 15 years of age

Results

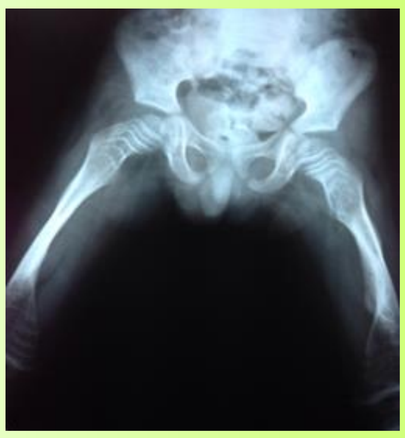
In 15 patients, the concentration of vitamin 25 (OH) D in serum before treatment was reduced, with a minimum of 10.91 ng / ml; Among them, the decrease was noted in 9 patients with type III and in 6 patients with type I.

Decrease of the concentration of vitamin 25 (OH) negatively affects the processes of formation and mineralization of bone tissue and and enhances systemic osteoporosis in these patients. In 8 patients (31%) receiving vitamin D at a dose of 2000 IU or alphacalcidol 0.5-1 mkg per day for more than 12 months, 25 (OH) D was in the normal range. Treatment children with OI was carried out by drugs of pamidronic acid (DPA). All patients received basic therapy: drugs of Ca (osteogenone) for 1-2 capsules 2 times a day and the active form of vitamin D - alphacalcidol (TEVA) at 0.5 - 1 mkg per day. As a control in 5 patients was carried out without getting DPA without D3, which led to a smaller increase in bone mass density compared with the patients who were getting DPA and alfakaltsidol.





Before treatment



After treatment

Conclusions

In our opinion, under the influence of vitamin D, the synthesis of collagen type I and proteins of bone matrix is accelerated, the quality of bone tissue improves in this disease.

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