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Role of calcitriol on Wnt 5a expression in osteoblast

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Objectives: Physiologic levels of calcitriol has the direct role in promoting bone remodeling process, and enhance osteoblast function through the interaction of osteoclast-derived factors (clastokines). However, in most clinical scenario, we use therapeutic (pharmacological) doses of calcitriol. The goal of our work was to examine the therapeutic dose of calcitriol on the expression of Wnt 5a on osteoblast.

Methods: To determine the source of Wnt 5a, 7F2 preosteoblast were treated with different doses of calcitriol and the Wnt 5a content evaluated by Western blot.

Results: After preosteoblast 7F2 cell stimulated with 100 ug/ml ascorbic acid, and 10 mM β-glycerol phosphate, western blot analysis showed Wnt 5a expression in osteoblast at different doses of calcitriol was significantly different at the protein level.

Conclusions: The anablic effect of calcition when treating secondary hyperparathyroidism might came the expression of Wnt 5a from osteoblast.

The expression of Wnt 5a in osteoblast after treating with different dose of calcitriol