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Abstract

Background: Histamine regulates function of osteoclasts and osteoblasts, however data regarding the influence of histamine H2 receptors antagonists on bone tissue are ambiguous. Factors that influence growing skeleton may have an important impact on the peak bone mass and future risk of fractures. The aim of our study was the assessment of influence of ranitidine, on growing bones.

Methods: The experiment was carried out on young male Wistar rats divided into two groups receiving either ranitidine (10 mg/kg *ip*) or vehicle.

Results: A significant decrease in femoral BMD in ranitidine-treated rats (R) compared to vehicle-treated ones (C) was detected (0.262 ± 0.009 g/cm^2 *vs.* 0.271 ± 0.007 g/cm^2, $p < 0.05$). In group R we observed elevated serum C-terminated telopeptide of type I collagen (CTX) level with concomitantly lowered serum osteocalcin (OC) concentration comparing to control