عنوان مقاله:

Protective Effect of Oxytocin Against Bone Loss in a Female Rat Model of Osteoporosis

محل انتشار:

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خلاصه مقاله:

Background: Introduction: Oxytocin (OT) has been proposed to assist in the regulation of bone remodeling and to exert an antiosteoporotic effect. We evaluated the possible protective effect of OT against bone degeneration in ovariectomized (OVX) rats. Methods: The study was performed on three groups of adult female rats; group I was subjected to sham operation, group II was subjected to ovariectomy, and group III was subjected to ovariectomy and intraperitoneal injection with OT for eight successive weeks. At the end of the study, bone mass density (BMD) was measured; then the rats were euthanized and their blood and bone tissues were examined. Results: The group II rats had significantly less BMD and greater serum bone-specific alkaline phosphatase (bALP), osteocalcin (OC), and tartrate-resistant acid phosphatase (TRAP) levels than the group I rats. Furthermore, group II rats had fewer osteocytes and osteoblasts, and less OPG/RANKL mRNA expression than group I rats. The groups I and III and rats showed no significant differences in BMD, bALP, OC, TRAP, OPG/RANKL mRNA expression, or osteocyte and .osteoblast numbers. Conclusions: Oxytocin may have an antiosteoporotic effect in OVX rats

کلمات کلیدی:

Osteoporosis, OPG, Oxytocin, Ovariectomy, RANKLKL