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LONG-TERM GLUCOCORTICIDS EFFECTS OF BONE LINING CELLS

APOPTOSIS

Abstract

The aim of this study was to count the amount of apoptotic bone lining cells after long term glucocorticoid distribution. This study used Rattus Norvegicus females aged 3 months that were divided into 3 groups, each group consisted of 7 rats. The groups are: (1) control group; (2) treatment group 1 were given glucocorticoid 0.01 mg/day; (3) treatment group 2 were given glucocorticoid 0.2mg/day. The treatment carried out for 4 weeks and at the end of treatment, mice were sacrificed and continued with preparation, and the number of bone lining cells that undergoing apoptosis was calculated through examination of the femur bone tissue metaphysis section using immunohistochemical technique. All data were analyzed with statistical analysis Anova. The result showed that the number of apoptotic bone lining cells is increased in group with glucocorticoid administration 0.01 mg/day and 0.2 mg/day compared to control group with p= 0.000 (p <0.05). The number of apoptotic bone lining cells on the group of glucocorticoid dose 0.2 mg/day higher than the group of glucocorticoid dose 0.01 mg/day with p= 0.000 (p <0.05). In conclusions long term glucocorticoid distribution increase apoptosis of bone lining cells.(FMI 2012;48:12-16)

Keyword : Bone, lining, cells, apoptosis, glucocorticoid, ,

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