

## Brazilian Oral Research

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### Abstract

[CAVAGNI, Juliano](#); [SOLETTI, Ana Cristina](#); [GAIO, Eduardo José](#) and [ROSING, Cassiano Kuchenbecker](#). The effect of dexamethasone in the pathogenesis of ligature-induced periodontal disease in Wistar rats. *Braz. oral res.* [online]. 2005, vol.19, n.4, pp. 290-294. ISSN 1806-8324. doi: 10.1590/S1806-83242005000400010.

The aim of this study was to evaluate, in rats, the role of the systemic use of dexamethasone in the pathogenesis of induced alveolar bone loss. In 26 female Wistar rats, ligatures were placed around the second upper molars, and the contralateral ones served as intra-group controls. Two groups were formed. The test group received 0.5 mg/kg of dexamethasone subcutaneously every third day during thirty days. The control group received the same amount of saline solution. After thirty days, the animals were sacrificed and their maxillae were removed. Sodium hypochlorite was used to prepare the specimens, and the cementum-enamel junction was stained with 1% methylene blue. Morphometric analysis of the alveolar bone loss was performed with standardized digital photographs, and the distance between the cementum-enamel junction and the alveolar bone crest was measured with the software ImageTool 3.0. Intra-examiner calibration revealed a Pearson correlation coefficient of 0.99. Statistical analysis was performed by paired or independent sample *t* tests, as appropriate ( $\alpha = 0.05$ ). Dexamethasone increased the mean alveolar bone loss in ligature-induced periodontitis in relation to the control group (0.77 and 0.61 buccally, and 0.65 and 0.56 palatally, respectively). No significant differences were observed intergroups in the teeth without ligatures. In the animal model used here, the use of dexamethasone increased the progression of ligature-induced alveolar bone loss.

Keywords : Alveolar bone loss; Dexamethasone; Periodontal diseases; Rats.

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