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Abstract

[FERNANDES, Marilene Issa](#) et al. Microscopic qualitative evaluation of fixation time and decalcification media in rat maxillary periodontium. *Braz. oral res.* [online]. 2007, vol.21, n.2, pp. 134-139. ISSN 1806-8324. doi: 10.1590/S1806-83242007000200007.

The rat model is widely used in periodontal research and the quality of histological sections is essential. The purpose of this study was to evaluate the histological characteristics of periodontal tissues in Wistar rat maxillae, with different times of fixation and decalcified by nitric acid or formic acid (Anna Morse Solution). Fifteen rats were used. Fixation was performed for 24, 48 and 72 hours. The maxillae were hemi-sectioned and each part was decalcified either in nitric acid for 7 days or in Anna Morse solution for 35 days. Two trained and blinded examiners performed the evaluation. Fourty eight hours of fixation and decalcification with Anna Morse solution showed more clear characteristics of the epithelium-connective tissue interface and of the periodontal structures. Mean measurements between the cementum-enamel junction and the bone crest varied in the different experimental times from 176.5 (\pm 60.45) to 210.94 (\pm 39.33) pixels on the buccal aspect, and from 199.69 (\pm 38.33) to 298.55 (\pm 70.81) pixels on the palatal aspect, with no statistically significant differences (ANOVA, $p > 0.05$). In the same fixation period, decalcification with nitric acid or Anna Morse solution did not display any statistically significant differences. It may be concluded that for a qualitative histological analysis, fixation should preferably be for 48 hours and the demineralization should be made by Anna Morse solution. For a histomorphometric analysis, the decalcification solution does not interfere in the results.

Keywords : Histology; Periodontium; Dental research.

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