

Brazilian Oral Research

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Abstract




[CAMARGO, Selma Cristina Cury](#) et al. Diffusion of calcitonin through the wall of the root canal. *Braz. oral res.* [online]. 2004, vol.18, n.1, pp. 59-62. ISSN 1806-8324. doi: 10.1590/S1806-83242004000100011.

The aim of this study was to evaluate the *in vitro* diffusion of synthetic salmon calcitonin (CT), used as an intracanal medication, to the external root surface, with or without the presence of intact root cementum. Fifty-four human central incisors were used in the experiment, and were divided into two groups of 21 (test groups) and two groups of 6 teeth (control groups). After root canal preparation, 10 ml of calcitonin was inserted within the root canal chamber. The root was sealed and made externally impermeable. Specimens were then placed in tubes with saline solution buffered with phosphates and stored at 37°C. The diffusion of calcitonin was measured after 1, 4 and 7 days. To count calcitonin present at the external media (PBS), ELISA test (an antigen-antibody reaction) was used. Results showed that there was calcitonin diffusion through dentin in all of the test samples. The absence of cementum increased the diffusion of calcitonin ($p=0.05$). The highest counts of CT were obtained on day 7 for groups with or without cementum - showing a direct relation between time and diffusion of the medication.

Keywords : Dental cementum; Tooth permeability; Root canal irrigants; Calcitonin.

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