

*Original article*

## Concentration of Transforming Growth Factor-beta 1 in Chronic Periapical Lesions

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### SUMMARY

Host response to antigen stimulation in chronic inflammatory periapical lesions is mainly controlled by the balance between proinflammatory and anti-inflammatory cytokines. The aim of this study was to determine the concentration of TGF- $\beta_1$  in the tissue homogenates of periapical lesions and to analyse its level in relation to the symptomatology of the patients and size of the lesions. Ninety three samples of chronic periapical lesions were obtained after extraction of teeth. Samples were divided according to the clinical symptoms as symptomatic and asymptomatic, and according to the size as large and small. The concentration of TGF- $\beta_1$  was analyzed using ELISA. The results showed increased production of TGF- $\beta_1$  in symptomatic lesions compared to asymptomatic, but the difference was not statistically significant. Statistically significant difference in TGF- $\beta_1$  concentrations was observed in large lesions compared to small ( $p < 0,001$ ). It seems that TGF- $\beta_1$  have a modulating effect on bone tissue resorption activity under the influence of proinflammatory cytokines and can be molecular prognostic marker of periapical lesion healing.

*Key words: periapical lesions, cytokines, TGF- $\beta_1$*

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