

The action of corticosteroids on orthodontic tooth movement: A literature review

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Editor's summary

The orthodontic movement is induced by bio-mechanical forces that promote inflammatory reaction in the bone and periodontal ligament. Some medicines may interfere with inflammatory mediators, such as the corticosteroids, which may result in changes in the orthodontic movement. Recently, the corticosteroids have been widely used for the treatment of some chronic systemic diseases. It is important that orthodontists understand the action mechanism of these substances in the orthodontic movement. Thus, the aim of this study consisted in investigating the action mechanism of the corticosteroids in the orthodontic movement by literature review. In general, the corticosteroids decrease the activity of neutrophils, macrophages, fibroblasts and osteoblasts, and inhibit the transcription gene

of cyclooxygenase-2 (COX-2), leading to lower release of leukotrienes and prostaglandins. It seems reasonable to suppose a suppressive mechanism of this medicine in the orthodontic movement, as observed by some authors with lower clastic activity. On the other hand, other studies have found greater orthodontic movement after the administration of methylprednisolone, associated to the increased bone resorption and decreased bone formation. Therefore, there is a lack of consensus in literature regarding the influence of corticosteroids on the orthodontic movement. Given this, the authors have indicated for chronic users of corticosteroids longer intervals between orthodontic visits, and periodic radiographic follow-up, for the precocious diagnosis of root resorption.

*Access www.dentalpress.com.br/revistas to read the entire article.

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How to cite this article: Knop LAH, Shintcovsk RL, Retamoso LB, Grégio AMT, Tanaka O. The action of corticosteroids on orthodontic tooth movement: A literature review. *Dental Press J Orthod*. 2012 Nov-Dec;17(6):20.

Submitted: October 23, 2008 - **Revised and accepted:** August 20, 2012

» Authors report no commercial, proprietary or financial interest in the products or companies described in this article.

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