

The Role of mechanical force in molecular and cellular during orthodontic tooth movement

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Abstrak

Application of mechanical force on abnormally positioned tooth, cause changes in tooth location and transmitted to the bone ia the periodontal ligament (PDL) produce orthodontic tooth movement. This force application is further way that remodeling in the area occurs. In order to develop biological strategies for enhancing this movement of teeth in bone, the underlying mechanisms of bone resorption and apposition should be understood in detail. Analysis of gingival crevicular fluid (GCF) may be a good means of examining the on going molecular and cellular process associated with gingival and bone turnover during orthodontic tooth movement. If it could be possible to biologically monitor and predict the outcome of orthodontic force, then the appliance management could be based on dividual tissue response and the effectiveness of the treatment could be improved and understanding their biology is critical to finding ways to modify bone biology to move teeth faster. The present article reviewed a short introduction to some mayors advanced mechanical force in molecular and cellular biology during orthodontic tooth movement.