



Osteogenesis at Tension Site by *Stichopus hermanii* Application as Relapse Orthodontic Prevention

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Abstract: Objective : The aim of this study is to investigate osteogenesis at tension site by *Stichopus hermanii* application as relapse orthodontic prevention.

Materials and Methods: The experiment was held by Post Test Only Group design. Thirty two male *Cavia Cobaya* were divided into four groups. K(-) group as negative control group (without treatment), K(+) group as positive control group which were applied with relaps orthodontic forces, and the other groups P1, P2, were applied with relaps orthodontic forces and *Stichopus hermanii* 2,5 % and 3 %. After treatment the *cavia cobaya* were sacrificed. Collagen type1 and BMP-2 expression at tension site as osteogenesis marker were examined with immunohistochemistry.

Results: This study showed collagen type 1 and BMP-2 expression especially in P2 increased to show osteogenesis occurred compare with K(-), K(+), and P1.

Conclusion : Osteogenesis occurred at tension site by *Stichopus hermanii* as relapse orthodontic prevention. 3 % *Stichopus hermanii* is the effective dose for osteogenesis.

Keywords: *Stichopus hermanii*, Osteogenesis, relapse orthodontic prevention.