

**PERBANDINGAN JUMLAH FIBROBLAS PASCA IMPLANTASI  
HIDROKSIAPATIT DAN HIDROKSIAPATIT-CHITOSAN PADA  
PENYEMBUHAN PENCABUTAN GIGI MARMOT (*CAVIA COBAYA*)**

**(COMPARISON OF FIBROBLAST CELLS AMOUNT AFTER  
IMPLANTATION OF HYDROXYAPATITE AND HYDOXYAPATITE-  
CHITOSAN AT MARMOT (*CAVIA COBAYA*) HEALING OF EXTRACTION)**

**ABSTRACT**

**Background.** Tooth extraction is a common procedure by dentist to cure dental caries, chronic periodontal diseases, tooth fracture, impacted tooth, or for orthodontics and prosthodontics treatment needs. Tooth loss can cause some negative effects to patient, such as reduction of alveolar ridge dimension because of bone death and resorption of the socket wall. To solve this problem, the clinicians may use bone graft to stimulate wound repair and provide the stability of alveolar ridge dimension, particularly for prosthodontics treatment preparation (socket preservation). Bone graft materials which many clinicians use are hydroxyapatite and chitosan. **Purpose.** The aim of this study was to compare the ability of hydroxyapatite and hydroxyapatite-chitosan in stimulating extraction healing at marmot (*Cavia cobaya*). **Method.** This research was done in-vivo experiment from 18 marmots' extracted left incisor. They were divided into 3 groups : group HA, the empty socket was injected by hydroxyapatite gel ; group HAC, the empty socket was injected by hydroxyapatite-chitosan gel ; group HK, the untreated socket. All groups were sacrificed in 7 days after treatment. All samples were examined by histopathology to count the fibroblast cells in the lowest part of socket. **Results.** There was higher fibroblast cells amount at group HAC than HA's with significant difference between them. **Conclusion.** Hydroxyapatite-chitosan can stimulate fibroblast proliferation better than hydroxyapatite alone does to promote healing of extraction.

**Keywords:** tooth extraction, alveolar ridge resorption, bone graft, socket preservation