

**PENGARUH EKSTRAK KUNYIT TERHADAP PENINGKATAN JUMLAH  
MAKROFAG PADA SOKET PASCA PENCABUTAN GIGI *Cavia cobaya***

**THE EFFECT OF TURMERIC EXTRACT TO THE AMOUNT OF MACROPHAGE  
ON SOCKET AFTER TOOTH EXTRACTION OF *Cavia cobaya***

**ABSTRACT**

**Background:** Turmeric (*Curcuma longa L.*) extract has been known to have antiinflammatory properties that can help wound healing process. The active compounds of turmeric role in inflammatory processes associated with wound healing such as polyphenols, flavonoids, alkaloids, saponins and tannins. Thus, turmeric extract should theoretically be able to accelerate wound healing process.

**Purpose:** This research is to study the effect of turmeric extract gel topically to increase the amount of macrophage on socket after tooth extraction of *Cavia cobaya*. **Methods:** This study used 24 *Cavia cobaya* which are divided into 1 control group and 3 treatment group, in which each group consisted of 6 *Cavia cobaya*. Firstly, tooth extraction of the left incisive in lower jaw was done in all groups. In the control group, the socket of tooth extraction was given CMC Na 3% topically, whereas in the treatment groups, the first treatment group was given turmeric extract gel with 15% concentration, the second treatment group was given turmeric extract gel with 30% concentration, the third treatment group was given turmeric extract gel with 45% concentration. The application of turmeric extract gel 0.1 ml in each socket. Afterwards, on the day 3, all of *Cavia cobaya* were made histopatology preparations and the amount of macrophage cell were measured. The difference of macrophage cell amount were analyzed statistically using One Way ANOVA and Tukey HSD analysis. **Result:** Based on the results of normality test and homogeneity test showed  $\text{sig} > 0.05$ , so that data from all groups were normally distributed and homogeneous. Furthermore, analyzed by one-way ANOVA and Tukey HSD analysis shows that there are differences between the amount of macrophages in control group and treatment group that treated with turmeric extract gel application on the third day. Amount of macrophage increase in the in the first treatment group, but a decrease in second treatment groups and third treatment groups. **Conclusion:** Applying turmeric extract gel topically to the socket post tooth extraction can increase the amount of macrophage cell in 15% concentration, but decrease the amount of macrophage cell in 30% concentration and 45 % concentration.

*Key word: Curcuma longa L., wound healing, macrophage, tooth extraction.*