ABSTRACT

COMPARATIVE EFFECTIVENESS THE APPLICATION OF ALOE VERA EXTRACT WITH A CONCENTRATION OF 25%, 50%, 75%, AND 100% TO OVERVIEW HISTOPATOLOGICAL ORAL MUCOSA OF WHITE MALE MICE *SPRAGUE DAWLEY* STRAIN WERE INDUCED WITH H_2O_2

With

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Inflammation of oral mucosa often occurs as yellowish white spots with slightly concave and reddish halo, and painful. The treatment of oral mucosa inflammation is basically to suppress the inflammation, reduce the pain and to increase the healing process. Histopathological assessment proved infiltration of inflammatory cells such as *polymorpho nuclear cells* (PMN) and *mononuclear phagocyte cells*. *Aloe vera* contains some compounds that can heal the inflammation. The objective of this research was to find out the decrease of *macrophages* in the oral mucosa of mice that given extract of *aloe vera* in various concentrations.

The research was carried out as randomized pre-test and post-test with control group design. Five groups involved in this study, including one control group and four treatment groups. The control group was given aquadest and the treatment groups were treated with *aloe vera* extract in the concentration of 25%, 50%, 75%, and 100% respectively for six consecutive days.

The result based on comparison test between the groups with *One Way Anova* showed that the average amount of macrophages in the five group after a given treatment was significantly different at p = 0.014. Furthermore the number of macrophages least significant difference in the control group and groups of 100% concentration after receiving the treatment was highly significantly different p = 0.003. The result of the test showed the decrease in the number of *macrophages* in the *aloe vera* treatment control group and groups of 100% concentration.

The conclusion was that the application of *aloe vera* extract proved in reducing inflammation with concentration of 100% was the strongest in reducing inflammation on mice oral mucosa.

Keywords***:*** Aloe vera, macrophage, oral mucosa inflammation.