ABSTRACT

Background. Impressing procedure using alginate has high risk to cause cross infection. Alginate impression that contaminated by saliva and blood from the patient could be a media of microorganisms transfer. To prevent cross infection, the impression have to be disinfected by potential substance such as mangosteen pericarp infusion. The pericarp of mangosteen is containing some chemical organic compounds like xanthone, flavonoid, and tanin. Xanthone which is natural constituent of mangosteen pericarp, has some pharmacological actions, such as antibacterial, antifungal, and antiviral. Purpose. The purpose of this study is to find out the most effective concentration of mangosteen pericarp infusion as disinfectant to decrease microorganism colonies on the alginate impression surface. Material and method. Forty samples have been taken from 10 respondens. The alginate impression was divided into 4 groups: group 1 sprayed by sterile aquades (as control), group 2 sprayed with mangosteen pericarp infusion 50% for 30 second, group 3 sprayed with mangosteen pericarp infusion 75% for 30 second, group 4 sprayed with mangosteen pericarp infusion 100% for 30 second. The microorganism colonies were statistically compared by using Kolmogorov-Smirnov test to analyze data distribution, then Kruskal Wallis and Mann Whitney test for further analysis. Result. There are significant differences between each group, \( p = 0.000 \) (\( p<0.05 \)). Conclusion. The higher concentration of Mangosteen infusion used as disinfectant, the lower amount of microorganism colony would be found on the alginate impression.

Keyword : Alginate impression, spray disinfection, mangosteen pericarp infusion, microorganism colonies.