

Abstract

THE EFFECT OF GARGLING USING A SOLUTION OF TRIGONA HONEY ON BACTERIA ON DENTAL CARIES AND *Candida albicans* ON THRUSH

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Mouth is the organ that frequently infected by a number of pathogens such as protozoa, virus, bacteria and fungi. These microorganisms can cause diseases such as dental caries and thrush. Therefore, it is necessary to make efforts to mend the prevent or treat the disease, for example by rinsing the mouth using the honey solution. Honey contains phenolic acid compounds, flavonoids and quercetin, with the benefit as an antibacterial. This study aimed to determine the effect of gargling using a solution of trigona honey on bacteria in dental caries and mouth ulcer. This experiment using 5 treatments of gargling using honey solution by concentration of 1% (P-1), 2% (P-2), 3% (P-3) and using K- (mineral water) and K+ (Povidone iodine). Respondents of the study used were 25 people. By criteria that were experiencing dental caries and thrush. The treatment is carried out for 3 days, while saliva collection is carried out before and after treatment. The data obtained were analyzed using a t-test sample part test. The results showed that gargling using solution of trigona honey had an effect on reducing the number of bacteria and fungi that cause dental caries and mouth ulcer ($P < 0.05$). The concentration of trigona honey solution used for gargling, which has a significant effect on reducing the number of bacterial colonies in dental caries (*Streptococcus mutans* and *Staphylococcus aureus*) is a concentration of 1% ($p < 0.05$) but does not significantly reduce the number of *Candida albicans* fungal colonies in canker sores. The concentration of trigona honey solution used for gargling which had a significant effect on reducing the number of bacterial colonies in dental caries (*Streptococcus mutans* and *Staphylococcus aureus*) was a concentration of 1% ($p < 0.05$), but did not significantly decrease the number of colonies of the fungus *Candida albicans* in thrush.

Keywords: *Honey solution, gargling, dental caries, mouth ulcer*