

ABSTRACT

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Title : COMPARING THE ANTIBACTERIAL EFFECT OF MANUKA HONEY AND CHLORHEXIDINE AGAINST STREPTOCOCCUS MUTANS

Topical application of honey is useful in the treatment of burns and soft-tissue damages. This study aimed to evaluate the antimicrobial activity of Manuka honey against plaque-associated bacteria in vitro in order to evaluate the possible application as an addition to periodontal treatment. An in vitro study was carried out on 30 samples in 5 different groups (n=6). Manuka honey UMF 6.9, Chlorhexidine and water were included in the study to evaluate its efficacy against *S. mutans*. The antibacterial activity were tested using disc diffusion method, and its effect was evaluated by measuring the zone of inhibition around the disc. The results obtained were statistically analyzed using one-way Anova test. CHX 2% showed the greatest zone of inhibition compare to other groups ($p \leq 0.05$). MH 75% had significant zone of inhibition compare to MH 30% and 50% ($p \leq 0.05$). This effect was depend on the concentration of the MH used. However, the effect of CHX 2% still significant larger than MH 75% so we should adding some other antibacterial material into MH to increase it antimicrobial activity in periodontal treatment.

Keywords: *Chlorhexidine, Streptococcus mutans, Manuka honey, Antibacterial*