DAYA ANTIBAKTERI EKSTRAK PROPOLIS Apis mellifera Spp. TERHADAP BAKTERI CAMPUR KARIES DENTIN PROFUNDA

(ANTIBACTERIAL POTENCY OF Apis mellifera Spp. PROPOLIS EXTRACT ON MIXED BACTERIA OF DEEP CARIOUS DENTINE)

ABSTRACT

Background: The microbial populations involved in dental caries are known to be highly complex and variable. Deep dentinal caries can defect the vitality of dental pulp. Pulp capping is one of therapy to maintain vitality of dental pulp, but nowadays it is commonly consist of chemical material. Back to nature, there is alternative material, one of them is propolis. Propolis active compounds likes flavonoids, terpenoids and Saponin are potential antibacterial agent. Purpose: The aim of this study is to know the antibacterial effect of Apis mellifera Spp. propolis extract on mixed bacteria of deep carious dentine that determined by its minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC). Method: This research was a laboratory experimental study. Propolis was extracted by ethanol 70% on maceration technique and diluted into several concentrations. Direct contact method between various concentration and bacteria was used. Value of MIC and MBC were done by counting the bacteria colony in Mueller Hinton media. Growth of bacteria colonies is calculated manually in colony forming unit (CFU). Result: At the concentration of 7.25% propolis extract, show that the colony’s growth less than 10% when compared with positive control group. At the concentration 8% of propolis extract, was not revealed any bacterial growth in Mueller Hinton media. Conclusion: The MIC of Apis mellifera Spp. propolis extract against mixed bacteria of deep carious dentine was at 7.25% concentration and MBC was at 8% concentration.

Key words: Antibacteria, Propolis, Apis mellifera Spp, Deep carious dentine bacteria.