THE ABILITY OF CHLORHEXIDINE 2% AND POVIDONE IODINE 1% AS ROOT CANAL MEDICAMENTS TO KILL AND INHIBIT *ENTEROCOCCUS FAECALIS*

ABSTRACT

Background. *Enterococcus faecalis is one of the pathogenic organisms associated with root canal treatment failure and apical periodontitis. Root canal medicament is needed to prevent re-infection in the root canal and increase the success of treatment. Chlorhexidine and povidone iodine is a broad spectrum root canal medicaments that can kill gram-positive bacteria*. **Purpose.** *The purpose of this study was to discover the ability of antimicrobial chlorhexidine 2% and 1% povidone iodine as root canal medicaments against bacteria Enterococcus faecalis.* **Methode.** *This research was done by measuring the inhibition zone and count the number of colonies. Determination of the inhibition of root canal medicaments against Enterococcus faecalis by diffusion method. 10 microliter root canal medicaments dropped on paperdisk and placed on nutrient agar media with enterococcus faecalis, then inhibition zone was calculated. Determination ability to kill enterococcus faecalis is done by inserting 1 ml medicaments root canal into 5 ml BHIB media, then 0.05 ml inoculum of Enterococcus faecalis inserted into each tube, except the negative control. 0.1 ml of each tube implanted in the media nutrient agar. Media incubated for 24 hours, then Enterococcus faecalis bacterial colonies that grow in media calculated using the CFU.* **Results.** *There no colony growth of enterococcus faecalis in both root canal medicaments. But, there are significant differences in inhibition zone of 2% chlorhexidine and 1% povidone iodine ($p<0.05$).* **Conclusion.** *Both of root canal medicaments can kill enterococcus faecalis, but chlorhexidine 2% was more capable inhibit Enterococcus faecalis.*

***Key words**: root canal medicament, povidone iodine, chlorhexidine, enterococcus faecalis*