COMPARISON OF THE ANTIGLUCAN PROPERTIES OF 2% CHLORHEXIDINE AND 0.09% MANGOSTEEN PERICARP EXTRACT
(Garcinia Mangostana Linn) AGAINST Enterococcus Faecalis

ABSTRACT

Background: Caries is one of the oral health biggest problems and can lead to endodontic infection. E. faecalis is a microorganism which is often found after endodontic treatment failure and has virulence factors such as glucan. Application of chlorhexidine and mangosteen pericarp extract could decrease glucan production. Purpose: To compare the antiglucan properties between 2% chlorhexidine and 0.09% mangosteen pericarp extract as a root canal irrigant against E. faecalis. Method: This research was done in-vitro experiment. Enterococcus faecalis which is diluted as standard 0.5 McFarland (1.5×10^8 CFU/ml) is being grown in BHIB media. Negative control in this research is BHIB media without E. faecalis or sucrose. Positive control in this research is BHIB media with E. faecalis and sucrose. Control group 1 is BHIB media mixed with sucrose and 2% chlorhexidine without E. faecalis. Control group 2 is BHIB media mixed with sucrose and 0.09% mangosteen pericarp extract without E. faecalis. The control group’s absorbance is being compared to treatment groups. After incubation for 24 hours, the absorbance is being examined with spectrophotometer. Result: There is a significant difference between 2% chlorhexidine and 0.09% mangosteen pericarp extract (p<0.05) toward glucan produced by Enterococcus faecalis. Conclusion: Chlorhexidine has a bigger antiglucan properties compared to mangosteen pericarp extract.

Keywords: glucan, Enterococcus faecalis, endodontic, chlorhexidine, mangosteen pericarp extract