PERBEDAAN DAYA ANTIBAKTERI ANTARA KALSIUM HIDROKSIDA DENGAN IODOFORM DAN KALSIUM HIDROKSIDA DENGAN BARIUM SULFATE TERHADAP Enterococcus faecalis

THE DIFFERENCE ANTIBACTERIAL EFFECT BETWEEN OF CALCIUM HYDROXIDE WITH IODOFORM AND CALCIUM HYDROXIDE WITH BARIUM SULFATE TOWARDS Enterococcus faecalis

ABSTRACT

**Background:** Root canal is inhibited by many kind of bacteria. Enterococcus faecalis is one of many bacteria that can be found in root canal, which considered as the most resistant species in the oral cavity with the nature of alkali at pH 9.6 and salt concentrations of 6.9, especially in root canals and one of the possible causes of recurrence after treatment endodontic disease with a prevalence of between 24 % -77%. Calcium hydroxide paste used for the intracanal treatment, because it has a pH of 12.5 and produces an alkaline environment in the surrounding tissues through the diffusion of hydroxide ions into the dentin tubules, so with high pH can cause the bactericidal effect. Currently there are various calcium hydroxide with supporting additions in the market, including calcium hydroxide with iodoform and with barium sulfate. Therefore information about their efficacy in needed by dentist. **Purpose:** This study aims to determine whether the antibacterial effect of calcium hydroxide with iodoform is more effective than calcium hydroxide with barium sulfate towards Enterococcus faecalis. **Method:** From the calculation results of Kolmogorov Smirnov Test the entire group of inhibitory zone diameter measurements Enterococcus faecalis has a value greater than 0.05 (p> 0.05) which means that the data in the study group has a variance of normal distribution, so that data analysis can proceed Independent parametric test T-test, to see the significance of differences in inhibition zone diameter between the study groups. In the test Independent t-tests for comparison of inhibition zone diameters between treatment groups, obtained significance value smaller than 0.05 (p = 0.000, p <0.05), means that there are significant differences in inhibition zone diameters between groups iodoform with barium sulfate. **Result:** From this research, it’s showed that Calcium hydroxide with iodoform and Calcium hydroxide with barium sulfate had a significance difference antibacterial effect towards Enterococcus faecalis. It’s probably because iodoform is consisted by iodine, while barium sulfate had been added to provide radiopacity. **Conclusion:** Calcium hydroxide with iodoform has a better antibacterial effectiveness than Calcium hydroxide with barium sulfate towards Enterococcus faecalis.

**Keywords:** Enterococcus faecalis, Calcium hydroxide with iodoform, Calcium hydroxide with barium sulfate.