

ABSTRAK

Pertiwi, Winda G. 2014. **Perbandingan Efektivitas Antimikroba Obat Sterilisasi Saluran Akar *Cresophene* dan *Chlorophenol Kamfer Menthol* (ChKM) Terhadap Bakteri *Enterococcus faecalis* Secara *In Vitro***. Tugas Akhir, Program Studi Pendidikan Dokter Gigi Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) drg. Yuliana Ratna Kumala, Sp. KG. (2) dr. Siwipeni Irmawanti Rahayu, M. Biomed.

Perawatan saluran akar merupakan prosedur perawatan gigi yang bermaksud mempertahankan gigi di dalam rongga mulut. Karies gigi yang tidak dirawat akan berkembang menjadi nekrosis pulpa. Salah satu mikroorganisme yang paling sering menyebabkan nekrosis pulpa adalah *Enterococcus faecalis*. Infeksi saluran akar dapat dikendalikan dengan menggunakan obat sterilisasi saluran akar. Obat sterilisasi saluran akar yang digunakan dalam penelitian ini adalah *Cresophene* dan *Chlorophenol Kamfer Menthol* (ChKM). Kedua obat tersebut telah diketahui memiliki daya antimikroba yang baik. Tujuan penelitian ini adalah untuk mengetahui perbandingan efektivitas antimikroba obat sterilisasi saluran akar *Cresophene* dan ChKM terhadap bakteri *Enterococcus faecalis* secara *in vitro* dengan metode difusi cakram. Penelitian ini merupakan rancangan eksperimen murni dengan *Post Test Only Control Group Design*. *Cresophene* dan ChKM diteteskan pada *blank disk* sebanyak masing-masing $\pm 40 \mu\text{l}$ kemudian diletakkan diatas biakan. Hasil penelitian ini menunjukkan bahwa rata-rata diameter zona hambatan sekitar *Cresophene* (18,36 mm) lebih luas daripada *Chlorophenol kamfer Menthol* (ChKM) (17,16 mm). Hal ini menunjukkan bahwa *Cresophene* lebih efektif sebagai obat sterilisasi saluran akar terhadap *Enterococcus faecalis* dibandingkan dengan *Chlorophenol Kamfer Menthol* (ChKM) secara *in vitro*. Analisis data menggunakan *Independent T test* menunjukkan bahwa terdapat perbandingan signifikansi sebesar 0,004 ($p < 0,05$). Berdasarkan hasil tersebut dapat disimpulkan bahwa *Cresophene* lebih kuat dalam menghambat pertumbuhan *Enterococcus faecalis* daripada *Chlorophenol Kamfer Menthol* (ChKM).

Kata Kunci: Antimikroba, *Chlorophenol Kamfer Menthol* (ChKM), *Cresophene*, *Enterococcus faecalis*

ABSTRACT

Pertiwi, Winda G. 2014. **The Comparison of Antimicrobe's *Cresophene* and *Chlorophenol Kamfer Menthol* (ChKM) Effectiveness in Root Canal Medicament for Sterilization Toward *Enterococcus faecalis* Bacteria in a Manner of *In Vitro***. Final Project, Dentistry Major Faculty of Medicine Brawijaya University. Advisors: (1) drg. Yuliana Ratna Kumala, Sp. KG. (2) dr. Siwipeni Irmawanti Rahayu, M. Biomed.

Root canal treatment is a dental procedure that is intended to maintain the teeth in the oral cavity. Untreated caries may develop further into pulp necrosis. One of the microorganisms which is frequently cause pulp necrosis is *Enterococcus faecalis*. This teeth root infection can be controlled by using root canal medicament. The root canal medicaments for sterilization used in this study are *Cresophene* and *Chlorophenol Kamfer Menthol* (ChKM). Both medicines have been known to have a good antimicrobial ability. The aim of this study is to investigate the comparison of antimicrobial effectiveness of *Cresophene* and ChKM as root canal medicament for sterilization toward *Enterococcus faecalis* bacteria *in vitro* by using disk diffusion method. This study is a pure experimental design using Post Test Only Control Group Design. *Cresophene* and ChKM were dropped on a blank disk 40 µl for each disk then placed on culture. Result of this study showed that mean diameter of inhibition around *Cresophene* (18,36 mm) was wider than *Chlorophenol Kamfer Menthol* (ChKM) (17,16 mm). This indicates that *Cresophene* is more effective as rooth canal medicament for sterilization toward *Enterococcus faecalis* compared to *Chlorophenol Kamfer Menthol* (ChKM) *in vitro*. The data analysis using Independent T test showed significant comparison as much as 0,004 ($p < 0,05$). According to this results, it can be concluded that *Cresophene* is stronger than *Chlorophenol Kamfer Mentol* (ChKM) in term of blocking the growth of *Enterococcus faecalis*.

Keywords: Antimicrobe, *Chlorophenol Kamfer Menthol* (ChKM), *Cresophene*, *Enterococcus faecalis*