Efek antibakteri ekstrak jintan putih cuminum cyminum terhadap biofilm E. Faecalis isolat klinis eksperimental laboratorik = Antibacterial effect of cumin extract cuminum cyminum against biofilm of E-Faecalis from clinical isolates

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Abstrak

ABSTRAK
Latar Belakang: E. faecalis merupakan bakteri yang sulit dieliminasi sehingga dapat menyebabkan kegagalan perawatan endodontik. Klorheksidin 2 merupakan bahan irigasi yang sudah terbukti efektif dalam mengeliminasi E. faecalis, namun memiliki toksisitas terhadap sel-sel yang sehat. Ekstrak jintan putih Cuminum cyminum memiliki potensi efektivitas antibakteri. Namun, belum terdapat penelitian yang meneliti efek antibakteri ekstrak jintan putih terhadap biofilm E. faecalis dari isolat klinis. Tujuan: Mengetahui efek antibakteri ekstrak jintan putih konsentrasi 0,2 mg/ml, 0,5 mg/ml, 0,7 mg/ml, 1,0 mg/ml, dan 1,2 mg/ml dibandingkan dengan klorheksidin 2 terhadap biofilm E.faecalis dari isolat klinis. Metode: Menilai kekeruhan larutan biofilm E. faecalis pasca pemaparan bahan uji dengan ELISA reader, dengan hasil akhir berupa nilai optical density OD . Hasil: Terdapat perbedaan efek antibakteri yang bermakna antara ekstrak jintan putih dengan klorheksidin 2 terhadap biofilm E.faecalis dari isolat klinis p < 0,05 . Kesimpulan: Efek antibakteri ekstrak jintan putih konsentrasi 1,0 mg/ml lebih baik dibandingkan dengan klorheksidin 2 terhadap biofilm E.faecalis dari isolat klinis.
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ABSTRACT
Introduction E. faecalis is a bacteria that is difficult to eliminate which can lead to failure of endodontic treatment. Chlorhexidine 2 is an endodontic irrigation material that has been proven to be effective against E. faecalis, but has toxicity to healthy cells. The extract of cumin Cuminum cyminum has the potential antibacterial activity. However, there have been no research investigating the antibacterial effect of Cuminum cyminum extract on E. faecalis biofilm from clinical isolates. Aims To compare antibacterial efficacy of Cuminum cyminum extract 0,2 mg ml, 0,5 mg ml, 0,7 mg ml, 1,0 mg ml, and 1,2 mg ml and 2 chlorhexidine against E. faecalis biofilm from clinical isolates. Methods Assessing the turbidity of E. faecalis in biofilm after immersed in antibacterial agents with ELISA reader, with optical density OD as the final result. Results There were significant differences statistically between Cuminum cyminum extract and 2 chlorhexidine against E. faecalis biofilm from clinical isolates p 0.05 . Conclusion Antibacterial effect of 1,0 mg ml Cuminum cyminum extract was more effective than 2 chorhexidine against E. faecalis biofilm from clinical isolates.