DAYA ANTIBAKTERI OBAT KUMUR CHLORHEXIDINE, POVIDONE IODINE, FLUORIDE SUPLEMENTASI ZINC TERHADAP, STREPTOCOCCUS MUTANS DAN PORPHYROMONAS GINGIVALIS

Amilia

Program Studi S1 Keperawatan
STIKes Wijaya Husada Bogor

abstrak

latar belakang: *Prevalensi karies gigi dan penyakit periodontal masih tinggi pada anak Indonesia. Usaha mengatasi hal tersebut antara lain melalui melalui penggunaan obat kumur untuk mengurangi jumlah kuman pathogen. Kandungan obat kumur yang beredar di pasar diantaranya adalah chlorhexidine, povidone iodine dan fluoride dengan suplementasi zinc.* **tujuan:** *Penelitian ini bertujuan untuk meneliti efek antibakteri dari obat kumur berbahan aktif chlorhexidine, povidone iodine dan fluoride dengan suplementasi zinc terhadap bakteri campur plak, S. mutans dan P. gingivalis.* **Metode:** *Pengukuran efek antibakteri dilakukan dengan metode disk diffusion. Bakteri sampel (bakteri campur plak, Streptococcus mutans dan Porphyromonas gingivalis) ditanam secara merata pada cawan petri dengan medium MHA. Cakram kertas yang mengandung obat kumur diletakkan di tengah cawan petri dan diinkubasi selama 24 jam pada suhu 37^{o} C (anaerob untuk P. gingivalis, aerob untuk S.mutans dan bakteri campur). Diameter zona hambat bakteri yang mengelilingi cakram kertas diukur dan dibandingkan antara masing-masing bahan aktif yang terkandung dalam obat kumur.* **hasil:** *Chlorhexidine mempunyai efek antibakteri paling kuat dibanding povidone iodine dan fluoride. Chlorhexidine lebih ampuh menghambat pertumbuhan bakteri S.mutans dibanding terhadap bakteri P.gingivalis dan bakteri campur dalam plak, sedang Povidone iodine dan fluoride lebih efektif menghambat pertumbuhan bakteri campur.* **Simpulan:** *Obat kumur chlorhexidine lebih efektif dalam menghambat pertumbuhan bakteri campur dari plak, Streptococcus mutans dan Porphyromonas gingivalis dibanding povidone iodine dan fluoride dengan suplementasi zinc.*

Kata kunci: *Obat kumur, chlorhexidine, fluoride, povidone iodine, Streptococcus mutans, Porphyromonas gingivalis*

abstract

Background: *Dental Caries and periodontal disease prevalence in Indonesian children are still high. Some efforts can be done to overcome the problem; one of them is the use of mouthwash to decrease pathogen microorganisms. The mouthwashes that commercially available in market are chlorhexidine, povidone Iodine and Fluoride with Zinc supplementation.* **Purpose:** *The purpose of this study was to examine the anti bacterial effect of the mouthwashes chlorhexidine, povidone iodine and fluoride with zinc supplementation against mix bacteria that found in the plaque, Streptococcus mutans and Porphyromonas gingivalis.* **Methods:** *The antibacterial effect was measured using disk diffusion test. The bacteria samples (plaque polybacteria, S.mutans and P. gingivalis) were inoculated and spread in the petridish containing MHA. Paper discs containing the mouthwashes were placed in the petridish and incubated for 24 hours at 37^{o}C (anaerobe for P. gingivalis, aerobe for S. mutans and polybacteria). The diameter of inhibition zone surrounding the paper discs were measured and compared between each active ingredient contained in mouthwash.* **results:** *Chlorhexidine had the strongest antibacterial effect than povidone iodine and fluoride. Chlorhexidine was more effective to inhibited the growth of S. mutans than to polybacteria or P.Gingivalis, while Povidone iodine and fluoride were more effective to inhibited the growth of polybacteria.* **Conclusion:** *The mouthwash chlorhexidine was more effective to inhibit the growth of plaque polybacteria, Streptoccous mutans and Porphyromonas gingivalis compared with povidone iodine and fluoride with zinc supplementation.*

Key words: *Mouthwash, chlorhexidine, fluoride, povidone iodine, Streptococcus mutans, Porphyromonas gingivalis*