

INTISARI

Gangguan stabilitas pembentukan plak mengakibatkan berkembangnya spesies mikroba tertentu yang bertindak sebagai agen etiologi karies gigi dan penyakit periodontal. Oleh karena itu upaya pengendalian plak perlu dilakukan, diantaranya dengan memanfaatkan larutan kumur dari daun sirih (*Piper betle Linn*) dan propolis *Trigona sp* yang telah diketahui memiliki sifat antibakteri. Tujuan penelitian ini untuk perbandingan efektifitas berkumur dengan larutan ekstrak propolis *Trigona Sp* dengan larutan ekstrak daun sirih merah dalam menurunkan indeks plak.

Penelitian ini merupakan uji klinis dengan rancangan *pre-post test control group design*. Indeks plak diukur sebelum dan sesudah berkumur dengan ekstrak propolis *Trigona sp* maupun dengan larutan daun sirih merah masing-masing pada konsentrasi 25%. Jumlah sampel sebanyak 96 santri putri yang dibagi ke dalam dua kelompok. Indeks plak diukur dengan metode *Personal Hygiene Performance Indeks* (PHP) yang berikutnya dianalisis dengan uji *paired sample t-test* antara sebelum dan sesudah berkumur, dan dianalisis dengan uji *independent sample t-test* untuk nilai selisihnya.

Nilai rata-rata indeks plak sebelum dan sesudah berkumur dengan larutan propolis *Trigona sp* adalah $2,12 \pm 1,11$ dan $1,08 \pm 0,73$ ($p=0,000$), sedangkan untuk kelompok larutan daun sirih merah adalah $2,68 \pm 0,87$ dan $1,34 \pm 0,70$ ($p=0,000$). Rata-rata selisih penurunan indeks plak pada larutan propolis *Trigona Sp* dan daun sirih merah adalah $1,06 \pm 0,80$ dan $1,39 \pm 0,62$ ($p=0,025$).

Kesimpulan: Terdapat perbandingan pengaruh efektifitas larutan sediaan ekstrak propolis *Trigona sp* 25% dengan larutan daun sirih merah 25% terhadap penurunan indeks plak gigi.

Kata Kunci: Propolis *Trigona Sp*, Sirih Merah, Indeks Plak.

ABSTRACT

*Impairment of plaque formation stability led to the development of certain microbial species that act as an etiologic agent of dental caries and periodontal disease. Therefore, plaque control measures need to be done, including by the using of mouthrinses from red betel leaf (*Piper betle* Linn) and propolis *Trigona* sp which has been known had an antibacterial properties. The purpose of this study to compare the effectiveness of rinsing with a solution of propolis *Trigona* Sp extract with red betel leaf extract solution in reducing the plaque index.*

*This study is a clinical trial design with pre-post test control group design. The plaque index was measured before and after rinsing with propolis *Trigona* sp extract or with a solution of red betel leaves extract each at a concentration of 25%. The total sample of 96 women students were divided into two groups. The plaque index was measured by Personal Hygiene Performance Index (PHP) method, and then analyzed by paired samples t-test between before and after rinsing, and analyzed with independent sample t-test for the value of the difference.*

*The average value of the plaque index before and after rinsing with a solution of propolis *Trigona* sp was 2.12 ± 1.11 and 1.08 ± 0.73 ($p = 0.000$), while for the solution of red betel leaf extract group was 2.68 ± 0.87 and 1.34 ± 0.70 ($p = 0.000$). The mean difference in plaque index decline in solution of propolis *Trigona* Sp and red betel leaf extract group was 1.06 ± 0.80 and 1.39 ± 0.62 ($p = 0.025$).*

*Conclusion: There is a effectiveness comparison between solution of propolis *Trigona* sp 25% with a solution of red betel leaves extract 25% on the reduction of dental plaque index.*

Keywords: *Propolis Trigona Sp, Red Betel, Plaque Index.*