

ABSTRAK

EFEKTIVITAS TABLET HISAP PROBIOTIK *Lactobacillus reuteri* TERHADAP PENURUNAN POPULASI BAKTERI ANAEROB PADA CAIRAN SULKUS GINGIVA PASCA *SCALING AND ROOT PLANING* (Studi pada Pasien Periodontitis Kronis di RSGMP UNSOED)

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Periodontitis kronis merupakan penyakit periodontal destruktif yang mengakibatkan peradangan jaringan periodontal. Periodontitis kronis disebabkan oleh bakteri patogen jenis anaerob yang dapat ditemukan di plak subgingiva dan cairan sulkus gingiva. Terapi periodontal perlu dilakukan untuk mengeliminasi bakteri periodontopatogen dengan perawatan non-bedah *scaling & root planing* serta didukung dengan mengkonsumsi obat yang bersifat antimikrobal sebagai terapi adjuvan. Probiotik seperti *Lactobacillus reuteri* berpotensi sebagai terapi adjuvan karena mampu memproduksi zat antibakteri berupa bakteriosin. Penelitian ini bertujuan untuk mengetahui efektivitas tablet hisap probiotik *Lactobacillus reuteri* terhadap penurunan populasi bakteri anaerob dalam cairan sulkus gingiva pasien periodontitis kronis pasca *scaling & root planing*. Penelitian berupa eksperimental klinis dengan rancangan *pre-test post-test with control group design*. Sampel cairan sulkus gingiva didapatkan dari subjek penelitian 4 pasien kelompok kontrol (hanya SRP) dan 4 pasien kelompok perlakuan (SRP + konsumsi tablet hisap *L. reuteri* 2x/hari selama 7 hari). Data berupa Total Plate Count (TPC) koloni bakteri anaerob cairan sulkus gingiva yang dianalisis statistik menggunakan Uji *Paired t-test* dan *Unpaired t-test*. Hasil rerata penurunan jumlah koloni bakteri anaerob (10^5 CFU/mL) pada kelompok perlakuan dan kontrol secara berturut-turut sebesar $242,2 \pm 10,1$ dan $165,7 \pm 52,6$ ($p \leq 0,05$). Hasil penelitian menunjukkan terdapat perbedaan bermakna rerata penurunan jumlah koloni bakteri anaerob antara kelompok perlakuan dengan kelompok kontrol ($p \leq 0,05$). Simpulan penelitian ini adalah *scaling & root planing* dikombinasikan dengan mengkonsumsi tablet hisap probiotik *Lactobacillus reuteri* efektif dalam menurunkan populasi bakteri anaerob penyebab periodontitis kronis.

Kata kunci: bakteri anaerob, cairan sulkus gingiva, periodontitis kronis, probiotik *Lactobacillus reuteri*, *scaling and root planing*.

ABSTRACT

THE EFFECTIVENESS OF PROBIOTIC *Lactobacillus reuteri* LOZENGES IN REDUCING ANAEROBIC BACTERIAL POPULATION IN GINGIVAL CREVICULAR FLUID AFTER SCALING AND ROOT PLANING (Study on Chronic Periodontitis Patients at RSGMP UNSOED)

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*Chronic periodontitis is a destructive periodontal disease that results periodontal inflammation caused by anaerobic bacteria at subgingival plaque and gingival crevicular fluid. Periodontal treatment is needed to eliminate periodontopathogenic bacteria with non-surgical treatment scaling & root planing and consume antimicrobial medicine as adjuvant therapy. Probiotics such as *Lactobacillus reuteri* can be used as adjuvant therapy because it can produce bacteriosin as antibacterial substances. This study aims to determine the effectiveness of *L. reuteri* probiotic lozenges in reducing the population of anaerobic bacteria in the gingival crevicular fluid of chronic periodontitis patients after scaling & root planing. This study was clinical experimental research with pre-test post-test & control group design. Gingival crevicular fluid sample got from 4 control group patients and 4 treatment group patients. Data formed by Total Plate Count (TPC) of anaerobic bacterial colonies in gingival crevicular fluid which were statistically analyzed using the Paired t-test and Unpaired t-test. Anaerobic bacterial colonies (10^5 CFU/mL) was decreased at 242.2 ± 10.1 in treatment group and 165.7 ± 52.6 in control group. The result showed that there is a significant difference mean reduction number of anaerobic bacterial colonies between the treatment group and the control group ($p \leq 0.05$). Conclusion of this research was that scaling & root planing combined with consumed probiotic *Lactobacillus reuteri* lozenges was effective in reduced the population of anaerobic bacteria that cause chronic periodontitis.*

Keywords: *anaerobic bacteria, chronic periodontitis, gingival crevicular fluid, *Lactobacillus reuteri* probiotic, scaling and root planing.*