

Scaling root planing (SRP) merupakan perawatan mekanis untuk menghilangkan akumulasi kalkulus subgingiva yang mengandung bakteri anaerob fakultatif gram negatif, namun anatomi gigi yang kompleks menyulitkan SRP tanpa aplikasi antimikroba. *Ocimum sanctum* (*O. Sanctum*) salah satu bahan alami yang mengandung beberapa zat fitokimia seperti minyak atsiri, flavonoid, tanin, saponin dan alkaloid sebagai zat antimikroba dan immunomodulator. Penelitian ini bertujuan mengkaji perbedaan efektivitas antara aplikasi gel *ocimum sanctum* 4% dan gel *metronidazole* 25% pasca *scaling root planing* terhadap penurunan *probing depth* (PD), *Relative Attachment Level* (RAL), *papillary bleeding index* (BOP) dan perhitungan jumlah koloni bakteri pada pasien periodontitis kronis.

Pasien usia 30-45 tahun dengan periodontitis kronis kedalaman poket 4-6 mm diberi perlakuan SRP+gel *O.Sanctum* 4% dan SRP+gel *metronidazole* 25% dengan metode *split mouth*. PD dan RAL diukur pada hari ke-0, 21 dan 30, BOP dan perhitungan jumlah koloni diukur hari ke-0 dan 21. Data dianalisis menggunakan Mann Whitney..

Hasil penelitian menunjukkan bahwa seluruh kelompok mengalami perbaikan kondisi klinis secara signifikan pada setiap waktu pengamatan, namun tidak terdapat perbedaan yang bermakna antara kedua bahan tersebut terhadap penurunan *probing depth* (PD), *Relative Attachment Level* (RAL), *papillary bleeding index* (BOP) dan perhitungan jumlah koloni bakteri antara dua kelompok.

Kata kunci : periodontitis kronis , gel *metronidazole* 25%, gel *ocimum sanctum* 4%, antibakteri.

ABSTRACT

Scaling root planing (SRP) is a mechanical treatment to eliminate accumulation of subgingival calculus containing facultative gram-negative anaerobic bacteria, but complex dental anatomy complicates SRP without antimicrobial application. Ocimum sanctum (*O. Sanctum*) is a natural ingredient that contains several phytochemical substances such as essential oils, flavonoids, tannins, saponins and alkaloids as antimicrobial and immunomodulatory agents. This study aimed to examine the effectiveness difference between the application of ocimum sanctum 4% gel and metronidazole gel 25 % after scaling root planing to decrease probing depth (PD), Relative Attachment Level (RAL), papillary bleeding index (BOP) and calculation of the number of bacterial colonies in patients with chronic periodontitis.

Patients aged 30-45 years with chronic periodontitis with pocket depths of 4-6 mm were treated with SRP + 4% *O.Sanctum* gel and SRP + 25% metronidazole gel with split mouth method. PD and RAL were measured on days 0, 21 and 30, BOP and calculation of the number of colonies measured days 0 and 21. Data were analyzed using Mann Whitney.

The results showed that all groups experienced a significant improvement in clinical condition at each time of observation, but there were no significant differences between the two ingredients on the decrease in probing depth (PD), Relative Attachment Level (RAL), papillary bleeding index (BOP) and calculations number of bacterial colonies between the two groups.

Keywords: chronic periodontitis, 25% metronidazole gel, 4% ocimum sanctum gel, antibacterial.