

INTISARI

Periodontitis merupakan penyakit inflamasi jaringan pendukung gigi yang disebabkan interaksi bakteri periodontopatogen serta respon host. Adanya infeksi bakteri menyebabkan sintesis sitokin pro inflamasi salah satunya VEGF yang bila terjadi terus-menerus akan terjadi destruksi jaringan periodontal lebih parah, sehingga dikembangkan metode terapi tambahan bahan terapeutik untuk mengoptimalkan hasil perawatan *scaling* dan *root planing* (SRP). Bunga telang memiliki kandungan antosianin yang mampu menghambat sitokin pro inflamasi. Tujuan dari penelitian ini adalah untuk mengkaji pengaruh gel ekstrak bunga telang (*Clitoria ternatea*) setelah *scaling* dan *root planing* terhadap kadar *Vascular Endothelial Growth Factor* tikus periodontitis.

Subjek penelitian adalah 9 tikus wistar periodontitis yang dibagi dalam 3 kelompok yaitu kelompok perlakuan SRP ditambah gel ekstrak bunga telang 10%, kelompok perlakuan SRP ditambah gel ekstrak bunga telang 5%, kelompok perlakuan SRP ditambah gel CMC-Na 2% sebagai kontrol negatif. Pengambilan sampel cairan sulkus gingiva dilakukan pada hari perlakuan (hari ke-0), hari ke-3, 7 dan 14. Kadar VEGF dianalisis menggunakan ELISA kit. Data dianalisis menggunakan *Two-way ANOVA* ($p < 0,05$).

Hasil penelitian menunjukkan penurunan kadar VEGF pada ketiga kelompok dengan perbedaan bermakna antar jenis perlakuan, antar waktu pengamatan, dan pada interaksi perlakuan dengan waktu pengamatan. Kesimpulan penelitian ini adalah aplikasi gel ekstrak bunga telang (*Clitoria ternatea*) 10% dan 5% setelah *scaling* dan *root planing* dapat menurunkan kadar *Vascular Endothelial Growth Factor* tikus periodontitis.

Kata kunci: Periodontitis, VEGF, Ekstrak bunga telang

ABSTRACT

*Periodontitis is an inflammatory disease of the tooth-supporting tissue caused by periodontopathogen bacteria and the host's response. The presence of bacterial infection causes the synthesis of pro-inflammatory cytokines, one of which is VEGF, which if this occurs continuously will result in more severe periodontal tissue destruction, so additional therapeutic methods have been developed with therapeutic agents to optimize the results of scaling and root planing (SRP) treatment. Butterfly pea flowers contain anthocyanins which can inhibit pro-inflammatory cytokines. The aim of this study was to examine the effect of butterfly pea flower extract gel (*Clitoria ternatea*) after scaling and root planing on Vascular Endothelial Growth Factor levels in periodontitis rats.*

The research subjects were 9 periodontitis wistar rats divided into 3 groups, the SRP treatment group plus 10% butterfly pea flower extract gel, the SRP treatment group plus 5% butterfly pea flower extract gel, the SRP treatment group plus 2% CMC-Na gel as a negative control. Gingival crevicular fluid samples were taken on the day of treatment (day 0), days 3, 7 and 14. VEGF levels were analyzed using an ELISA kit. Data were analyzed using Two-way ANOVA ($p < 0.05$).

*The results showed a decrease in VEGF levels in the three groups with significant differences between types of treatment, observation time, and interaction between treatment and observation time. The conclusion of this study is that the application of butterfly pea flower extract gel (*Clitoria ternatea*) 10% and 5% after scaling and root planing can reduce Vascular Endothelial Growth Factor levels in periodontitis rats.*

Keywords: *Periodontitis, VEGF, Butterfly pea flower extract*