

INTISARI

Aggregatibacter actinomycetemcomitans merupakan salah satu bakteri patogen penyebab periodontitis. Bakteri ini mempunyai potensi virulensi berupa promosi kolonisasi, destruksi jaringan, dan penghambatan pertahanan jaringan. Daun binahong merupakan salah satu bahan herbal antibakteri dengan kandungan senyawa metabolit sekunder antibakteri berupa flavonoid, tanin, alkaloid, dan saponin. Tujuan dari penelitian ini adalah untuk mengetahui potensi antibakteri ekstrak etanolik daun binahong [*Anredera cordifolia* (ten.) steenis.] terhadap pertumbuhan bakteri *Aggregatibacter actinomycetemcomitans* (kajian *in vitro*).

Penelitian ini menggunakan daun binahong [*Anredera cordifolia* (ten.) steenis.] yang diekstraksi menggunakan metode maserasi dengan pelarut etanol 70%. Kelompok uji terdiri dari kelompok kontrol positif (klorheksidin glukonat 0,2%), kontrol negatif (DMSO 5%), kelompok ekstrak etanolik daun binahong konsentrasi 10%, 20%, 40%, dan 80%. Pengujian aktivitas antibakteri dilakukan menggunakan metode difusi cakram dengan lima kali pengulangan. Inkubasi dilakukan selama 1x24 jam dengan suhu 37°C pada kondisi anaerob. Pengamatan dilakukan dengan mengukur zona hambat yang terbentuk setelah proses inkubasi. Analisis statistik dilakukan dengan metode ANAVA satu jalur dan *post-hoc LSD*.

Hasil uji menunjukkan perbedaan rata-rata diameter zona hambat dengan kelompok klorheksidin 0,2% sebagai kelompok tertinggi, diikuti oleh kelompok ekstrak etanolik daun binahong 80%, 40%, 20%, dan 10% secara berurutan. Kelompok DMSO 5% tidak menghasilkan zona hambat pada semua pengulangan. Hasil analisis statistik menunjukkan bahwa kelompok klorheksidin 0,2%, serta kelompok ekstrak etanolik daun binahong konsentrasi 80%, 40%, 20%, dan 10% berpengaruh terhadap diameter zona hambat bakteri *Aggregatibacter actinomycetemcomitans* dengan perbedaan yang bermakna pada perbandingan antar kelompok. Kesimpulan dari penelitian ini menunjukkan bahwa ekstrak etanolik daun binahong memiliki potensi antibakteri terhadap pertumbuhan bakteri *Aggregatibacter actinomycetemcomitans*.

Kata kunci : Daun binahong, *Aggregatibacter actinomycetemcomitans*, antibakteri, zona hambat.

ABSTRACT

Aggregatibacter actinomycetemcomitans is one of the pathogenic bacteria that causes periodontitis. This bacterium has virulence potential in the form of promotion of colonization, tissue destruction, and tissue defense inhibition. Binahong leaves are one of herbal ingredients containing antibacterial secondary metabolites such as flavonoids, tannins, alkaloids, and saponins. The purpose of this study was to determine the antibacterial potential of the ethanolic extract of binahong leaf [*Anredera cordifolia* (ten.) steenis.] on the growth of the bacteria *Aggregatibacter actinomycetemcomitans* (in vitro study).

This study used binahong leaf [*Anredera cordifolia* (ten.) steenis.] which were extracted using the maceration method with 70% ethanol solvent. The test group consisted of positive control group (0.2% chlorhexidine gluconate), negative control (5% DMSO), binahong leaf ethanolic extract group (10%, 20%, 40%, and 80% concentrations). Antibacterial activity testing was carried out using the disc diffusion method with five repetitions. Incubation was carried out for 1x24 hours at 37°C under anaerobic conditions. Observations were done by measuring the inhibition zone formed after the incubation process. Statistical analysis was carried out using one way ANOVA method and post-hoc LSD.

The test results showed average differences in the inhibition zone diameter between the test groups with the 0.2% chlorhexidine group as the highest group, followed by the 80%, 40%, 20%, and 10% binahong leaf ethanolic extract groups respectively. The 5% DMSO group did not produce any inhibition zone on all repetitions. The results of statistical analysis showed that the 0.2% chlorhexidine group and the binahong leaf ethanolic extract group with concentrations of 80%, 40%, 20%, and 10% had an effect on the inhibition zone diameter of *Aggregatibacter actinomycetemcomitans* growth with a significant difference in the comparison between groups. The conclusion of this study showed that the ethanolic extract of binahong leaf had antibacterial potential against the growth of *Aggregatibacter actinomycetemcomitans* bacteria.

Keywords : Binahong leaf, *Aggregatibacter actinomycetemcomitans*, antibacterial agent, inhibition zone.