

INTISARI

Latar Belakang: Penyakit periodontal menduduki urutan kedua masalah gigi di masyarakat. Bakteri *Aggregatibacter actinomycetemcomitans* merupakan penyebab periodontitis yang termasuk dalam golongan bakteri gram negatif, anaerob. Nanas (*Ananas comosus*) adalah tanaman yang telah tersebar luas ke seluruh dunia dan dapat tumbuh di dataran rendah maupun dataran tinggi. Pada bagian kulit buah nanas (*Ananas comosus*) mengandung flavonoid dan enzim bromelin yang mampu menghambat pertumbuhan bakteri.

Tujuan: Penelitian ini bertujuan untuk mengetahui Kadar Hambat Minimal (KHM) dan Kadar Bunuh Minimal (KBM) dari ekstrak kulit nanas (*Ananas comosus*) terhadap pertumbuhan *Aggregatibacter actinomycetemcomitans*.

Metode: Jenis penelitian adalah penelitian ekperimental semu laboratoris (*in vitro*). Uji daya antibakteri dilakukan dengan metode dilusi cair pada media *Brain Heart Infusion* (BHI) dan metode dilusi padat pada media *Triton Soya Agar* (TSA). Ekstrak kulit nanas (*Ananas comosus*) diencerkan dengan cara berseri kedalam beberapa konsentrasi: 100%, 50%, 25%, 12,5%, 6,25%, 3,125%, 1,56%, 0,78%, dan 0,39%. Kadar hambat minimal dan kadar bunuh minimal ditentukan dengan mengamati dari pertumbuhan bakteri *Aggregatibacter actinomycetemcomitans* media BHI dan TSA.

Hasil: Kadar Hambat Minimal (KHM) dan Kadar Bunuh minimal (KBM) terdapat pada konsentrasi 6,25%.

Kesimpulan: Ekstrak kulit nanas (*Ananas comosus*) efektif dalam menghambat maupun membunuh bakteri *Aggregatibacter actinomycetemcomitans*.

Kata Kunci : daya antibakteri, *Aggregatibacter actinomycetemcomitans*, kulit nanas, metode dilusi.

ABSTRACT

Background: Periodontitis comes as the second most common dental disease problem in society. *Aggregatibacter actinomycetemcomitans* bacteria belongs to anaerobic gram-negative group known as the main cause of aggressive periodontitis. Pineapple (*Ananas comosus*) is a widely spread plant which can live in highlands as well as in lowlands throughout the globe. Flavonoid and bromelain enzyme found in pineapple (*Ananas comosus*) skin can be used as a bacterial growth inhibitor.

Objective: The purpose of this study was to determine the Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) of pineapple (*Ananas comosus*) skin extract on the growth of *Aggregatibacter actinomycetemcomitans*.

Method: This study was an in vitro, semi-laboratory experimental. The subjects in this study were *Aggregatibacter actinomycetemcomitans* and pineapple (*Ananas comosus*) skin extract. Antibacterial effect test was conducted using liquid dilution method on Brain Heart Infusion (BHI) medium and solid dilution method on Triton Soya Agar (TSA) medium. Pineapple (*Ananas comosus*) skin extract was serially diluted into some concentrations: 100%, 50%, 25%, 12.5%, 6.25%, 3.125%, 1.56%, 0.78%, and 0.39%. Minimum inhibitory concentration and minimum bactericidal concentration were determined by observing the growth of *Aggregatibacter actinomycetemcomitans* on both medium.

Result: Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) was found at 6,25%.

Conclusion: Pineapple (*Ananas comosus*) skin extract was effective in inhibiting and eliminating *Aggregatibacter actinomycetemcomitans*.

Keywords : antibacterial effect, *Aggregatibacter actinomycetemcomitans*, pineapple skin, dilution method.