INTISARI

Aggregatibacter actinomycetemcomitans merupakan salah satu bakteri penyebab periodontitis. Penggunaan obat herbal sebagai antibakteri periodontitis mulai meningkat seperti penggunaan membran kulit telur ayam, karena memiliki komponen antibakteri yaitu *lysozyme, β-N-acetylglucosaminidase,* dan *ovotransferrin.* Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak membran kulit telur ayam terhadap pertumbuhan bakteri *Aggregatibacter actinomycetemcomitans.*

Subjek penelitian terdiri atas bakteri *Aggregatibacter actinomycetemcomitans* yang diencerkan hingga mencapai kekeruhan 10^8 CFU/ml. Uji antibakteri menggunakan metode difusi. Sampel terbagi menjadi tiga kelompok yaitu perlakuan (ekstrak membran kulit telur ayam konsentrasi 5%, 10%, 20%, dan 40%), kontrol positif (obat kumur *Chlorhexidine* 0,2%), dan kontrol negatif (akuades steril). Pertumbuhan bakteri diamati dengan mengukur diameter zona hambat setelah inkubasi 24 jammenggunakan jangka sorong ketelitian 0,01 mm.

Hasil penelitian menunjukkan terdapat zona hambat pada kelompok kontrol positif, sedangkan pada kelompok perlakuan dan kontrol negatif tidak terdapat zona hambat. Kesimpulan penelitian ini adalah ekstrak membran kulit telur ayam tidak dapat menghambat pertumbuhan bakteri *Aggregatibacter actinomycetemcomitans* dan konsentrasi ekstrak membran kulit telur ayam tidak berpengaruh terhadap pertumbuhan bakteri *Aggregatibacter actinomycetemcomitans.*

Kata Kunci : membran kulit telur ayam, *Aggregatibacter actinomycetemcomitans,* antibakteri, zona hambat.

ABSTRACT

Aggregatibacter actinomycetemcomitans is one of the bacteria that cause periodontitis. The use of herbal medicine as antibacterial for periodontitis is increasing like in eggshell membrane that contains antibacterial components such as lysozyme, β-N-acetylglucosaminidase, and ovotransferrin. This study was aimed to determine effect of eggshell membrane extract to the growth of *Aggregatibacter actinomycetemcomitans*.

The subjects consisted of *Aggregatibacter actinomycetemcomitans* that diluted to obtain 10^8 CFU/ml bacterial density. Antibacterial test using diffusion method. The samples were divided into 3 groups, treatment groups (eggshell membrane extract with 5%, 10%, 20%, dan 40% concentration), positive control (Chlorhexidine 0,2% mouthwash), dan negative control (sterile aquadest). The growth of bacteria was determined with measured the diameter of inhibitory zone after 24 hours of incubation using vernier calipers with 0,01 mm precision.

Result of the study showed that inhibitory zone formed around the positive control, meanwhile inbitory zone was not formed around the treatment group and the negative control. The conclusion of this study was eggshell membrane extract can not inhibit the growth of *Aggregatibacter actinomycetemcomitans* and concentration had no effect on the growth of *Aggregatibacter actinomycetemcomitans.*

Keywords : eggshell membrane, *Aggregatibacter actinomycetemcomitans*, antibacterial, inhibitory zone