INTISARI

Streptococcus sanguinis merupakan bakteri pionir pembentuk plak gigi. Kemampuan adhesi *S. sanguinis* pada permukaan gigi dipengaruhi oleh adanya protein perlekatan dan *glucosyltransferase*. Daun salam (*Syzygium polyanthum* [Wight] Walp.) telah dikenal sebagai obat tradisional untuk mengatasi berbagai penyakit. Senyawa anti bakteri yang terdapat dalam daun salam antara lain flavonoid, tanin, dan minyak atsiri. Penelitian ini bertujuan untuk mengetahui efek rebusan daun salam terhadap kemampuan adhesi *S. sanguinis*.

Rebusan daun salam dibuat pada konsentrasi 12,5%; 25%, dan 50%. Kelompok kontrol berupa akuades. Suspensi bakteri ditetapkan mengandung $1,5x10^8$ CFU/ml bakteri. *Coating* saliva pada tabung reaksi dilakukan sebelum penelitian. Rebusan daun salam dan akuades dimasukkan dalam tabung reaksi yang telah berisi suspensi *S. sanguinis* dalam kaldu BHI. Tabung reaksi diinkubasi selama 18 jam pada suhu 37°C pada posisi kemiringan 30°. Bakteri pada dinding tabung reaksi dilepaskan ikatannya menggunakan sodium hidroksida 0,5M. Densitas optik diukur menggunakan spektrofotometer pada panjang gelombang 600 nm, dan hasil dianalisis pada tingkat signifikansi 0,05.

Hasil *one way ANOVA* menunjukkan perbedaan bermakna antara densitas optik kelompok kontrol dan perlakuan; dan *LSD* memperlihatkan perbedaan antara pengaruh rebusan konsentrasi 12,5% dan 50%. Kesimpulan penelitian ini yaitu rebusan daun salam menurunkan kemampuan adhesi *S. sanguinis*. Rebusan konsentrasi 50% menunjukkan kemampuan yang lebih baik dibandingkan 12,5%.

ABSTRACT

Streptococcus sanguinis is a pioneer in dental plaque formation. Streptococcus sanguinis adhesion is affected by adherence protein and glucosyltransferase. Bay leaf (Syzygium polyanthum [Wight] Walp.) has known as a traditional medicine. Anti bacterial agent contained in bay leaf is flavonoids, tannins, and essential oils. The aim of this study was to determine the effect of bay leaf decoction to the adhesion ability of S. sanguinis.

Bay leaf decoction was prepared at a concentration of 12,5%; 25%, and 50%. Distilled water was used for control group. Bacterial suspension was set containing $1,5x10^8$ CFU/ml. Salivary coating was done on the reaction tubes prior to the study. Bay leaf decoction and distilled water was placed in a tube which already contain S. sanguinis suspension. Reaction tubes were incubated for 18 hours at 37℃ in 30° tilted condition. Adhere bacteria were removed using 0,5M sodium hydroxide followed with optical density measurement on spectrophotometer at 600 nm wavelength. The result was analyzed at 0,05 significance level.

Result of one way ANOVA showed significance difference on the optical density between treatment and control; furthermore, LSD test showed significance difference between effect of 12,5% and 50% decoction. The conclusion of this study is bay leaf decoction could reduce S. sanguinis adhesion. The concentration of 50% shows more effective result compared with 12,5%.