INTISARI

Friksi alat ortodonti dipengaruhi saliva, debris, dan biodegradasi material ortodonti. Biofim memperlemah ikatan bahan adhesif ortodonti. Perawatan ortodonti yang lama memerlukan kontrol plak, salah satunya obat kumur.Pepermint (*Mentha piperita L.*) mempunyai banyak fungsi, salah satunya untuk obat kumur antiseptik.Daunpepermintmengandung senyawa mentol, mentil asetat, menton, polifenol, flavonoid glikosida, dan senyawa lainnya. Penelitian ini bertujuan untuk mengetahui efek antibakterial obat kumur ekstrak daun pepermint (*Mentha piperita* L.) terhadap bakteri *S. mutans* pada pemakai alat ortodonti cekat.

Efek antibakterial obat kumur daun pepermint ditentukan secara klinis. Sepuluh subjek penelitian diminta berkumur obat kumur ekstrak daun pepermint dan berkumur klorheksidin glukonat sebagai *gold standard*. Pada tiap subjek dilakukan swab plak gigi yang akan dilakukan pengenceran 10^{-3} dalam larutan phosphat buffer salin dan ditanam dalam media agar spesifik bakteri *S.mutans* TYS20B. Jumlah koloni bakteri setelah inkubasi 2x24 jam dihitung menggunakan *colony counter*. Data kemudian dianalisis dengan uji *paired t-test*.

Hasil *paired t-test* menunjukan perbedaan jumlah koloni*S. mutans* yang bermakna ($p<0,05$) setelah pemakaian obat kumur ekstrak daun pepermint 5% dibandingkan klorheksidin glukonat. Hal ini mengindikasikan bahwa pemakaian obat kumur ekstrak daun pepermint (*Mentha piperita* L.) 5% menurunkan jumlah koloni bakteri *S. mutans* pada pemakai alat ortodonti cekat.

Kata Kunci: obat kumur ekstrak daun pepermint, jumlah koloni bakteri, media spesifik TYS20B, *Streptococcus mutans*

ABSTRACT

Friction from orthodontic appliance is affected by saliva, debris, and biodegradation of orthodontic materials. Biofim weaken orthodontic bonding adhesive. Long orthodontic treatment requires plaque control, one of them by using mouthwash. Peppermint (*Mentha piperita* L.) has many functions, one of them for an antiseptic mouthwash. Peppermint leaves contain menthol, menthyl acetate, menthone, polyphenols, flavonoids glycosides, and other compounds. This study aims to determine the effect of antibacterial mouthwash peppermint leaf extract (*Mentha piperita* L.) against the bacteria *S. mutans* in fixed orthodontic appliance users.

The effect of antibacterial from peppermint leaves mouthwash was determined clinically. Ten research subjects were asked to gargle peppermint leaf extract mouthwash and gargle chlorhexidinegluconate as the gold standard. In each subject was performed dental plaque swab which would be carried with dilution 10^{-3} in phosphate buffered saline solution and embedded in agar medium specific *S. mutans* bacteriaTYS20B. The number of bacterial colonies after incubation 2x24 hours werecalculated using colony counter. Data were analyzed by paired t-test.

Paired t-test showed a significant difference in the number of colonies of *S. mutans* ($p < 0.05$) after the use of peppermint leaf extract mouthwash 5% compared by chlorhexidine gluconate. It indicates that the use of mouthwash extracts of peppermint leaves (*Mentha piperita* L.) 5% decreases the number of colonies of *S. mutans* in fixed orthodontic appliance users.

Key words : Peppermint leaf extract mouthwash, the number of colonies of *S.mutans*, agar medium specific *S. mutans* bacteria TYS20B, *Streptococcus mutans*