

ABSTRACT

Comparison of The Efficacy in Reducing Colonization of *Streptococcus mutans* Between Japanese Green Tea, Chinese Green Tea, and Indonesian Green Tea

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Introduction: *Streptococcus mutans* is a Gram-positive coccus commonly found in the human oral cavity and is a pathogen of dental caries. *Streptococcus mutans* is known to be associated with infective endocarditis. Green tea is known for having antibacterial effect against *Streptococcus mutans*. This study compared the efficacy in reducing colonization of *Streptococcus mutans* between japanese green tea, chinese green tea, and indonesian green tea.

Methods: This study was an experimental study. Antibacterial activity test was performed to evaluate the minimum inhibitory concentration (MIC) using dilution method of japanese green tea, chinese green tea, and indonesian green tea at the concentration of 100mg/ml, 50mg/ml, 25mg/ml, 12,5mg/ml, 6,25mg/ml. The minimum bactericidal concentration (MBC) was determined by culturing from broth dilution test on *Chocolate Blood Agar*.

Results: According to the experiment, growth of *Streptococcus mutans* in japanese green tea on *Chocolate Blood Agar* did not show any antibacterial effect. While chinese green tea and indonesian green tea did not show colonization of *Streptococcus mutans* on *Chocolate Blood Agar* at the concentration of 100mg/ml in 40% of replication and 60% of replication respectively.

Conclusion: Indonesian green tea has greater efficacy than both chinese green tea and the japanese green tea in reducing colonization of *Streptococcus mutans* at the concentration of 100mg/ml.

Keywords: *Streptococcus mutans*– green tea– antibacterial – dilution test