

Pengaruh pasta gigi mengandung xylitol terhadap pertumbuhan streptococcus mutans serotip C in vitro

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Abstrak

Streptococcus mutans serotype C is a major causative agent to caries and is found predominantly in dental plaque and saliva. Dentifrice containing xylitol has been shown to inhibit the growth of mutans streptococci. The aim of the study was to identify in vitro the influence of dentifrice containing xylitol on S. mutans serotype C. The solution of dentifrice containing xylitol was first diluted with sterile aquadest at 1:1, and then to concentrations of 100%, 10%, 1%, 0.1%, 0.01%, and 0.001%, also with positive and negative controls. These solutions were exposed to S. mutans Serotype C by diffusion and dilution method. The results of the study show that the inhibition zone formed at concentration of 10% and 100%. There was a significant positive correlation between the concentration of dentifrice and the growth of mutans streptococci ($p < 0.05$), with MBC point at 10%. In conclusion, dentifrice containing xylitol has an antibacterial effect and can inhibit the growth of S. mutans serotype C. Increasing concentration of dentifrice containing xylitol increases the size of the inhibition zone.