

Efek permen propolis hisap terhadap profil protein streptococcus mutans yang diisolasi dari plak gigi = The effect of propolis candy to the protein profile of streptococcus mutans isolated from dental plaque / Adrie Octavianus Thioritz

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Abstrak

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Latar Belakang: Streptococcus mutans (S.mutans) merupakan bakteri utama penyebab karies. Virulensi S.mutans dapat digambarkan melalui profil protein. Telah banyak penelitian yang menyebutkan propolis memiliki sifat anti bakteri dan dapat menurunkan prevalensi S.mutans. Tujuan: Mengetahui perbedaan efek antara permen propolis hisap, permen X dan permen madu terhadap profil protein S mutans yang diisolasi dari plak gigi. Metode: Sampel plak diambil sebelum dan sesudah perlakuan lalu dibiakkan pada medium agar dan medium cair TYS Broth. Profil protein dianalisis dengan metode SDS PAGE. Hasil: Permen X dan permen madu meningkatkan ekspresi protein GbpB, GbpC dan menurunkan ekspresi protein GtfB, GtfC, GtfD dan AgI/II. Permen propolis hisap dan permen madu sama-sama meningkatkan ekspresi protein GbpD. Kesimpulan: Permen X dan permen madu memiliki efek yang cukup mirip dalam mengubah profil protein S.mutans. Sementara permen propolis hisap memiliki efek berlawanan dengan permen X dan permen madu.

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**ABSTRACT**

Background: Streptococcus mutans (S.mutans) is the main bacteria that caused caries. S.mutans' virulence can be observed by protein profile. There have been lots of researches which proved that propolis has antibacterial properties and can reduce the prevalence of S.mutans. Objectives: To know the differences between the effects of propolis candy, X candy, and honey candy to the protein profile of S.mutans that isolated from dental plaque. Methods: Plaque samples were taken before and after treatment and then cultured on agar and liquid medium TYS Broth. Protein profile was analyzed using SDS PAGE method. Result: X candy and honey candy both increase the protein expression of GbpB, GbpC and decrease the protein expression of GtfB, GtfC, GtfD and AgI/II. Propolis candy and honey candy both increase the protein expression of GbpD. Conclusion: X candy and honey candy have fairly similar effects in changing the protein profile of S.mutans. While, propolis candy has the opposite effects with X candy and honey candy.