

Efektivitas Pasta Gigi Lilin Propolis Terhadap Penurunan Jumlah Koloni Streptococcus mutans pada Plak dan Penurunan Indeks Plak Subjek Bebas Karies = Efficacy of Toothpaste Containing Propolis Wax On The Growth of Streptococcus mutans In Dental Plaque and Plaque Scores In Free-Caries Subjects

Astrid Levina, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20466632&lokasi=lokal>

Abstrak

Perkembangan karies gigi terkait erat dengan karakter kariogenik Streptococcus mutans, yang menyebabkan pembentukan plak gigi. Propolis dilaporkan sebagai agen antibakteri karena mengandung flavonoid yang dapat menghambat pertumbuhan Streptococcus mutans. Lilin propolis adalah residu dari ekstrak propolis yang masih mengandung flavonoid.

Tujuan: Menganalisis efektivitas pasta gigi dengan kandungan lilin propolis terhadap pertumbuhan koloni Streptococcus mutans dan penurunan indeks plak dan membandingkannya dengan pasta gigi yang mengandung propolis.

Metode: 24 subjek bebas karies diinstruksikan untuk menyikat gigi dua kali sehari menggunakan pasta gigi uji selama 7 hari dan tidak melakukan pembersihan gigi selain sikat gigi. Dilakukan pemeriksaan sebelum dan sesudah penggunaan pasta gigi uji. Akumulasi plak dihitung menggunakan indeks plak Silness-Loe. Sampel plak dikumpulkan dari permukaan bukal insisif atas untuk penghitungan bakteri Streptococcus mutans. Data dianalisis secara statistik menggunakan uji Wilcoxon dan uji Kruskal Wallis.

Hasil: Tidak terdapat perbedaan bermakna antara penggunaan pasta gigi dengan kandungan lilin propolis dan propolis.

Kesimpulan: Pasta gigi dengan kandungan lilin propolis dan pasta gigi dengan kandungan propolis memiliki efek antibakteri pada Streptococcus mutans, sehingga dapat digunakan sebagai bahan tambahan dalam pasta gigi untuk mencegah karies gigi.

.....The development of dental caries was closely associated with Streptococcus mutans, which leads to the forming of dental plaque. Propolis has been reported as a potent antimicrobial material by containing flavonoids those can inhibit growth of Streptococcus mutans. Propolis wax is a residue of propolis extract that still contains flavonoids.

Aim: To analyze the effect of toothpaste containing propolis wax on the growth of Streptococcus mutans and formation of dental plaque in free caries subjects and to compare it with toothpaste containing propolis.

Methods: 24 subjects were instructed to brush their teeth twice daily using the assigned toothpaste and refrain from any other oral hygiene procedures throughout the duration of the study. The patients were examined at the first visit as baseline record and after 7 days for comparison. The plaque accumulation were scored using Silness Loe Plaque Index. Plaque samples were collected from buccal surface upper incisors for bacterial count. The data was statistically analyzed using Wilcoxon test and Kruskal Wallis test.

Results: No statistically significant difference was noted between propolis wax and propolis groups.

Conclusion: Both toothpastes have good antimicrobial effect on caries producing bacteria Streptococcus mutans, thus can be used in patients as a regular home care preventive aid in combating dental caries.