

ABSTRACT

Background: Caries is the most common problem that can be found on children's oral cavity. Caries can be prevented by having a controlled diet, routine dental check-ups every 6 months, scaling, fluoridation, brushing the teeth, rinsing the mouth and by using the siwak. Cleaning the teeth by using siwak is one of Prophet Muhammad S.A.W Sunnah. Siwak (*Salvadora persica*) can also be used as an ingredient in a mouthwash solution. The use of siwak can increase the saliva pH which in turn minimalise rate of email demineralization. High saliva pH and low demineralization rate can prevent the process of caries

Objectives: The aim of this study is to find out if there is a difference between rinsing the mouth with siwak extract and rinsing the mouth with infused siwak towards saliva pH.

Methods: The following study was done by using the quasy experimental method with one group pretest-posttest approach involving 27 subjects that were picked randomly by using the stratified random sampling technique. The subjects were instructed to rinse the mouth with siwak extract mouthwash, infused siwak mouthwash and mineral water for 30 seconds. The saliva samples were obtained before and after the intervention by spitting into the measuring glass. The samples were then measured by using the pH Metre. The results were analyzed by using the Shapiro-Wilk normality and data distribution test, Levene's variance test and Friedman and Wilcoxon hypothesis test.

Results: The results of Friedman hypothesis test showed that the value of $p > 0,05$ ($p = 0,014$)

Conclusion: There is a difference between rinsing the mouth with siwak extract and rinsing the mouth with infused siwak towards saliva pH.

Keywords: Saliva, saliva pH, mouth rinsing, *Salvadora persica*, extract, infused, children

INTISARI

Latar Belakang: Karies merupakan masalah yang paling sering ditemukan pada rongga mulut anak. Karies dapat dicegah dengan mengontrol diet, memeriksakan gigi 6 bulan sekali, scaling, floridasi, menyikat gigi, berkumur dan menggunakan siwak. Membersihkan gigi dengan menggunakan siwak merupakan salah satu Sunnah Nabi Muhammad S.A.W. Siwak (*Salvadora persica*) juga dapat digunakan sebagai bahan dalam larutan obat kumur. Penggunaan siwak dapat meningkatkan pH saliva yang akan meminimalisir laju demineralisasi email. PH saliva yang tinggi dan rendahnya laju demineralisasi email akan mencegah terjadinya proses karies.

Tujuan: Tujuan dari penelitian ini adalah untuk mencari tahu apakah ada perbedaan antara berkumur dengan ekstrak siwak dan berkumur dengan infus siwak terhadap pH saliva.

Metode: Penelitian ini dilakukan dengan menggunakan metode quasy experimental dengan pendekatan one group pretest-posttest yang melibatkan 27 subyek yang telah dipilih secara acak menggunakan teknik stratified random sampling. Subyek diinstruksikan untuk berkumur dengan obat kumur ekstrak siwak, obat kumur infus siwak dan air mineral selama 30 detik. Sampel saliva diambil sebelum dan setelah perlakuan dengan cara meludah kedalam gelas ukur. Sampel kemudian diukur dengan menggunakan pH meter. Hasil kemudian dianalisis menggunakan uji normalitas dan distribusi data Shapiro-Wilk, uji variansi Lavene's dan uji hipotesis Friedman and Wilcoxon.

Results: Hasil dari uji hipotesis Friedman menunjukkan nilai $p > 0,05$ ($p = 0,014$)

Kesimpulan: Terdapat perbedaan antara berkumur dengan ekstrak siwak dan berkumur dengan infus siwak terhadap pH saliva.

Kata kunci: Saliva, pH saliva, berkumur, *Salvadora persica*, ekstrak, infus, anak