



TOOTHPASTES EFFICIENCY FOR DECREASING STREPTOCOCCUS MUTANS LEVEL IN DENTAL BIOFILM OF YOUNG CHILDREN



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BACKGROUND: Streptococcus Mutans (SM) is known as the most cariogenic bacteria so SM level in dental biofilm may be used for toothpastes efficiency assessment.

AIM: To study toothpastes efficiency for decreasing dental biofilm SM level in young children.

METHODS:

- Cross-sectional study was approved by Volgograd Ethics Committee.
- 45 caries free children aged 12-23 months (mean age 16.6 months) who had not had oral hygiene were enrolled in the study.
- Three types of toothpastes were used for the children's oral hygiene: with fluoride 250ppmF (F2), fluoride 500ppmF (F5) and xylitol (X).
- The number of children in F2, F5 and X groups was equal (15 children).
- Dentocult SM kit (Orion Diagnostica, Finland) was used to reveal the dental biofilm SM level, colony counts of >100000CFU/ml were considered high.
- The SM level was estimated at baseline and after 3 months.
- Statistical analysis was performed using STATISTICA-6; mean, 95% confidence interval (CI), and were calculated.

RESULTS:

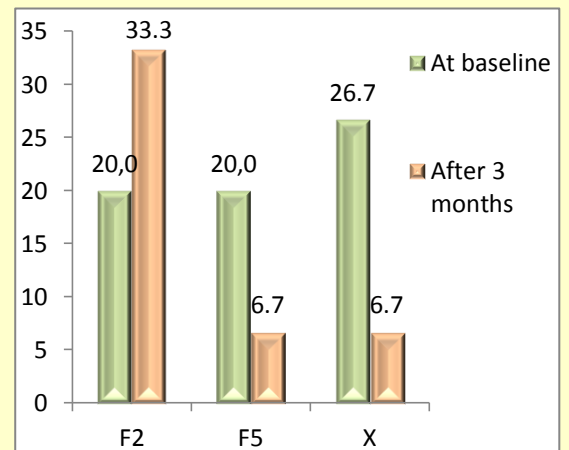
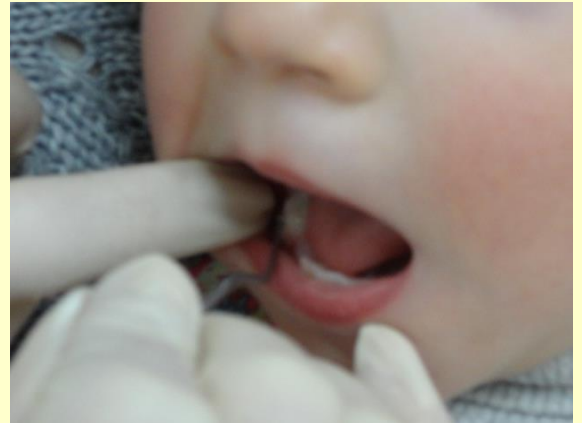
Number of children with high SM level	F2	F5	X
At baseline	20.0%	20.0%	26.7%
After 3 months	33.3%	6.7%	6.7%
Relative risk (RR)	1.2	0.85	0.78
95% confidence interval (CI)	CI 0.77-1.86	CI 0.64-1.14	CI 0.56-1.09

Tab.1 Prevalence of children with high SM level at baseline and after 3 month.

CONCLUSION: Toothpastes with 500ppmF and xylitol were more efficient than toothpastes with 250ppmF in decreasing the number of young children with high SM level in dental biofilm.

SOURCES OF FUNDING: Volgograd State Medical University.

Fig. 1. Collection of dental biofilm samples in children.



Tab. 2. Prevalence of children with high SM level.

Fig. 2. Using of Dentocult SM kit to reveal the dental biofilm SM level.



