ABSTRACT

ANTIBACTERIAL ABILITY OF PROPOLIS FROM *Apis mellifera* ASSOCIATED TO SODIUM FLUORIDE IN THE CONTROL ON THE DENTAL BIOFILM

Antibacterial properties from propolis has become a subject of increasing interest in Dentistry to use it as a chemical control for the dental biofilm. The aim of this study was to evaluate the action of a 5% propolis gel associated to 0,05% sodium fluoride over the assesment of salivary levels of *Streptococcus mutans,* inhibition of white spots, and dental biofilm increasing, at high caries risk patients. This study was previously submitted and aproved by Survey Ethical Comitte at UFMS. Voluntaries' permission allowed by 97 children whose rates were over 10^6 / mL of saliva assesment of *Streptococcus mutans* colony – forming units were used in this research. The sample was randomly divided in two groups: Group 1 ((n= 49, Gel A) and Group 2 (n=48, Gel B), trough a randomized double-blind trial. Four topics applications were done with the experimental gel once a week, during a month. The salivary levels of *Streptococcus mutans* were analised by the spatula method as the white spots by clinical observation and biofilm accumulation by the IHO-S index. Data revealed a significative reduction of *Streptococcus mutans* in salivary levels with the best performance of the Gel A (Propolis 5% + NaF 0,05%) - ($p< 0,0001$) when compared to Gel B (Propolis 5%). The same results were observed in inhibition of white spots. Biofilm accumulation was significantly reduced ($p<0,0001$) after the gel aplication in both groups, but they didn't show statistical difference ($p>0,05$). It was concluded that 5% propolis added to 0,05% sodium fluoride acted over the salivary levels of *Streptococcus mutans* and showed the ability to balance DES-RE process, inactivating white spots. Regarding dental biofilm accumulation, the performance of both gel were the same.

Key – words: Fluoride. Propolis. *Streptococcus mutans*