

ABSTRACT

Backgorund: Dental erosion is a prevalent condition that occurs worldwide. It is the result of exposure of the enamel to non-bacterial acids of extrinsic and intrinsic origin, whereby mineral loss occurs from the surface of the tooth. Dental erosion is caused by sustained direct contact between tooth surfaces and acidic substances. It has long been recognized that demineralization of dental enamel will occur once the oral environmental pH reaches the critical threshold of 5.5. Fluoride has an important role in remineralization of enamel and dentin. Topical fluoride is one of treatment choices to strengthen enamel and dentin, fluoride varnish is the most popular nowadays contains 5% sodium fluoride or 22.600 ppm. In this research, author want to know about fluoride varnish that can prevent dental erosion against carbonic acid drinks. **Purpose:** to analyze the fluoride varnish effectiveness against prevention of dental erosion with carbonic acid drinks. **Method:** 21 bovine teeth which included 3 groups whose contents 7 teeth each group. Group I is control group without intervention and submerged in aquadest and artificial saliva. Group II without fluoride varnish application and submerged in erosive cycling. Group III with fluoride varnish application and submerged in erosive cycling. The sections of the teeth were examined under scanning electron microscopy (SEM) and EDX. The data were analyzed using the Kruskall Wallis Test, Tukey HSD and Pearson Correlations Test. **Result:** Group I showed the erosion depth (12,0445 μ m) and 2,4314% Fluor, Group II showed the biggest erosion depth (100,15 μ m) and 1,6043% Fluor, Group III showed the erosion depth (26,5886 μ m) and 4,3471% Fluor. **Conclusion:** The depth of dental erosion caused carbonic acid drinks with fluoride varnish application is lower than without fluoride application before. And there is a correlation between the depth of dental erosion and Fluor content.

Keywords: Dental erosion, fluoride varnish, fluor, carbonic acid drinks.