

Original Article

Effects of fluoridated tooth paste on medically erosive enamel in bonded primary teeth during maxillary arch expansion in cleft palate patient: An *in vitro* study

Abstract:

AIMS: This study searched the effects of fluoridated toothpaste on the enamel surface of deciduous molars eroded by different pediatric liquid medicaments which were encircled by orthodontic bands by gravimetric analysis method.

MATERIALS AND METHODS: A suitable orthodontic band was used to band each of the 110 non-carious exfoliated deciduous molars, and stored in artificial saliva. These teeth were divided randomly into fluoridated and non-fluoridated groups (50 teeth each), and 10 teeth were used as negative controls. The enamel surface of the fluoridated group was swabbed with fluoridated toothpaste for 5 minutes twice daily. Each group was subdivided into five clusters of 10 teeth each according to the type of medication used which included paracetamol, Adol, amoxicillin, Medazole (ME), and Viton (VI) according to a specific immersion cycle. The erosion induced in the enamel for all the teeth was evaluated by gravimetric analysis for different intervals.

RESULTS: The results showed that the weight loss increased with increasing exposure to liquid medication for all groups, but this increase was smaller in the fluoridated group. The highest mean weight loss after 28 days was in VI, and the lowest was in ME (0.145 [0.005] mg; 0.08 [0.008] mg), respectively.

CONCLUSION: The fluoridated toothpaste significantly reduced medically eroded enamel by oral medical syrups. The gravimetric method is valid for the detection of erosion on banded deciduous molars.