ENAMEL SURFACE HARDNESS RESULT OF PUNICA GRANATUM JUICE APPLICATION AS BLEACH MATERIAL

ABSTRACT
Background. Bleaching is a cosmetics procedure to whiten teeth. The negative effect of bleaching encourage searching of natural bleach material that has better effect of bleach and minimum negative effects. One of the natural usable materials is Punica granatum. Punica granatum contains ellagic acid which can be used for teeth whitening. Purpose. To figure out the effect of Punica granatum juice application as bleach materials against enamel surface hardness and discoloration of the teeth. Method. Enamel surface hardness and tooth enamel colors of 6 post-extraction premolars tooth were measured before bleach material Punica granatum juice is applied. Application was done 3 times a day for 5 minutes in 2 weeks, each day the color of tooth enamel was measured using the Vita 3D shade guide. After 2 weeks the enamel surface hardness was re-measured. Result. Friedman Test results that followed by Wilcoxon Signed Rank Tests show significant differences in values and chroma score, but there was no significant differences in hue score. Paired T-Test results showed significant differences in the enamel surface hardness. Conclusion. Punica granatum juice application as bleach material can decreases the enamel surface hardness. Punica granatum juice application also brighten the color of teeth characterized by decreasing the value and chroma score, but it cannot change the hue score.

Keywords: Punica granatum, enamel surface hardness, discoloration