ABSTRACT

EFFECTIVITY USE OF ASCORBIC ACID CONCENTRATION IN AVOCADO EXTRACT (*Persea americana* Mill.) FOR A DENTAL BLEACHING

Wika Putri Rizkiah[1], Etny Dyah Harniati[2], Lira Wiet Jayanti[3]
[1,2,3]Fakultas Kedokteran Gigi, Universitas Muhammadiyah Semarang
Email : wikaputry86@gmail.com

Introduction: Teeth discoloration has been complained by most of Indonesians. A treatment of teeth discoloration can be overcome by using a *bleaching* treatment. *Bleaching* itself, can be done using a natural ingredients, for instance avocado (*Persea americana* Mill.), which contained an ascorbic acid for a dental bleaching. The aim of this study is to find out the effectiveness of avocado with concentrations of 30%, 70%, and 100% on a teeth bleaching.
Method: It is a laboratory experimental research using a *pretest-posttest control group design*. The sample used are 24 post-extraction of premolar teeth, and ascorbic acid which was taken from the avocado by an isolation method. The teeth soaked in a black tea for 6 days and replaced every 2 days, then soaked with ascorbic acid in the avocado extract 30%, 70%, 100%, and control aquades for 3 days.The degree of teeth color was measured by using a *spectrophotometer*. The data analysis used a discrimination test with *One Way Anova* and further discrimination test with *Pos Hoc Anova*.
Results: The results of discrimination test with *One Way Anova* showed the significant value was 0,019 ($p<0,05$), which means there was difference colour between before and after the soaking teeth treatment using the ascorbic acid in avocado with concentrations of 30%, 70%, and 100%. Based on *Pos Hoc Anova* test, showed that 30% and 100% concentrations of ascorbic acidis more effective than the aquades. As the 100% concentration of ascorbic acid showed a demineralization. Therefore the 30% concentration of ascorbic acid is the most effective.
Conclusion: The ascorbic acid in avocado extract (*Perseaamericana* Mill.) with 30%, 70%, dan 100% concentrations is effective for a dental bleaching.

Keywords: Avocado, ascorbic acid, *bleaching*, *spectrophotometer*.