EFEKTIVITAS PASTA GIGI APEL TERHADAP PEMBENTUKAN PLAK
PADA PENGGUNA PERANTI ORTODONTI CEKAT

(THE EFFECTIVITY OF APPLE TOOTHPASTE IN INHIBITING THE
DENTAL PLAQUE FORMATION ON THE FIXED ORTHODONTIC
PATIENTS)

ABSTRACT

**Background.** The use of conventional oral hygiene measurements is more complicated when the brackets, archwire, ligatures, and other orthodontic appliances is involved, and it resulted in significant plaque accumulation around the bracket bases. The addition of apple extract in toothpaste is expected to inhibit the growth of dental plaque. **Purpose.** The purpose of this study was to evaluate the effectivity of apple toothpaste in inhibiting plaque formation on fixed orthodontic patients. **Method.** 33 samples of 17-23 years old dental students Airlangga University who have been wearing fixed orthodontic appliances for minimum a year has to brush their teeth three times. First without toothpaste, the second using placebo, and the third with apple toothpaste. The samples were instructed to brush their teeth using Bass method. After applying disclosing agent, plaque was scored using Orthodontic Plaque Index (OPI). The score was taken 4 hours after brushing. The statistical analysis was done by using Friedman test (ordinal data) and Anova Same Subject (ratio data). **Result.** The average of accumulated plaque on group that use apple toothpaste is 31.0642, placebo is 40.5164, and without toothpaste is 50.9188. The result showed that the comparison between without toothpaste, placebo, and apple toothpaste in 4 hours after brushing was significantly different (p value = 0.000; p < 0.05). It meant that there was signifi cant difference in plaque after tooth brushing between without toothpaste, placebo, and apple toothpaste. **Conclusion.** Apple toothpaste is effective in inhibiting the dental plaque formation on fixed orthodontic patients.

**Keywords:** Apple toothpaste, dental plaque, fixed orthodontic patients