INTISARI

Gigi tiruan adalah protesa yang dibuat untuk menggantikan satu atau lebih gigi yang hilang dengan dukungan dari gigi yang tersisa atau mukosa rongga mulut. Salah satu bahan polimer sebagai basis gigi tiruan adalah resin asetal. Penggunaan *denture cleanser* disarankan untuk menjaga kebersihan gigi tiruan, misalnya dengan perendaman dalam hidrogen peroksida (H_2O_2 3%), namun perendaman yang terlalu lama diketahui berpengaruh terhadap sifat fisik suatu bahan. Tujuan penelitian ini adalah mengkaji pengaruh lama perendaman basis gigi tiruan resin asetal dalam larutan H_2O_2 3% sebagai *denture cleanser* terhadap perlekatan *Candida albicans*.

Rancangan penelitian ini adalah eksperimental laboratoris. Sampel terbuat dari resin asetal berbentuk cakram dengan diameter 5 mm, tinggi 2 mm sebanyak 24 buah yang dibagi atas 4 kelompok, yaitu 6 cakram tanpa perlakuan, 6 cakram dengan perendaman dalam H_2O_2 3% selama 3,5 jam, 6 cakram dengan perendaman selama 14 jam, 6 cakram dengan perendaman selama 42 jam. Jumlah koloni *Candida albicans* dihitung dalam satuan CFU/ml. Data yang diperoleh dilakukan uji statistik ANAVA satu jalur kemudian uji *Post Hoc* LSD.

Hasil rerata terendah pada kelompok perendaman 3,5 jam, hasil rerata tertinggi pada kelompok perendaman 42 jam. Uji statistik ANAVA satu jalur menunjukkan ada pengaruh lama perendaman resin asetal dalam larutan H_2O_2 3% terhadap perlekatan *Candida albicans* pada semua kelompok perendaman setelah dibandingkan dengan kontrol ($p<0,05$). Uji *Post Hoc* LSD menunjukkan ada perbedaan bermakna antar kelompok perlakuan.

Kesimpulan penelitian ini adalah perendaman basis gigi tiruan resin asetal selama 3,5 jam dalam H_2O_2 3% berpengaruh paling rendah terhadap perlekatan *Candida albicans* dibandingkan dengan perendaman selama 14 dan 42 jam.

Kata Kunci: Resin asetal, *denture cleanser*, hidrogen peroksida 3%, *Candida albicans.*

ABSTRACT

A denture is a prosthesis that is made to replace one or more missing teeth with the support of the remaining teeth or oral mucosa. One of the polymer materials as a denture base is acetal resin. Denture cleanser is recommended to maintain the cleanliness of the denture, for example by immersing it in hydrogen peroxide (H_2O_2 3%), but immersion in a denture cleanser for too long is known to affect the physical properties of a material. The purpose of this study was to examine the effect of immersion time of acetal resin denture base in H_2O_2 3% as denture cleanser on the attachment of *Candida albicans*.

The design of this research is experimental laboratory. The samples were made of acetal resin in the form of disc with diameter of 5mm, height of 2mm as many as 24 pieces which were divided into 4 groups, 6 discs without treatment, 6 discs were immersed in H_2O_2 3% for 3.5 hours, 6 discs were immersed for 14 hours, and 6 discs were immersed for 42 hours. The number of *Candida albicans* colonies was calculated in units of CFU/ml. The data obtained were carried out with one-way ANOVA statistical test and then the Post Hoc LSD test.

The the lowest mean was on group with 3,5 hours immersion and highest mean was on group with 42 hours immersion. One-way ANOVA statistical test showed that there was an effect of H_2O_2 3% immersion time on the adhesion of *Candida albicans* in all immersion groups after being compared with control group ($p<0.05$). The Post Hoc LSD test showed that there was a significant difference between the treatment groups.

The conclusion of this study was that the immersion time of acetal resin denture base in H_2O_2 3% for 3,5 hours had the lowest effect on the adhesion of *Candida albicans* when compared to the duration of immersion for 14 and 42 hours.

Keywords: Acetal resin, denture cleanser, hydrogen peroxide 3%, *Candida albicans*