

INTISARI

Salah satu faktor yang meningkatkan kekuatan fleksural dari *fiber reinforced acrylic resin* adalah penempatan posisi serat kaca. Serat kaca (*fiberglass*) adalah salah satu jenis serat yang dapat digunakan dalam kedokteran gigi. Penelitian ini bertujuan mengetahui pengaruh posisi serat kaca (*fiberglass*) terhadap kekuatan fleksural *fiber reinforced acrylic resin*.

Metode penelitian berjenis eksperimental laboratoris *in vitro*. Sampel penelitian sebanyak 16 plat spesimen (65x10x2,5mm). Kelompok penelitian terbagi menjadi 4 yaitu 3 kelompok *fiber reinforced acrylic resin* diberi serat kaca (*fiberglass*) di bagian atas, tengah dan bawah serta 1 kelompok kontrol resin akrilik tanpa serat kaca (*fiberglass*). Semua kelompok akan di uji kekuatan fleksural dengan *three-point bending* dengan alat *Universal Testing machine*.

Berdasarkan uji *One Way Anova* didapatkan nilai signifikan 0,000 ($p < 0,05$), sehingga disimpulkan terdapat pengaruh bermakna antar kelompok. Dari uji *Post Hoc LSD* didapatkan hasil signifikan antara semua kelompok perlakuan dengan kelompok kontrol. Perbandingan antara kelompok serat kaca di atas dan di tengah dengan serat kaca di bawah menunjukkan perbedaan yang signifikan dengan nilai ($p < 0,05$).

Dari hasil penelitian disimpulkan bahwa terdapat pengaruh posisi serat kaca (*fiberglass*) terhadap kekuatan fleksural *fiber reinforced acrylic resin*.

Kata kunci : *Fiber reinforced acrylic resin*, kekuatan fleksural, posisi serat, serat kaca

ABSTRACT

One of factor that increases the flexural strenght of fiber reinforced acrylic resin is a fiberglass position . Fiberglass is one of type that can be used in dentistry. The aim of this was to determine the influence of position of fiberglass to the flexural strenght of fiber reinforced acrylic resin.

This study was in vitro laboratory experimental. Samples was 16 plate spesimens (65x10x2.5mm). The study group was divided into 4 group : 3 groups of fiber reinforced acrylic resin were given fiberglass at the upper, middle, and bottom side and 1 control group of resin acrylic without fiberglass. All of groups would be in the flexural strenght test with a three-point bending test using a universal testing machine.

Based on One Way ANOVA test showed that there were significant value 0.000 ($p < 0.05$), it concluded that there were significant influence between all the groups. Based on the LSD Post Hoc test showed that there were significant value between all of groups with fiberglass reinforced and control group without fiberglass reinforced. Comparisson between the group that given fiberglass in a upper and middle side with the group that given in bottom side showed value of significant difference ($p < 0.05$).

The result of study was concluded that there was an influence on the position of fiberglass to flexural strenght of fiber reinforced acrylic resin.

Kata kunci : Fiber Reinforced Acrylic Resin, Flexural Strenght, Fiber Position, Fiberglass