

## INTISARI

Resin komposit merupakan bahan terbaru yang digunakan sebagai bahan pembuatan mahkota sementara gigi tiruan cekat. Mahkota sementara memerlukan kekuatan perlekatan yang baik dari semen sementara agar dapat bertahan hingga mahkota permanen siap digunakan. Semen sementara yang biasa digunakan yaitu *zinc oxide eugenol* dan *zinc oxide non eugenol*. Penelitian ini bertujuan untuk mengkaji perbedaan kekuatan geser semen *zinc oxide eugenol* dan *zinc oxide non eugenol* pada resin komposit mahkota sementara gigi tiruan cekat.

Sampel penelitian terdiri dari 20 sampel resin komposit berbentuk silinder berukuran diameter 3 mm dan tinggi 2 mm. Dua puluh balok resin akrilik yang ditengahnya berlubang dengan diameter 5 mm dan tinggi 2 mm, dibagi menjadi dua kelompok. Kelompok I diisi dengan semen *zinc oxide eugenol*, kelompok II diisi dengan semen *zinc oxide non eugenol*. Resin komposit diletakkan diatas permukaan semen. Sampel disimpan dalam air destilasi di inkubator dengan suhu 37°C selama 24 jam. Kekuatan geser diukur menggunakan *Universal Testing Machine*. Data dianalisis menggunakan uji t tidak berpasangan dengan tingkat kepercayaan 95%.

Hasil penelitian menunjukkan bahwa terdapat perbedaan yang signifikan kekuatan geser antara kedua jenis semen sementara pada resin komposit ( $p < 0,05$ ). Kesimpulan penelitian ini adalah kekuatan geser perlekatan semen *zinc oxide non eugenol* lebih besar daripada semen *zinc oxide eugenol* pada resin komposit mahkota sementara gigi tiruan cekat.

**KataKunci :** Resin komposit, *zinc oxide eugenol*, *zinc oxide non eugenol*, Kekuatan geser

## ABSTRACT

Composite resin is the latest materials which are utilized as materials for making temporary crowns. Temporary crowns need a good adhesion strength of temporary cement in order that they can stand until the permanent crowns are ready to use. The temporary cements which are commonly used are zinc oxide eugenol and zinc oxide non eugenol. This research is aimed at examining the differences in shear strength of zinc-oxide eugenol and zinc oxide non eugenol in the composite resins of temporary crowns.

The research samples consisted of 20 cylindrical samples of composite resins with diameter of 3 mm and 2 mm height. Twenty hollow beams of acrylic resin with diameter of 5 mm and a height of 2 mm were divided into two groups. Group I was filled with zinc oxide eugenol, while Group II was filled with zinc oxide non eugenol cement. The composite resins were put above the surface of the cement. The samples were stored in distilled water in an incubator with a temperature of 37<sup>0</sup>C for 24 hours. The shear strength was measured using a Universal Testing Machine. Data were analyzed using an unpaired t-test with a confidence level of 95%.

The research results indicated that there were significant differences in the shear strength between the two types of temporary cement in the composite resins ( $p<0.05$ ). It can be concluded that the shear bond strength of zinc oxide non eugenol is greater than that of zinc oxide eugenol in the composite resins of temporary crowns.

**Keywords :** Composite resin, zinc oxide eugenol, zinc oxide non eugenol, shear strength