

ABSTRAK

Gigi tiruan cekat merupakan salah satu perawatan dalam mengatasi kehilangan gigi yang semakin populer di masyarakat. Penggunaan gigi tiruan cekat dapat memberikan estetik yang baik serta nyaman saat digunakan. Saat ini mulai berkembang semen *self-adhesive* dengan basis resin. Semen dengan bahan monomer *triethylene glycol dimethacrylate* (TEGDMA) merupakan semen *self-adhesive* yang sering digunakan saat sementasi. Selain itu mulai berkembang semen resin dengan bahan 4 *methacryloxyethyl trimellitate anhydride* / *methyl methacrylate-tributylborane* (META/MMA-TBB). Penelitian ini bertujuan untuk mengetahui perbedaan antara dua bahan dasar semen *self-adhesive* terhadap kekuatan geser pada permukaan porselen gigi tiruan cekat.

Penelitian ini merupakan penelitian eksperimental laboratoris dengan menggunakan 32 subjek porselen dan gigi premolar rahang atas yang ditanam dalam resin akrilik. 32 subjek ini terbagi atas 2 kelompok, kelompok perlakuan pertama terdapat 16 subjek pelapisan dengan semen *self-adhesive* TEGDMA. Kelompok dengan perlakuan kedua terdapat 16 subjek pelapisan dengan semen *self-adhesive* 4 META/MMA-TBB. Subjek direndam dengan saliva buatan pH 6,8 selama 24 jam didalam inkubator suhu 37°. Setelah itu dilakukan uji kekuatan geser.

Hasil analisis data dengan uji t menunjukkan bahwa terdapat perbedaan yang bermakna antara semen resin 4 META/MMA-TBB dengan semen *self-adhesive* TEGDMA terhadap kekuatan geser pada permukaan porselen gigi tiruan cekat ($p < 0,05$). Kesimpulan penelitian ini adalah kekuatan geser porselen pada semen resin 4 META/MMA-TBB memiliki kekuatan geser lebih tinggi dibandingkan semen *self-adhesive* TEGDMA.

Kata kunci : gigi tiruan cekat, semen *self-adhesive*, kekuatan geser

ABSTRACT

Fixed denture is one of the treatment in lost of teeth. That are increasingly popular in society. The fixed denture can provide good aesthetic and comfortable to used. The cement that is currently developing *self-adhesive* cement with a resin base. Cement with *triethylene glycol dimethacrylate* (TEGDMA) monomer is a *self-adhesive* cement that is often used during the time of cementation. In addition, that is currently developing cement resin with material 4 *methacryloxyethyl trimellitate anhydride/methyl methacrylate-tributylborane* (META/MMA-TBB). This research aims to determine the difference between two basic ingredients of *self-adhesive* cement against the shear strength of porcelain surface in fixed denture.

The research was a laboratory experiment using the 32 subjects of porcelain and premolars teeth of the maxilla in acrylic resin. There were 32 subject was divided into two groups, there consisting of 16 subjects in the first treatment group using porcelain coating with self-adhesive cement TEGDMA and 16 subjects in the second treatment group using porcelain coating self-adhesive cement 4 META/MMA-TBB. The subject is soaked with a pH 6.8 in artificial saliva for 24 hours in a 37 °C incubator. Subsequently, their shear strength was tested.

Furthermore, the acquired data on shear strength were further analyzed using the t-test. The result of t-test showed a significant difference between 4 META/MMA-TBB resin cement and TEGDMA *self-adhesive* cement toward the shear strength of porcelain surface in fixed denture. ($p < 0.05$). This research concludes that resin 4 META/MMA-TBB has stronger shear strength than TEGDMA *self-adhesive* cement.

Keywords : fixed denture, *self-adhesive* cement, shear strength