

INTISARI

Surface treatment dan semen resin digunakan untuk meningkatkan perlekatan restorasi keramik. *Self-etching glass-ceramic primer* (SECP) merupakan material baru yang dapat mempersingkat *surface treatment* dari litium disilikat. Tujuan penelitian adalah untuk mengkaji pengaruh *surface treatment* dan jenis semen resin terhadap kekuatan geser litium disilikat pada gigi tiruan cekat.

Penelitian menggunakan 24 sampel litium disilikat berbentuk tabung dengan diameter 5,5 mm dan ketebalan 3 mm yang terbagi menjadi dua kelompok *surface treatment* (*hydrofluoric acid* (HF) 5 % + silan dan *self-etch glass ceramic primer*). Kedua kelompok tersebut dibagi lagi berdasarkan jenis semen resin yang digunakan (*adhesive* dan *self-adhesive*). Sampel direndam dalam saliva buatan selama 24 jam pada suhu 37°C. Uji kekuatan geser pelekatan menggunakan *universal testing machine*. Data dianalisis dengan ANAVA dua jalur dengan tingkat kepercayaan 95% ($\alpha = 0,05$).

Hasil penelitian menunjukkan terdapat perbedaan signifikan pengaruh *surface treatment* dan jenis semen resin ($p < 0,05$), tetapi interaksi keduanya tidak memiliki pengaruh terhadap kekuatan geser litium disilikat ($p > 0,05$). Uji *post-hoc* LSD menunjukkan adanya perbedaan signifikan pada seluruh kelompok. Kesimpulan penelitian adalah *surface treatment* dan jenis semen resin mempengaruhi kekuatan geser litium disilikat pada gigi tiruan cekat, dengan rerata kekuatan geser tertinggi (22,96 MPa) pada kelompok kombinasi *surface treatment self-etch ceramic primer* dan semen resin *self-adhesive*. Rerata terendah pada kelompok kombinasi HF 5%+ silan dan semen resin *adhesive*. (13,92 MPa)

Kata kunci : litium disilikat, *surface treatment*, semen resin, kekuatan geser

ABSTRACT

Surface treatment and resin cement used to enhance adhesion in all-ceramic restoration. Self-etch glass-ceramic primers (SECP) is a new material that can shorten the surface treatment procedure. The objective of the study was to investigate the effect of surface treatment and resin cement on shear bond strength of lithium disilicate on fixed bridge restoration.

Twenty four lithium disilicate samples in the form of tube with 5.5 mm diameter and 3 mm thickness were divided into two groups of surface treatment (hydrofluoric acid (HF) 5% + silane and self-etch glass-ceramic primer). Then, both groups were subdivided by the type of cement used (adhesive and self-adhesive). Shear bond strength test was measured with universal testing machine after immersed in artificial saliva for 24 hours at 37 ° C. Data were analyzed by two-way ANOVA with 95% confidence level ($\alpha = 0.05$).

The results showed that there were significant differences effect on surface treatment and resin cement ($p < 0.05$), but the interaction of the two treatments was not significant against the shear strength of lithium disilicate ($p > 0.05$). LSD tests showed that there was significant differences among all of groups. The conclusions of the research are surface treatment and resin cement affecting shear strength of lithium-disilicate on fixed bridge restoration. Surface treatment self-etch glass-ceramic primer combined with self-adhesive resin cement has the highest shear bond strength (22.96 MPa). Surface treatment HF 5% + silan combined with adhesive resin cement has the lowest shear bond strength (13.92 MPa).

Keyword : lithium disilicate, surface treatment, resin cement, shear bond strength