

INTISARI

Susunan gigi yang rapi dan berwarna putih merupakan standar kecantikan gigi di masyarakat, sehingga memungkinkan seseorang ingin melakukan perawatan *bleaching* dan ortodonti secara bersamaan. Gigi pasca *bleaching* akan terjadi demineralisasi permukaan email, sehingga menurunkan pelekatan braket ortodonti. Penggunaan *desensitizing agent* pasca *in-office bleaching* dapat remineralisasi permukaan email gigi, sehingga permukaan email menjadi lebih kuat. Hal tersebut berpotensi meningkatkan pelekatan braket ortodonti. *Desensitizing agent* terbagi menjadi 2 jenis yaitu berbasis *fluor* dan *non-fluor*. Penelitian ini bertujuan untuk menganalisis pengaruh pengaplikasian *desensitizing agent fluor* dan *non-fluor* pasca *in-office bleaching* pada braket logam dengan sementasi semen ionomer kaca aktivasi sinar.

Dua puluh tujuh gigi premolar atas pasca ekstraksi dibagi menjadi 3 kelompok (n=9): Kontrol (*bleaching*), *Fluor (bleaching+desensitizing agent fluor)*, dan *Non-Fluor(bleaching+desensitizing agent non-fluor)*. Tahapan selanjutnya dilakukan prosedur *bonding* braket dengan bahan sementasi semen ionomer kaca aktivasi sinar. Sampel dilakukan uji kekuatan geser dan perhitungan skor *Adhesive Remnant Index* (ARI). Hasil uji kekuatan geser dianalisis dengan uji *one-way anova* dan uji *post-hoc LSD* ($P < 0.05$), sedangkan skor ARI dianalisis dengan uji *kruskal-wallis*.

Hasil penelitian menunjukkan pengaplikasian *desensitizing agent* mampu meningkatkan kekuatan geser braket logam pasca *in-office bleaching* secara signifikan ($P < 0.05$) dengan kekuatan geser paling kuat pada kelompok *Fluor*, dan hasil pengamatan skor ARI pada ketiga kelompok tidak terdapat perbedaan bermakna ($P > 0.05$). Hasil penelitian menyimpulkan bahwa penggunaan *desensitizing agent fluor* dan *non-fluor* mampu meningkatkan kekuatan pelekatan braket logam pasca *in-office bleaching* dengan sementasi semen ionomer kaca aktivasi sinar, tetapi tidak mampu merubah nilai skor ARI.

Kata Kunci: *In-Office Bleaching*, *Desensitizing Agent*, Kekuatan Geser, *Adhesive Remnant Index*

ABSTRACT

White and neat teeth become a benchmark of dental aesthetics in society, thus allowing someone want to do bleaching and orthodontic treatment simultaneously. The effect of the bleaching procedure is demineralize of tooth enamel surface which can decrease the attachment of the orthodontic bracket. The application of desensitizing agent post bleaching can remineralize the enamel surface, there are 2 types of desensitizing agents, namely fluor-based and non-fluor based. This study aims to analyze the effect of fluor and non-fluor desensitizing agents post in-office bleaching on metal bracket with light-activated glass ionomer cement.

Twenty-seven post-extraction upper premolars were divided into 3 groups (n=9): Control (bleaching), Fluor (bleaching+desensitizing agent fluor), and Non-Fluor (bleaching+desensitizing agent non-fluor). The next step is the bracket bonding procedure with light-activated glass ionomer cement. The sample was subjected to shear strength test and calculation of the Adhesive Remnant Index (ARI) score. The results of the shear strength test were analyzed by one-way ANOVA test and LSD post-hoc test ($P < 0.05$), while the ARI score was analyzed by Kruskal-Wallis test.

The results showed that the application of desensitizing agent significantly increase brackets bond strength post in-office bleaching ($P < 0.05$), with the Fluor group having the strongest shear strength, and the results of ARI scores no significant difference ($P > 0.05$). The results of the study concluded that the use of fluor and non-fluor desensitizing agents was able to increase the shear strength of brackets post in-office bleaching with light-activated glass ionomer cement, but unable to change the value of the ARI score.

Keywords: In-Office Bleaching, Desensitizing Agent, Shear Bond Strength, Adhesive Remnant Index