

ABSTRAK

Attachment system merupakan suatu alat mekanik yang berfungsi sebagai retensi, fiksasi dan stabilisasi protesa. *Attachment system* bertujuan untuk menghubungkan *implant* dengan gigi tiruan di atasnya. Penggunaan *attachment system* ini mampu menambah kekuatan retensi pada *implant overdenture*. Tujuan penelitian ini adalah untuk mengetahui perbedaan kekuatan retensi *attachment system* antara *locator* dan *o-ring* pada interpremolar *implant overdenture*.

Metode yang digunakan adalah quasi eksperimental dengan desain *post test only*. Sampel dalam penelitian ini yaitu terdiri dari 2 kelompok yaitu kelompok *attachment system locator* dan *attachment system o-ring* dengan masing-masing kelompok terdapat 4 buah sampel. Kedua kelompok *attachment system* diletakkan di interpremolar. Kemudian dilakukan pengujian kekuatan retensi menggunakan alat *UTM (Universal Testing Machine)*

Hasil rata-rata kekuatan retensi pada *attachment system locator* menunjukkan nilai $0,0358 \pm 0,012$ MPa dan pada *attachment system o-ring* menunjukkan nilai $6,5925 \pm 0,535$ MPa. Hasil uji *t-test* menunjukkan hasil signifikansi 0,000 ($P < 0,05$) yang menginterpretasikan bahwa terdapat perbedaan kekuatan retensi *attachment system* antara *locator* dan *o-ring* yang diletakkan di interpremolar.

Kesimpulan dari hasil penelitian ini adalah terdapat perbedaan kekuatan retensi antara *attachment system locator* dan *attachment system o-ring* pada interpremolar *implant overdenture*. *Attachment system o-ring* memiliki nilai kekuatan retensi lebih tinggi dibandingkan *attachment system locator*. *Attachment system o-ring* dapat dijadikan alternatif pilihan penggunaan *attachment system* pada *interpremolar implant overdenture*.

Kata Kunci : *Attachment system, locator, o-ring, implant overdenture*, kekuatan retensi.

ABSTRACT

Attachment system is mechanical device for the retention, fixation and stabilization of a prosthesis. Attachment system is used to connect implant with the denture. It could enhance the retention strength of implant overdentures. The aim of the research was to determine the difference of attachment system retention between locator and o-ring in the interpremolar implant overdenture.

This study was quasi experimental using post test only control group design. This research divided into 2 groups, locator and o-ring attachment groups, each group consisted of 4 samples. Both groups were placed in interpremolar. The retention strength was tested by UTM (Universal Testing Machine).

Mean value of retention strength in locator attachment group was 0.0358 ± 0.012 MPa and in o-ring attachment was 6.5925 ± 0.535 MPa. The results of the t-test significancy value was 0,000 ($P < 0.05$) which means there were a significant difference of retention strength between locator and o-ring attachment placed in interpremolar.

The conclusion of this study is there was significant difference in the retention strength between locator and o-ring attachment in interpremolar implant overdenture. O-ring attachment has higher retention strength value than the locator attachment. As a result, o-ring attachment system can be used as an alternative choice of attachment system for interpremolar implant overdenture.

Keywords : *Attachment system, locator, o-ring, implant overdenture, retention strength*