MARGINAL ACCURACY BOND STRENGTH AND MICROLEAKAGE OF TWO DESIGNS AND MATERIALS OF CERAMIC VENEERS BONDED TO ENAMEL AND DENTIN

A Thesis

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in

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الدقة الحافية وقوة الربط والتسريب الدقيق لتصميمين ومادتين للقشور الخزفية الملتصقة بالمينا والعاج

رسالة مقدمة الي

كلية طب الفم والاسنان

جامعة القاهرة

تمهيداً للحصول علي درجة الدكتوراة في الاستعاضات السنية المثبتة

من

الطبيب/ محمد السيد حسنين

ماجيستير الاستعاضات السنية المثبتة

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استاذ و رئيس قسم الاستعاضات السنية المثبتة

كلية طب الفم و الاسنان

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الدكتورة

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Abstract

A universal testing machine (Instron) was used to measure the bond strength values, where a specially designed brass attachment was constructed to hold the resin block in place during testing. All samples were mounted on the lower compartment of the Instron testing machine. Shear testing was done by compressive mode of load applied at the tooth structure- ceramic disc (enamel and dentin) interface at cross head speed of 0.5mm/min. The load at failure was divided by the

interfacial bonding area to express the bond strength in Mpa and the load deflection curve was recorded using computer software.

Key word :

- Designed
- Attachment
- Deflection

بسم الله الرحمن الرحيم

" قالوا سبحانك لا علم لنا إلا ما علمتنا
إنك أنت العليم الحكيم"

صدق الله العظيم

"الآية٣٢ من سورة
البقرة"

The present investigation was designed to evaluate the effect of two preparation designs namely: window type and incisal wrap around, and two depths of preparation: Enamel / Dentin on the:

1- Shear bond strength,
2- Marginal accuracy, and

3- Micro-leakage.

Of two types of porcelain laminate veneers (pressable and machinable).

Dedication

This work is dedicated to….

My parents *for their endless love and support,*

My wife *for her encouragement and understanding,*

and

Last but not least my beloved twins

Malak and Hussein

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