بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا الاما علمتنا انك انت العليم الحكيم

صدق الله العظيم

سورة البقرة الاية ٣٢

Shear Bond Strength of Two Resin Cements to Ceramic and Tooth Substrate (Enamel And Dentin) Using Different Bonding Approaches

Thesis

Research Project Submitted to the Faculty of Oral and Dental Medicine, Cairo University in Partial Fulfillment of the Master Degree In

(Fixed Prosthodontics)

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رسالة مقدمة من

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إستيفاء للحصول على درجة الماجستير فى
فرع الإستعاضات السنية المثبتة

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٢٠٠٩

بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا الاما علمتنا انك انت العليم الحكيم

صدق الله العظيم

سورة البقرة الاية ٣٢

المشرفون

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Introduction

Advances in adhesive technology have occurred at a remarkable place over the past 10 years. It seems as though every month brings a "new" and "better" bonding system onto the market. Clinical protocol is constantly changing. Just when clinicians have mastered one technique, they find it has been replaced by another.

Adhesion offers a number of advantages including retention and stabilization of restoration without removal of sound tooth structure; it reduces marginal leakage at the restoration tooth interface, transmits and distributes functional stresses across the bonding interface to the tooth structure with potential to reinforce weakened tooth structure [(78)]. It has also expanded the range of possibilities for aesthetic restorative dentistry[(38)].

Today's patient pays more attention to cosmetics than ever before, and teeth are a key consideration in personal appearance. Tooth-colored restorative materials are used to cosmetically restore and/or re-contour teeth with little or no tooth preparation. Advances in dental adhesive technology have allowed the dentist to improve facial aesthetics in a relatively simple and economical way.

Bond strength between tooth substrate and restoration is affected by a variety of factors including type of luting agent, content of adhesive material and type of surface pretreatment of both tooth and fitting surface of the restoration.

Eventually, the current adhesive systems should be able to provide sealed margins, but the progressive loss of this marginal seal and successive marginal deterioration caused by microleakage, is mainly caused by polymerization shrinkage of resin cement and stresses resulting from thermal dimensional changes. Therefore, most progress in adhesive