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#### STUDY OF MARGINAL INTEGRITY AND SHEAR BOND STRENGTH OF A RESIN MODIFIED GLASS IONOMER RESTORATIVE MATERIAL

Thesis

Submitted To The Faculty Of Dentistry
Alexandria University
In Partial Fulfilment Of The Requirement
Of Master Degree



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To my Parents

And My

Kusband



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#### INTRODUCTION

the average age of the population rises and the number of patients retaining at least some of their natural dentition also increases, dentists are likely to encounter caries of the root surface with increasing frequency (Nicholls (1987)<sup>(1)</sup>).

Due to the inability of composite to bond directly to dentin a variety of resins and dentin bonding agents have been formulated. An alternative approach however, is to utilize the adhesive properties of glass-ionomer to dentin (Mount (1990),<sup>(2)</sup> Suzuki & Jordan (1990)<sup>(3)</sup>).

Cervical lesions, such as root caries, eroded areas and abrasions are becoming a frequent dental problem (Zyskind et al  $(1991)^{(4)}$ ).

For successful treatment of root surface lesions, all factors, dentin, tooth, patient and materials, must be considered (Heymann & Bayne  $(1993)^{(5)}$ ).

Glass-ionomer cements provide a convenient method for conservative restorations of geriatric lesions without the use of mechanical preparation or acid etching of the enamel (Mclean  $(1992)^{(6)}$ ).

However, conventional glass-ionomer cements have several negative characteristics as : prolonged setting time , lack of toughness and rough surface texture (Phillips (1991)<sup>(7)</sup>).