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marginal leakage

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Glass -) (Posterior Composite - Amalgam
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Syntac - Exite - :

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[P = 0.01]

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The Effect of Different Restorative Techniques on Micro Leakage in Large Occlusal Cavities with Undermined Cusps

Roula Al-Boni *

Abstract

Minimal intervention principles designed to limit the loss of natural tooth structure should be applied to all cavities especially extensive ones, as well as replacement of failed existing restorations. This study evaluates marginal leakage of two different techniques for the treatment of extensive occlusal lesions with posterior composite resin- Amalgam and Glass ionomer- Amalgam combined techniques, using two adhesive systems Syntac and Exite. Thirty two extracted maxillary first premolars were used. Standard extensive occlusal cavities with undermined cusps were prepared. The teeth were randomly divided into four groups 8 of each.

Group I- composite resin- Syntac- Amalgam.

Group II- composite resin- Exite- Amalgam.

Group III- Glass ionomer- Syntac- Amalgam.

Group IV- Glass ionomer- Exite- Amalgam.

After thermo cycling and dye soaking, these teeth were sectioned longitudinally. leakage scores were observed with stereomicroscope at all the interfaces of the restorations. Data were subjected to statistical analysis (Chi square test). Results showed that there were no significant differences among the groups. However, there were a significant difference between group and group IV at composite-Am and Glass ionomer- Am interface $P=0.01$. syntac adhesive system demonstrated the least leakage in all groups.

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Introduction

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		Enamel-Am		Comp-Am/GI-Am		No.	%
		No.	%	No.	%	No.	%
(1) Groupe-I	Score-1	24	87.5	39*	47.7	6	10
	Score-0	8	21.5	11	52.3	26	90
	Total	30	100	20	100	32	100
(2) Group-II	Score-1	28	95	19**	72.5	8	20
	Score-0	4	5	11	27.5	24	80
	Total	30	100	20	100	30	100
(3) Group-III	Score-1	24	90	3	32.5	16	27.5
	Score-0	8	10	17	67.5	16	32.5
	Total	30	100	20	100	32	100
(4) GroupIV	Score-1	27	92.5	7	42.5	20	30
	Score-0	5	7.5	13	57.5	12	70
	Total	30	100	20	100	30	100

$$X^2=8.95$$

$$df=6$$

$$p=0.176$$

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