

*

A3 Proximal slot
Brilliant

- + (EBA) :A
- + (EBA) :B
- (LCIW) + (Light Conducting Intrawedge = LCIW)
- + (DBA) :C
- + (EBA) :D
- + (EBA) :E
- (LCIW) + (DBA) (LCIW) :F
- LCIW Bioglass

(°c - °c)

)

F

(/) C

(/ /)

F E

(C)

/

/



() Failzer

.()

() Walls

.()

() Davidson Kemp-scholte

() Suliman.()

()

()

.()

.()

() Versluis

Versluis

.()

.()

() Causton.()

MOD

.()

.()

.()

(Rebonding)

.()

.()



+) SiC+HF
 (/ MPa) (
 (/ MPa) SiC+HF+SBMP/Porcelain primer
 .()

Bowen .

() Setz

Only.()

() Bowen

() Bowen.()

() Proximal slot

() Rada.()

mm

/ mm

CEJ

() Tani .()

- () Crispin.()

+ (EBA)	A
+ (EBA) + (Light Conducting Intrawedge = LCIW)	B
+ (DBA) (LCIW) +	C
+ (EBA)	D
+ (EBA) (LCIW) +	E
+ (DBA) (LCIW) +	F

()

()

()

Bioglass

()



Olympus

Brilliant (Colten)

A3

Coltolux 2.5

DEJ	
DEJ	

Vivadent

Bioglass

% /

Scotchbond Multi Purpose (SBMP)

(3M)

:2

:1

(1)

(2)

2	1	
		A
/	/	B
	/	C
/	/	D
/	/	E
/	/	F

± oc

± oc

Putty optosil

oc

% /

C1

C



() Fusayama

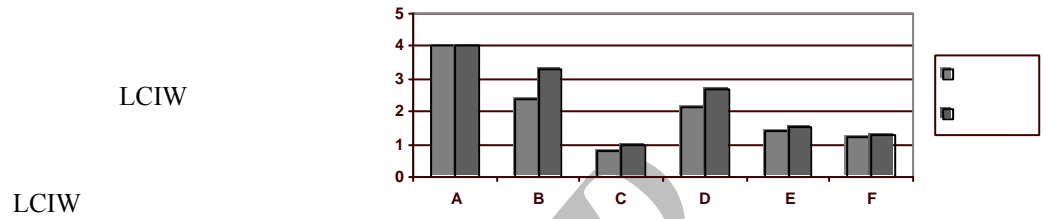
C

() Crispin () Maitland

2 1

LCIW

()



LCIW

LCIW

E

1

2

F D

() Hellwing

%

%

E

LCIW

LCIW

C B



F E

DBA

F E

(C)

LCIW

LCIW

()

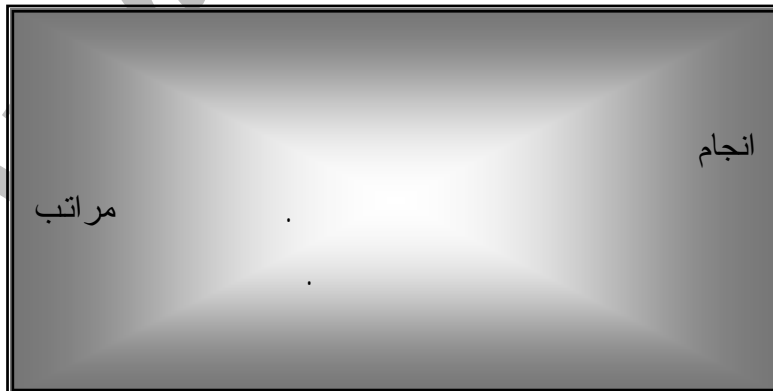
LCIW

C

LCIW

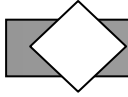
DBA

LCIW



مراتب

انجام



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Effects of light conducting intrawedges in enamel gingival margin microleakage of posterior composite resin restorations

Moazzami S.M.* D.D.S,

Assistant Professor, Dept of Operative Dentistry,
Dental School, Mashhad University of Medical Sciences, Mashhad, Iran.

Alaghehmand H. D.D.S,

Assistant Professor, Department of Operative Dentistry,
Dental School, Babol University of Medical Sciences, Babol, Iran

Abstract

Introduction: Microleakage of gingival floor in class II composite resin restorations is a major clinical problem. The aim of this study was evaluation of the effects of light conducting intrawedges (LCIW) in decreasing gingival microleakage 1 millimeter above CEJ in class II composite resin restorations.

Materials and Methods: 60 maxillary first molars were randomly divided into six groups of ten Proximal slot cavities with gingival floor one millimeter upper to CEJ were prepared. They were filled with Brilliant composite (A3) by six different methods:

A: Unfilled resin (UR) + One bulk placement

D: UR+Incremental placement

B: UR+Light Conducting Intrawedge(LCIW)+One bulk placement
placement

E: UR + LCIW + Incremental

C: DBA + LCIW + One bulk placement

F: DBA+LCIW+Incremental placement

An etched and silanated bioglass cylinder (2mm diameter) was used as LCIW. After 2500 times of thermocycling (5^oc-55^oc), Samples were stained and molded in epoxy resin. Mesiodistal sections were prepared one in central and the other in the most lateral part (buccal or lingual) of gingival floor. Dye penetration was determined using a stereomicroscope. The statistical analysis was done by one way ANOVA and Duncan's test.

Results: The mean dye penetration of central and lateral sections was the least in group C (0.8 & 1 respectively) and then group F (1.2 & 1.3). This shows that because LCIW has been inserted in cavity after curing of 1mm layer in gingival floor in groups E and F, their effect in decreasing the microleakage is less (compared with group C).

Conclusion: LCIW in one bulk placement of composite resin restorations can minimize the associated difficulties.

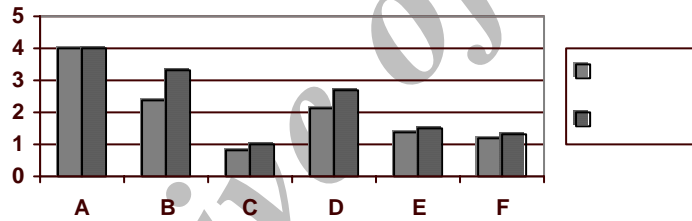
Key words: Composite resin, microleakage, light conducting intrawedge, dentin bonding agent.

* Corresponding Author



:

	+ (EBA)	A
+	+ (EBA)	B
	(Light Conducting Intrawedge = LCIW)	
+	+ (DBA) (LCIW)	C
	+ (EBA)	D
+	+ (EBA) (LCIW)	E
+	+ (DBA) (LCIW)	F



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