

)
()

*

)

(

40

:

excite

10 :

-

.Tetric ceram

10 :

-

.estelite

one up bond f

Tyrian spe

10 :

-

. renew

10 :

-

.z250

prompt Lpop

()
()

150

24 المثلين %0.5

:

•

•

•

250

The Effect of Dentin Adhesives (total etch and self etch)on Marginal Leakage of Composite Resin Restorations (A Comparative Study)

Arwa Khir^{*}

Abstract

The purpose of this study is to detect the relationship between dentin bonding systems (total etch and self etch) and the marginal leakage of composite resin restorations.

Materials and Methods:

40 cavities class v were prepared on newly extracted teeth, and divided into the following groups:

- First group: 10 samples of the total etch bonding agent (excite) with (Tetric ceram) composite resin were used.
- Second group: 10 samples of the one step self etch bonding agent (one up bond f) with (estelite) composite resin were used.
- Third group: 10 samples of the two step self etch bonding agent (Tyrian spe-one step) with (renew) composite resin were used.
- Fourth group: 10 samples of the one step self etch bonding agent (Adper prompt L pop) with (z250) composite resin were used.

All the laboratory samples were immersed in physiological serum for a week and exposed to 150 thermal cycles, All the samples then were stained with methylene blue, sectioned and studied with computer connected to the scanner.

RESULTS:

- There was significant difference in the leakage levels between the gingival and the occlusal area.

The leakage in the gingival wall was greater than in the occlusal wall.

- The total etch adhesive (Excite) was better and showed less leakage than the two step self-etch adhesive and the one step self etch adhesive.
 - The two step self etch adhesive was better and showed less leakage than the one step self etch adhesive.
-

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()

smear layer -1
%40-30)
30-15 (.(
-2 -2
self etching
:primers :

(two •
.Tyrian step system)
•
(one step system)
Adper prom pt 1 pop
:
-1
(all-in-one system) **Total etch**
Bonding strategies: :adhesives

Total etch: -

:

(An Acid) -1

(5)

(primer) -2

methacrylate

(24)

(bonding resin) -3

Bis-Gma

Bis-Gma

hydroxy. ethyl

(2.5-1) PH

methacrylate

Self :

etching primers

(4,22)

()
()

(6)

(36)

(24)

(23)

(27)

self cure

composite resins

thermal fatigue :

30.000

self and dual

composite resins

(20,21)

self cured

(8)

self :

resin -dentin interface

: priming acids

(1,10,11,33,35)

nanoleakage

self priming acids

tyrian spe

(7.34.40)

nano leakage

()

hybrid layer

"

"

water trees

(34)

"

"

poly merized adhesive

(39) layer

()
()

10 : -

total etch excite
adhesives. ivclar vivadent

tetric ceram

10 : - all-in-one

one up ⁽³⁰⁾

self etching bond f **Methods and**
adhesives(one step). toku yama **: Materials**
palfique estelite 40

10 : -

tyrian spe

self . Bisco one step plus
etching adhesives (two-step) 1.8
Renew

10 : -

10

Adper

self etching prompt 1 pop

:

adhesives (one step). espe

filtek z250

:

3

(0

(1

(2

7

150

(3

5-55

60

p4

Artec e++

30

phtoshop

:

24 %0.5

(chi-test)

()

p

()
()

prompt 1 pop
(One step) (Self etch)

p

0.05

p

0.05

0.05

(4) 0.05>p

*

% 95

Excite

:

(Total etch)

(2)

0.05>p

*

Tyrian

(Two Self (etch)

Excite

step)

(Total etch)

One up bond

(Self etch)

f

(6)

*

(One step)

0.05>p

(Total etch) Excite

(3)

0.05<p

*

One up bond f

One (Self etch)

Self

(Tyrian)

(step)

(Two step)(etch)

Excite

(Total etch)

(7) *

(Self Tyrian 0.05>p

etch) (Two step)

Self Tyrian

(Two step)(etch)

:Results

prompt 1 pop

(One step) (Self etch)

:

(8) *

0.05>p

	3	2	1	0		
10	1	-	1	8	Total etch	Excite
10	1	2	2	5	Self etch one step	one up bond f
10	1	2	1	6	Self etch two step	Tyrian
10	1	1	2	6	Self etch one step	prompt 1 pop

(1)

()
()

	3	2	1	0		
10	1	-	1	8	Total etch	Excite
10	1	2	2	5	Self etch one step	one up bond f
20	2	2	3	13		

(2)

	3	2	1	0		
10	1	2	1	6	Self etch two step	Tyrian
10	1	1	2	6	Self etch one step	prompt 1 pop
20	2	3	3	12		

(3)

	3	2	1	0		
10	1	-	1	8	Total etch	Excite
10	1	2	1	6	Self etch two step	Tyrian
20	2	2	2	14		

(4)

	3	2	1	0		
10	1	1	3	5	Total etch	Excite
10	2	3	2	3	Self etch one step	one up bond f
10	1	3	2	4	Self etch two step	Tyrian
10	2	3	3	2	Self etch one step	prompt 1 pop

(5)

	3	2	1	0		
10	1	1	3	5	Total etch	Excite
10	2	3	2	3	Self etch one step	one up bond f
20	3	4	5	8		

(6)

	3	2	1	0		
10	1	3	2	4	Self etch two step	Tyrian
10	2	3	3	2	Self etch one step	prompt 1 pop
20	3	6	5	6		

(7)

	3	2	1	0		
10	1	1	3	5	Total etch	Excite
10	1	3	2	4	Self etch two step	Tyrian
20	2	4	5	9		

(8)

:Discussion

Kidd Eam

(31)

(2,3)

()
()

-2

total etch

Excite adhesives

(19-37-

adper

³⁸⁾ prompt lpop, tyrian one up bond
.f,

:

-1

(0)

%62.5

%37.5

%35

⁽²⁵⁾

Pilo Ben Amer

.Inoue Satoshi

tyrian

self etch (two step)

(0)

prompt lpop

self etch (one

.%60 step)

Excite

Total etch

(Total etch) Excite

tyrian One up bond f

. prompt lpop One up

(0) prompt lpop, bond f

(Self etch) tyrian

%50 (0)

%25

% 80

%20

%55

%.40

Inoue

⁽¹²⁾ Satoshi

%.60

()
()

⁽⁹⁾ Finger WT- Balkenholm
One up bond f Excite ⁽²⁹⁾ PerdigaoJ , Romas Jc
Perdiago J,Swift Ej, GC Lopes
⁽²⁸⁾

prompt lpop tyrian

tyrian Excite ⁽¹⁸⁾
:

total etch

:Conclusion

40

()
()

-2

:

-1

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