

Biomesh 가

1 . 1 . 2 . 1 . 1

, 1
2

I.

4). cemento -
blast 5)
가

1). , 6),

, 7,8).

가 . 가

가

Bjorn Prichard
9).

1982 Nyman
millipore filter

2,3).
1976 Melcher가 4가 3 가

, , 가 , 10).
, 가 1986 Gottlow

가 가 , 가

* 1999
:

(guided tissue regeneration) 11). 가 2 가

Anderegg bone allograft decalcified freeze - dried PTFE 가

가

, 2 18). 가 , , , 가 , 가 , , ,

가

. 1990 Galgut oxidized cellulose mesh 가 12), 가

1988 Flishier glycolide lactide Vycrylmesh 가 .

Zellin 가 13). 1994

e - PTFE osteopromotive effect ,

II.

14). 1. Y 10 22 32 54 7 , 3 ,

11,15). 가

2. 1) 10 가 Biomesh , 12

16), Lekovic porous hydroxyapatite PTFE(polytetrafluoroethylene) 17), 2)

6

3)

6

가

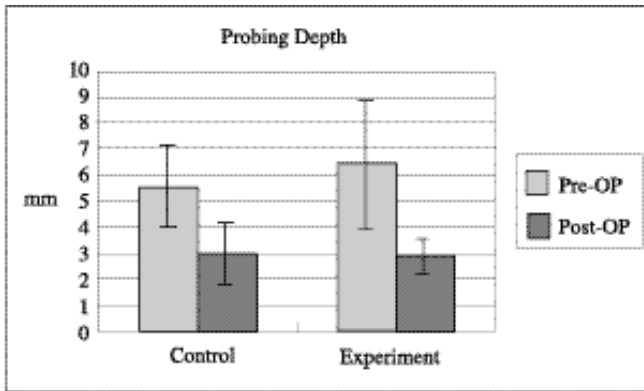


Figure 1

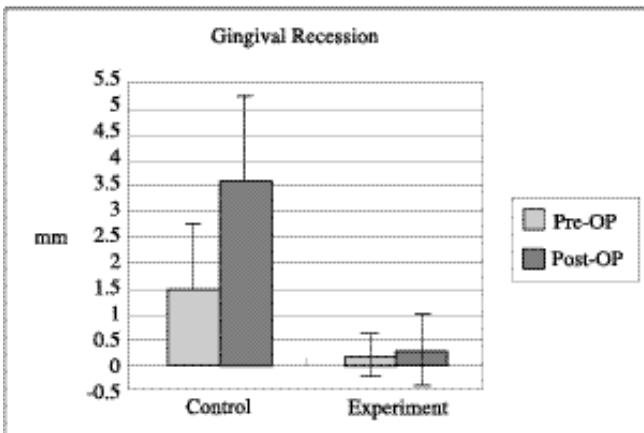


Figure 2

* : Ethicone, 4/0 ethilone

Biomesh Figure 1 Table 1

5.6 ± 1.6mm

* 3.0 ± 1.2mm

0.2% 6.5 ± 2.5mm

0.2% 2.9 ± 0.7mm (P<0.05).

3

3

7 - 10

4)

Figure 2 Table 2

1.5 ± 1.3mm

3.6 ± 1.6mm 가

(P<0.05), 0.2 ± 0.4mm

0.3 ± 0.7mm 가

Wilcoxon sign rank sum 가 (P<0.05).

tset ,

Mann - Whitney U test

III.

3.

1.

Figure 3 Table 3

9.3 ± 2.4mm

Table 1. Probing depth(mm)

	Pre Op.	Post Op.	change
	Mean ± S.D	Mean ± S.D	Mean ± S.D
Control(n=13)	5.6 ± 1.6	3.0 ± 1.2	2.7 ± 1.3#
Experimental(n=10)	6.5 ± 2.5	2.9 ± 0.7	3.6 ± 2.3#

* : significant between control & experimental group : P<0.05

: significant change : P<0.05

Table 2. Gingival recession(mm)

	Pre Op.	Post Op.	change
	Mean ± S.D	Mean ± S.D	Mean ± S.D
Control(n=13)	1.5 ± 1.3*	3.6 ± 1.6	2.1 ± 1.2*#
Experimental(n=10)	0.2 ± 0.4	0.3 ± 0.7	0.1 ± 0.3

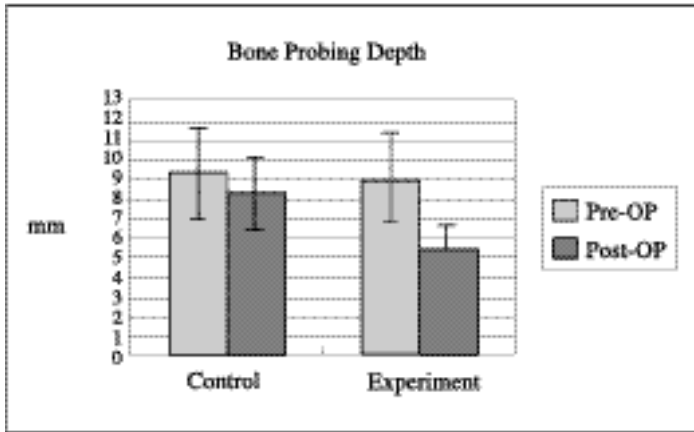


Figure 3

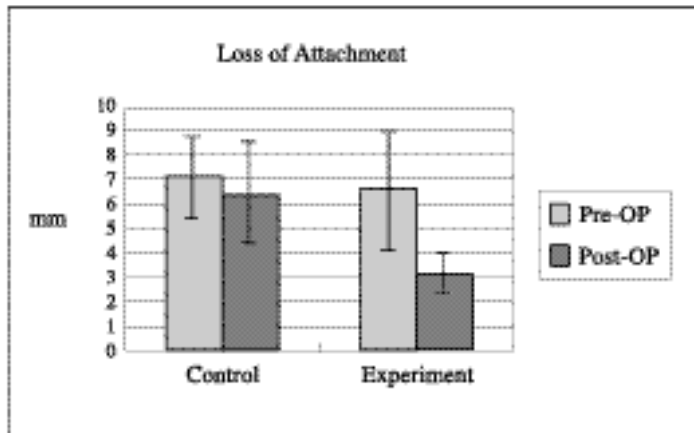


Figure 4

Table 3. Probing bone level(mm)

	Pre Op.	Post Op.	change
	Mean ± S.D	Mean ± S.D	Mean ± S.D
Control(n=13)	9.3 ± 2.4	8.3 ± 1.9	1.1 ± 1.4 *
Experimental(n=10)	9.1 ± 2.3	5.4 ± 1.3	3.7 ± 2.0#

* : significant between control & experimental group : P<0.05

: significant change : P<0.05

Table 4. Loss of attachment(mm)

	Pre Op.	Post Op.	change
	Mean ± S.D	Mean ± S.D	Mean ± S.D
Control(n=13)	7.2 ± 1.7	6.6 ± 2.1	0.6 ± 1.2 *
Experimental(n=10)	6.7 ± 2.5	3.2 ± 0.8	3.5 ± 2.3#

* : significant between control & experimental group : P<0.05

: significant change : P<0.05

, $8.3 \pm 1.9\text{mm}$
 , $9.1 \pm 2.3\text{mm}$
 $5.4 \pm 1.3\text{mm}$
 (P<0.05),
 (P<0.05).

IV.

4.

^{11,15,19-22}. 1987 Egelberg
 3가 ,

Figure 4 Table 4

$7.2 \pm 1.7\text{mm}$
 , $6.6 \pm 2.1\text{mm}$
 , $6.7 \pm$
 2.5mm $3.2 \pm 0.8\text{mm}$
 (P<0.05),

,
 ,
 23).

(P<0.05).

가

. Iglhaut Karring
 1 - 2
 3 mitotic activity가
 2
 2 - 3

3 - 4

가

²⁴⁻²⁶.

1996 Cotellini
 83.3% 4mm

Gottlow

²⁷. 1994

Guidor

6

, 6 - 12

가 24 . 24

가 Klein rod, PLA/PGA rod

가 Jansen 가 1999 microtextured surface

가 HA 30%가 가 GTR

1989 Caffesse

1 4 - 8

O'Leary 1960 Nabers

가 coagulum, bone blend

Robinson osseous coagulum

³⁴), Rosenberg free osseous tissue graft

bone blend

bone blend 0.66mm 2.98mm

75%

^{37,38}), 가 , ,

가 osteogenesis, osteoinduction, osteoconduction 3가

GTR

. 1991 Arthur

11 Vycryl mesh

가 Schallhorn, McClain

³⁹), ⁴⁰), GTR, calci - um carbonate, HA, DBM

GTR

가 가 GTR DFDB

가 GTR

II GTR DFDB CI

volume 가

volume 가 가 space

provision particle

1994 oxidized cellulose membrane porous replamineform hydroxyapatite,

porous resorbable calcium carbonate
oxidized cellulose
membrane

가

Isdor

가

osteoiduction

가

53).

가

41).

polylactic acids,

가

polyurethane, polyglycolic acids, Type I
collagen

가

16)

Durwin (0.84m - m) , Becker (1.2mm) ,
Schallhorn (1.0mm) , Anderegg (0 -
0.9mm) , Yukna (0.9mm)

48).

42 -

18,40,54,55,56).

2.1 ±

1.2mm 가 0.1 ± 0.3mm

가

, 가

가

6

Anderegg , Wallace

가 6

, 6

가

3.1mm

Westfelt

e - PTFE

6

12

18,57).

가

Guillemin

58).

49,50).

3.6 ± 2.3mm,

0.1 ±

Froum

6

3.3mm

0.3mm,

3.7 ± 2.0mm,

1.5mm

3.5 ± 2.3mm

51), Rosling

2 - 3mm

20), Becker

1

3mm

2 - 7mm

52),

30% 50%

2.7 ± 1.3mm,

2.1 ±

1.2mm,

1.1 ± 1.4mm,

criteria가

0.6 ± 1.2mm

가

(P<0.05).

V.

가

d,l - alctide/glycolide copolymer(Biomesh)
가 6 - 8

VI.

10 22
, 7
10 가
Biomesh
, 4 12

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1.

(P<0.05).

2.

가 (P<0.05),

가 ,

3.

가 (P<0.05).

,
(P<0.05),

(P<0.05).

4.

,
(P<0.05),

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Dent. 1988;8(4):9 - 31

41.

가

42.

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- Abstract -

Clinical Study on Therapeutic Effects of Biodegradable membrane Biomesh and autogenous bone grafts in infrabony defects

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The ultimate goal of periodontal disease therapy is to promote the regeneration of lost periodontal tissue, there has been many attempts to develop a method to achieve this goal, but none of them was completely successful.

This study was designed to compare the effects of treatment using resorbable barrier membrane (Biomesh[®]) in combination with autogenous bone graft material with control treated by only modified Widman flap.

22 infrabony defects from 10 patients with chronic periodontitis were used for this study, 10 sites of them were treated with resorbable barrier membrane and autogenous bone graft material as experimental

group and 12 site were treated by only modified Widman flap as control group. Clinical parameters including probing depth, gingival recession, bone probing depth and loss of attachment were recorded at 6 - 8 months later, and the significance of the changes was statistically analyzed. The results are as follows :

1. Probing depth of the two group was reduced with statistically significance ($P < 0.05$), but this changes were not different between the two experiment, control group with statistically significance.
2. Gingival recession showed statistically significant increase in control group ($P < 0.05$), but not in experimental group, and initial values of the two group were in statistically significant difference ($P < 0.05$).
3. Bone probing depth showed statistically significant decrease in experimental group ($P < 0.05$), but not in control group, and this changes were different between the two experiment, control group with statistically significance ($P < 0.05$).
4. Loss of attachment showed statistically significant decrease in experimental group ($P < 0.05$), but not in control group, and this changes were different between the two experiment, control group with statistically significance ($P < 0.05$).

On the basis of these results, treatment using resorbable barrier membrane in combination with autogenous bone graft material improve the probing depth, bone probing depth and loss of attachment in

infrabony defects.

Key words : guide tissue regeneration, resorbable barrier membrane, autogenous bone graft material, probing depth, bone probing depth, loss of attachment