

I. Beardmore

11). 가

가

가

가

2.3). ,

가 (wearhaug, 1971).

4). 20

Goldman Cohen(1979)

band 가

12-14), 15-16),

가

5). 가

6). 가

Bowers, Miyasato, Dorfman, De Trey, Bernimoulin<sup>7-11)</sup> 1mm

( )

Bjorn(1963)<sup>20)</sup> 가

17-19)

24

가 ,  
가 ,

가

가

1.

II.

가  
가

21-28)

23

2mm

Free Connective tissue graft

1mm

40

20

가

가

29)

가

2.

가

(1)

Free connective tissue graft

Sullivan Atkins

Edel<sup>30)</sup>

가

31),

33,33)

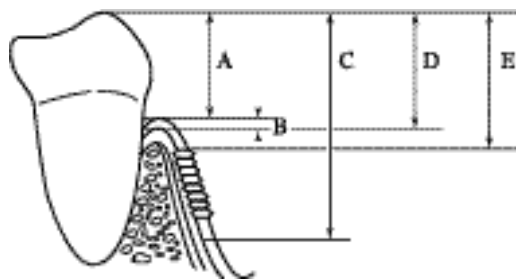


Figure 1. Diagram of the Measurements

- A. Distance from cusp tip to gingival margin
- B. Sulcus depth
- C. Immediately after surgery, distance from cusp tip to apical margin of the extension wound (after wound healing, distance from cusp tip to MGJ)
- D. Distance from cusp tip to presurgical MGJ
- E. Distance from cusp tip to apical transplant margin

1 4 가  
12

, 24 (25~48.3%)

34,35)

가

가

가

chromic catgut

가 2, 12, 24

1

2

ANOVA test

Independent t - test

가

4mm

catgut

III.

Coe - Pak

1.

(2)

Figure 1

A, B, C, D

"

"

E

(University of

(C - D).

Mishigan No. O Probe)

5.98 ± 0.16mm

2,

12, 24

4.85 ± 0.15, 2.54 ±

Divider Vernier caliper

0.22, 2.23 ± 0.15mm

(Table 1,

Mea -

Figure 2).

가

suring Device(SDI)

1/10mm

4.92 ± 0.40mm

2,

Table 1. Width of Extension

Weeks	0	2	12	24
Graft Type				
CTC	5.98 ± 0.16	4.85 ± 0.15	2.54 ± 0.22	2.23 ± 0.15
FGG	4.92 ± 0.40	3.94 ± 0.28	2.91 ± 0.15	2.90 ± 0.16

CTG(connective tissue graft): n=20

unit : mm

FGG(Free Gingival Autograft) : n=20

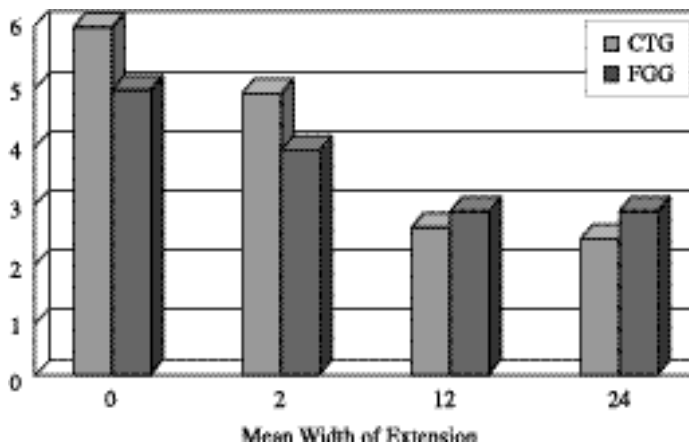


Figure 2. Mean Width of Extension

Table 2. Attached Gingiva Including Free Marginal Gingiva

Graft Type \ Weeks	Before	0	2	12	24
CTC	1.25 ± 0.57	6.73 ± 0.61	5.93 ± 0.26	3.58 ± 0.20	3.24 ± 0.20
FGG	1.19 ± 0.49	6.11 ± 0.58	5.14 ± 0.53	4.11 ± 0.49	4.09 ± 0.51

CTG(connective tissue graft): n=20  
 FGG(Free Gingival Autograft) : n=20

unit : mm

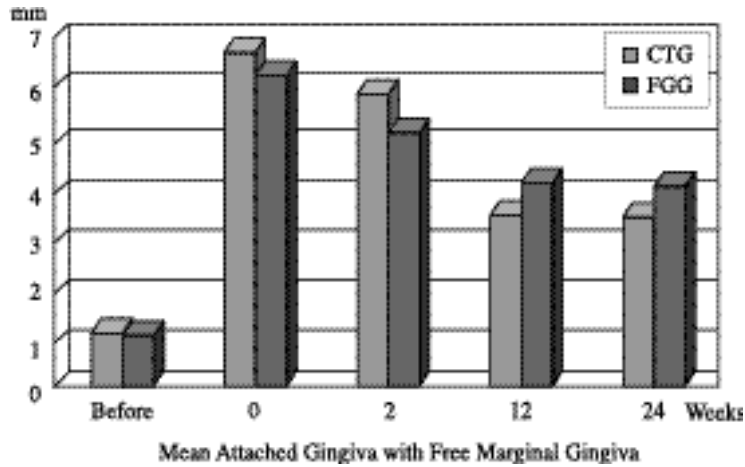


Figure 3. Mean Attached Gingiva Including Free Marginal Gingiva

12, 24 3.94 ± 0.28, 2.91 ± 0.15, 2.90 ± 0.16mm (Table 1, Figure 2).  
 가  
 가 2 가  
 12 가  
 (P<0.01), 12 24 (Table 4, 1.19 ± 0.49 mm, 2, 12, 24 6.11 ± 0.58, 5.14 ± 0.53, 4.11 ± 0.49, 4.09 ± 0.51mm (Table 2, Figure 3).  
 가 가  
 가  
 (P<0.01). 12 , 12 24 (Table

Table 3. Width of Transplant

Weeks \ Graft Type	0	12	24
CTC	4.98 ± 0.20	2.54 ± 0.22	2.23 ± 0.15
FGG	4.04 ± 0.15	2.91 ± 0.15	2.90 ± 0.16

CTG(connective tissue graft): n=20  
 FGG(Free Gingival Autograft) : n=20

unit : mm

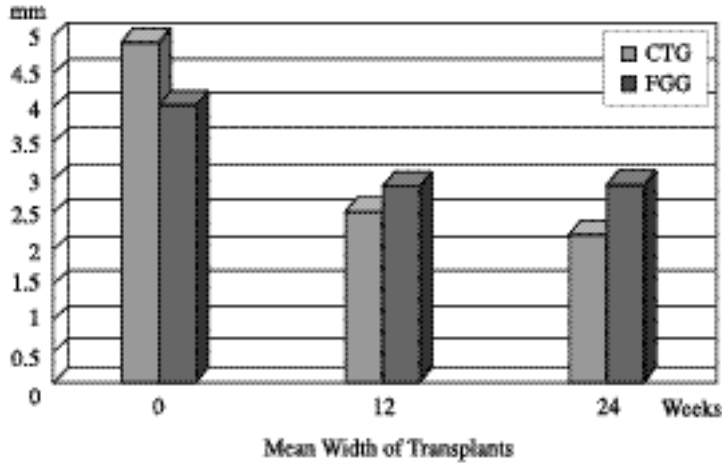


Figure 4. Mean Width of Transplant

6, 7). 4.98 ± 0.20 mm 12 24  
 2.54 ± 0.22, 2.23 ± 0.15mm  
 3. (Table 3, Figure 4).  
 가 4.04 ±  
 Measuring 0.15 mm 12 24  
 device(SDI) , 2.91 ± 0.15, 2.90 ± 0.16 mm  
 E - D . (Table 3, Figure 4).

Table 4. Result of Multiple Range Test for the Width of Extension after Connective tissue graft according to the Postoperative Period

Week	0	2	12	24
0				
2	**			
12	**	**		
24	**	**		

(\*\* :p<0.01)

Table 5. Result of Multiple Range Test for the Width of Extension after Free Gingival Autograft according to the Postoperative Period

Week	0	2	12	24
0				
2	**			
12	**	**		
24	**	**		

(\*\* :p<0.01)

Table 6. Result of Multiple Range Test for Attached Gingiva with Free Marginal Gingiva after Connective tissue graft according to the Postoperative Period

Week	Before	12	24
Before			
12	**		
24	**		

(\*\* :p<0.01)

Table 7. Result of Multiple Range Test for Attached Gingiva with Free Marginal Gingiva after Free Gingival Autograft according to the Postoperative Period

Week	Before	12	24
Before			
12	**		
24	**		

(\*\* :p<0.01)

Table 8. Result of Multiple Range Test for Width of Transplant after Connective tissue graft according to the Postoperative Period

Week	Before	12	24
Before			
12	**		
24	**		

(\*\* :p<0.01)

Table 9. Result of Multiple Range Test for Width of Transplant after Free Gingival Autograft according to the Postoperative Period

Week	Before	12	24
Before			
12	**		
24	**		

(\*\* :p<0.01)

가 가 가 .  
 Lang L e<sup>38)</sup>  
 (P<0.01). 12 12 24 2mm 1mm 가  
 (Table , Ericsson Lindhe  
 8, 9).  
 가 12 , Bowers, Miyasato, Dorfman, De  
 49%, 24 55% Trey<sup>7-10)</sup> 1mm  
 , 가 12  
 28%, 24 29% , Hangorsky Bissada<sup>40)</sup>  
 . 가 가 8  
 (P<0.01). , , Wennstrom Lindhe<sup>41)</sup>

4.

가

(B)

(P<0.01).  
 0.64mm 24 1.33 ±  
 0.43mm 가 1.23 ±  
 1.57 ± 0.51mm , 24 1.57 ±  
 0.51mm . , ,

IV.

가

가

가 , 가  
 1.19 ± 0.59mm, 1.25 ± 0.57mm ,  
 36). 6 가 가  
 가 4.09 ± 0.51mm,  
 1 mm 3.24 ± 0.20mm 가 .  
 9 mm  
 37), ,





4. 가  
가 24  
55% 29%  
가  
가  
가 ,  
, Trap door approach  
가

#### VI.

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- Abstract -

## The Clinical Study on Shrink - age Rate of Graft Following Connective Tissue Autografts

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Dentistry, Dankook University

The purpose of this study was to evaluate clinical changes in graft size after treatment with connective tissue autograft in human. 40 premolar teeth in 23 patients having the following mucogingival problems were selected.

The width of extension, attached gingiva including free marginal gingiva, width of transplant and clinical sulcus depth were measured at the initial examination, 2, 12 and 24 weeks following the connective tissue autograft and free gingival autograft.

The change of width of extension, attached gingiva including free marginal gingiva, width of transplant and clinical sulcus depth according to healing process in both graft procedures was statistically analyzed by ANOVA test and independent t - test using SPSS program.

The results were as follows :

1. The change of keratinized gingiva in both grafting procedures was increased

significantly at 24 weeks post - op.

2. The clinical sulcus depth exhibited no marked changes throughout the entire investigation in both grafting procedures.
3. After 12 weeks, no dimensional variation was seen in graft size in both grafting procedures.
4. Shrinkage differs significantly in both grafting procedures. From the day of graft to 24 weeks after surgery the percentages of shrinkage were connective tissue autograft 55% and free gingival autograft 29%.