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I.	-----	1
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1997 7 2000 7

235 , , ,

, , 109 , , .

1. 1.4 38.7 10 가 165 (70.2%) .  
 53 (22.6%) ,  
 가 50 (21.3%), 가 40 (17.0%), , .

2. 235 2,427 10.3 .  
 10 , 1 .

3. 2 39 (45-315 ) , 2 13 (25-290 ) .  
 가 가 ,  
 , 가  
 가  
 . (P < 0.05)

4. 가 가

가

5.

(P = 0.05)

95 (87.2%)

가



: , , , .

( )

# I.

가 가 .  
가 , 가 , ,  
가 가  
가  
가 , ,  
가 가  
(dentally handicapped patient)

<sup>1)</sup>

가 가

가

가

가 가 가 가

가 가

가

가 가

가 가

1844 Horace Wells(1844) N O Ether

barbiturate

Allen Sim(1967)<sup>13)</sup>, Grytten (1989)<sup>14)</sup> Vermeulen (1991)<sup>15)</sup>

Libman (1979)<sup>16)</sup>

가

가

가

가

24)

가

. 1997

가

## II.

가.

1997 7 2000 7

235

235 109

46.6%

. Figure 1.

가

Fig 1.

1.	:	( )	( )
2.	:	( )	
3.	:	( )	( ) ( )
		( )	( )
4.	:	( )	( ) ( )
		( )	( ) ( )

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1. : ( ) ( )

2. : ( )

3. : ( ) ( ) ( )  
 ( ) ( ) ( )  
 ( ) ( ) ( )

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1. ?  
 (2 ) ( ) ( )

2. ?  
 ( ) ( ) ( ) 가 ( )

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1. ?  
 (2 ) ( ) ( )

2. ?  
 ( ) ( ) ( ) ( )  
 ( ) ( )

1.

(2 ) ( ) ( )

?

2.

? ( )

1.

1,2

가 2

( )

( , ) ( )

③

( , , ) ( )

④

( )

⑤

( )

2.

1,2

가 가 2

( )

②

( )

③

( )

④

( )

⑤

( )



3. 가 가 2

1, 2

① ( )

② , 가 ( )

③ ( )

④ ( )

4. ?

( ) ( )  
( ) ( ) ( )

5. ?  
( ) ( ) ( )  
. ( ) ( )

6. 가 ?  
( ) (7 ) ( )

7. ?  
( )

SAS 6.12 , t-test  
(correlation analysis) . 0.05 .

### III.

가.

(1)

235 가 160 (68.1%), 가 75 (31.9%) .  
 1.4 38.7  
 3 가 55 (23.4%), 6 가 72 (30.6%), 12  
 가 45 (19.2%), 18 가 38 18 25 (10.6%) .  
 9.5 . (Table 1)

**Table 1. Age distribution.**

Age(year)	No. of cases	Percentage(%)
3	55	23.4
6	72	30.6
12	45	19.2
18	38	16.2
> 18	25	10.6
Total	235	100.0

Mean age : 9.5

(2)

53  
 (22.6%) 가 가 40 (17.0%), 50 (21.3%),  
 8 (3.4%), 4 (1.7%), 가 27 (11.4%) . , Leigh  
 disease, . (Table 2)  
 , ASA class I  
 184 (78.3%), ASA class II가 51 (21.7%) 가

**Table 2. Patients' General condition.**

	No. of cases	Percentage (%)	Mean age(year)
Normal but unmanageable	53	22.6	4.7
Autism	53	22.6	11.3
Mental Retardation	50	21.3	12.3
Cerebral palsy	40	17.0	11.1
Down's syndrome	8	3.4	11.1
Convulsive disorder	4	1.7	4.7
	27	11.4	6.1
Total	235	100.0	9.5

(3)

2 39 (45-315 ) , 2 13 (25-290 )

(4)

235 2,427 10.3  
 . 가 1,510 6.4 , 가 917 3.9 .  
 가 745 , stainless steel crown 412 ,  
 가 475 , 261 , 92 .  
 16 .  
 가 564 , stainless steel crown 81 , gold crown and  
 bridge가 2 , 94 . 170 .  
 145 . Scaling 38 , 가 120 , 가 28  
 . (Table 3)

labial or lingual frenectomy, ranula masupialization, odontoma removal, biopsy

**Table 3. Performed dental treatment under General Anesthesia.**

Performed dental treatment				
	No. of cases	Mean	No. of cases	Mean
Filling	745	3.17	564	2.4
Pulp treatment	475	2.02	94	0.4
Stainless steel crown	412	1.75	81	0.35
Extraction	261	1.11	170	0.72
Sealant	92		145	0.61
Fixed space maintainer	16			
Celluloid Crown			10	
Gold Crown			2	
Total	2001		1066	

Mean = No. of cases/235

(5)

10

, 1

.  
 5 ,  
 1 , 2 , 3 , 4  
 , 5 1 ,  
 2 , 3 , 4 , 5  
 .  
 235 109 ( 46% )  
 t-test Correlation coefficients  
 0.05 .

(1)

a.  
 109 가 32 , 가 77 . 42.03  
 47.03 39.95 .  
 가 가 . (Table 4)

**Table 4. Parent's anxiety level for the dental treatment under general anesthesia according to parent's sex.**

	No. of cases(%)	Mean	SD
	32(29.4)	3.28	1.33
	77(70.6)	4.04	0.95
Total	109(100)	3.81	1.12

p = 0.0053 .

b.

. (Table 5)

**Table 5. Parent's anxiety level for the dental treatment under general anesthesia according to parent's education level.**

	No. of cases	Mean	SD
	14	4.00	0.52
	51	3.88	1.07
	32	3.87	1.13
	12	3.17	1.40

p = 0.0145

c.

가

. (Table 6)

**Table 6. Parent's anxiety level for the dental treatment under general anesthesia according to parent's experience for general anesthesia.**

	No. of cases	Mean	SD
	56	3.61	1.06
	53	4.04	1.16
Total	109	3.81	1.12

p = 0.0450

(2)

a.

가 78 , 가 31 ,  
10.73 , 16.19 .  
가 . (Table 7)

**Table 7. Parent's anxiety level for the dental treatment under general anesthesia according to patient's sex.**

	No. of cases (%)		Mean	SD
	78(71.6)	10.73	3.92	1.12
	31(28.4)	16.19	3.55	1.09
Total	109(100)	12.28	3.81	1.12

p = 0.1167 .

b.

가 .  
가 .(Table  
8)

**Table 8. Parent's anxiety level for the dental treatment under general anesthesia according to patient's general condition.**

	No. of cases	Mean	SD
	28	4.29	1.05
	81	3.65	1.11
Total	109	3.81	1.12

p = 0.0097 .

c.

(Table 9)

**Table 9. Parent's anxiety level for the dental treatment under general anesthesia according to patient's experience for general anesthesia.**

	No. of cases	Mean	SD
.	36	3.83	1.28
.	73	3.81	1.05

p = 0.9132

(3)

가 86 (78.9%) 가 , 가 42 (38.5%) 가 . (Table 10)

**Table 10. Decisive factors of the choice for the dental treatment under general anesthesia.**

	No.of cases	Percentage(%)	No.of cases	Percentage(%)
	86	78.9	6	5.5
	2	1.8	4	3.7
	4	3.7	18	16.5
	14	12.8	39	35.8
	3	2.8	42	38.5
Total	109	100	109	100



(4)

67 (61.5%) 가 ,  
 67 (61.5%) 가 . (Table 11)

**Table 11. Parent's anxious factors before the dental treatment under general anesthesia.**

	No of cases	Percentage(%)	No of cases	Percentage(%)
	67	61.5	6	5.5
	18	16.5	28	25.7
	0	0.0	0	0.0
	20	18.3	67	61.5
	4	3.7	8	7.3
Total	109	100	109	100

(5)

가 가 72  
 (66.1%) , 46 (42.2%)  
 . (Table 12)

**Table 12. Difficulties before the dental treatment under general anesthesia.**

	No. of cases	Percentage(%)	No. of cases	Percentage(5)
	11	10.1	6	5.5
가	72	66.1	26	23.9
	14	12.8	31	28.4
	12	11.0	46	42.2
Total	109	100	109	100

(6)

a.

가 .  
가 . (Table 13)

**Table 13. Parent's satisfaction level for the dental treatment under general anesthesia according to parent's sex.**

	No. of cases	Mean	SD
	32	1.56	0.56
	77	1.94	0.64
Total	109	1.83	0.61

p = 0.0048

b.

,  
(Table 14)

**Table 14. Correlation of the parent's satisfaction level for the dental treatment under general anesthesia between parent's age and patient's age.**

	C. C. *	P
	-0.02990	0.7576
	-0.03865	0.6899

\* : Correlation coefficients

c.

가 .

. (Table 15)

**Table 15. Parent's satisfaction level for the dental treatment under general anesthesia according to parent's education level.**

	No. of cases	Mean	SD
	14	2.14	0.56
	51	1.90	0.57
	32	1.75	0.67
	12	1.33	0.49

p = 0.0004 .

d.

가 .

(Table 16)

**Table 16. Parent's satisfaction level for the dental treatment under general anesthesia according to patient's past dental experience.**

	No. of cases	Mean	SD
	83	1.89	0.66
	26	1.61	0.49

p = 0.0529 .

(7)

95 (87.2%)

. 14 (12.8%)

# IV.

, ,  
 .  
 .<sup>18-25)</sup> Smith <sup>4)</sup> 2-5%  
 . Trapp<sup>26)</sup>  
 가  
 , , , , ,  
 , , ,  
 . Hastings <sup>27)</sup>  
 가 가 ,  
 가  
 가 가 , ,  
 , , , 가 , ,  
 가 <sup>25,28)</sup> Allen Sim<sup>13)</sup> 50%  
 가 가 ,  
 . Davis Bierenbaum<sup>29)</sup>  
 가 31%  
 가  
 53 (22.6%) ,

(1997) <sup>24)</sup>

, 가 가 가

가 가

<sup>30)</sup> Smith (1978)<sup>4)</sup> 7 . Enger

Mourino <sup>3)</sup> 1 6.1 , 3.7 , stainless steel crown 3.0 ,  
0.7 235 2,427

10.3 917 3.9

1,510 6.4 가

564 , stainless steel crown 81 , gold crown and bridge 2 ,

94 가 170 , 145 .

가 745 , stainless steel crown 412 , 가 475

, 261 , 92 16 ,

28

가 ,

가 .

gold crown and bridge

가 .

4

17,31) 2 39

(45 - 315 ) , 2 13 (25-290 ) 가

12% - 45% 3,16,32,33)

10 (4%)

5% 34) Coplans

Curson 35) 1:593,000

가 .

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,

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가 가

21,22)

,

.

가

,

.



가

가

가

가

가

87.2%가

가

가

가

가



# V.

1997 7 2000 7

235 , , , ,

, , 109 , , .

1. 1.4 38.7 10 가 165 (70.2%) .  
53 (22.6%) ,  
가 50 (21.3%), 가 40 (17.0%), , .

2. 235 2,427 10.3 .  
10 , 1 .

2 39 (45-315 ) , 2 13 (25-290 ) .

3. 가 가 , .  
가 가 .

4. 가 가 (P < 0.05) .  
가 가 .

가 .

5.

.(P < 0.05)

95 (87.2%)

가

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**A study of dental treatment and the response of the parents  
of the dentally handicapped patients treated  
under out-patient general anesthesia**

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Department of Dentistry, The Graduate School, Yonsei University  
(Directed by Jae-Ho Lee, D.D.S., M.S., PhD)

Under this thesis, 235 patients with dental problems treated under general anesthesia at the Pediatric Dentistry Clinic of Yonsei Dental College were surveyed and their age distribution, reasons for taking general anesthesia, duration of anesthesia, duration of dental procedure, dental treatment performed and complications were analyzed. A questionnaire survey was also conducted to analyze degrees of anxiety and satisfaction among their parents according to the parents' age, educational background and experience of general anesthesia, as well as the patients' age and past dental history. Following are the results.

1. The age distribution of the patients ranged from 1.4 years old to 38.7 years old, while patients under 10 years old accounted for 165 cases (70.2%). Primary reasons for taking general anesthesia were normal but unmanageable children and autism which accounted for 53 cases (22.6%), respectively, mental retardation, 50 cases (21.3%), cerebral palsy, 40 cases (17.0%), followed by Down's Syndrome and convulsive disorder. Other reasons included cardiac disorder, visual handicap, etc.

2. For those 235 patients, 2,427 teeth were treated and the average number of teeth treated was 10.3 per patient. The average duration of anesthesia was 2 hrs 39 min. (45~315 min.) and the average duration of the procedure was 2 hrs 13 min. (25~290 min.)

3. When the patients were treated under general anesthesia, the degree of anxiety of their mothers was higher than that of their fathers. It appeared that the higher the parents' educational background was, the less their anxiety. There were some differences shown in the parents' anxiety according to the patients' general health condition, and the anxiety of parents whose children had no systemic problem was higher than that of parents' whose children had systemic disability. The anxiety of parents who had no experience of general anesthesia was higher than that of parents who had such experience. ( $P < 0.05$ )

4. The primary cause of the parents' anxiety was the possibility that patients would fail to come out from under the anesthetic, followed by the possibility of side effects.

5. The higher the parents' educational level was, the higher the degree of satisfaction after treatment under general anesthesia. 95 cases (87.2%) responded that they would accept such treatment again, if needed.

From the result, dental treatment under general anesthesia causes anxiety for parent but the parent's satisfaction level was high. And that was the way gives good quality of dental service to unmanagable patients.

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key words : dental treatment, out - patient general anesthesia, anxiety,  
satisfaction level,