

소아에서 중이환기관의 유치기간에 영향을 미치는 인자

박경훈 · 구본조 · 박정준 · 김선기 · 최선명 · 권순욱 · 윤상원

Factors Influencing the Extrusion of Tympanostomy Tubes in Children

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-ABSTRACT-

Background and Objectives : Premature extrusion of tympanostomy tubes continues to bother both doctor and patient. In spite of the previous studies, the mechanism of extrusion is still uncertain. The aim of this study was to determine the factors influencing the extrusion. **Materials and Method** : We selected 78 children (124 ears) who underwent tympanostomy tube insertion from January 2001 to December 2002. Age, sex, previous adenotonsillectomy history, previous tympanostomy tube insertion history, type of impedance audiometry, site of insertion, incision method and contents of the middle ear were recorded as independent variables. The patients were observed every 1 month until the tube was extruded. Statistical analysis was performed with the extrusion rate as a dependent variable. **Results** : As the frequency of previous tympanostomy tube insertion was increased, the indwelling period of newly inserted tympanostomy tubes was significantly reduced. The total indwelling period of previously inserted tympanostomy tube was correlated with the indwelling period of newly inserted tympanostomy tubes. But there were no correlation nor difference with other variables. **Conclusion** : It is probable that repeated tympanostomy tube insertions lead to the change of the histology and physiology of tympanic membrane and accelerate the extrusion rate of tympanostomy tubes. (J Clinical Otolaryngol 2005;16:60-65)

KEY WORDS : Middle ear ventilation · Otitis media with effusion · Ventilation tube extrusion · Tympanic membrane.

서 론 가

1954 Armstrong

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(epithelial migration)

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환기관 삽입술의 기왕력과 환기관의 유지기간과의 관계 (SD=3.50), 3 3.50
 93 (75.0%), (SD=2.12)
 1 25 (20.2%), 2 가 (p=0.029)(Table 2)(Fig. 1A).
 4 (3.2%), 3
 2 (1.6%) .
 10.19 (SD=4.44), 1
 8.56 (SD=3.50), 2 6.75 (r = - 0.265,

Table 2. Simple statistics and one-way ANOVA analysis of multiple variables with the extrusion rate as a dependent variable

Independent variable	Group	No.	Percent	Mean duration (months)	p value
Frequency of previous VTI	No	93	75.0%	10.19	0.029*
	1 time	25	20.2%	8.56	
	2 times	4	3.2%	6.75	
	3 times	2	1.6%	3.50	
Insertion site	ASQ	41	33.1%	9.50	0.695
	AIQ	74	59.7%	9.42	
	PIQ	9	7.2%	10.18	
Nature of middle ear fluid	No fluid	12	9.7%	10.08	0.905
	Serous	33	26.6%	9.67	
	Mucoid	51	41.1%	9.33	
	Purulent	28	22.6%	10.0	

*P is the level of significance. ASQ : anterior superior quadrant, AIQ : anterior inferior quadrant, PIQ : posterior inferior quadrant, VTI : ventilation tube insertion

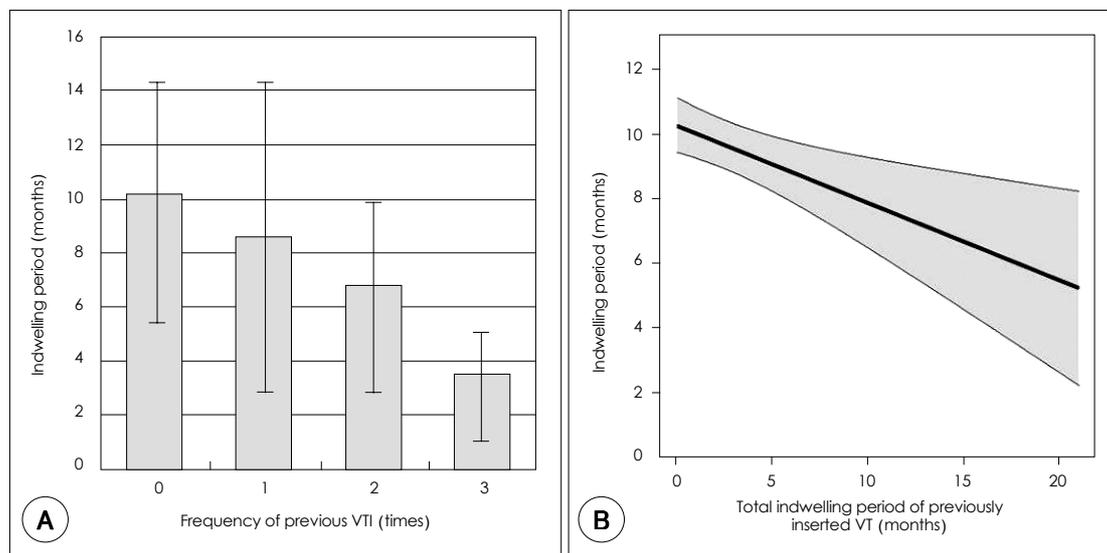


Fig. 1. Indwelling period according to previous ventilation tube insertion history. A : The more frequent ventilation tube insertion previously, the shorter indwelling period significantly (p=0.029). B : Indwelling period (bold line) is correlated with the total indwelling period of previously inserted ventilation tube negatively (r= - 0.265, p=0.003). VTI : ventilation tube insertion, VT : ventilation tube.

p=0.003)(Fig. 1B).

아데노이드 절제술이나 편도 및 아데노이드 절제술과 환기관
의 유지기간과의 관계

28 (22.6%)
10.08 (SD=4.10),
9.67 (SD=4.46), 9.33
(SD=4.66), 10.0 (SD=3.84)
(Table 2).

고 찰

34 (27.4%), 90 (72.6%)
10.27
(SD=3.90), 9.41 (SD=4.49)
가
(Table 1).

(groove)

가⁴⁾

가

임피던스 청력검사와 환기관의 유지기간과의 관계

B 91 (73.4%), C 33 (26.6%)
B 9.43 (SD=4.50), C 10.24 (SD=3.86)
가 B
(Table 1).

Gibb⁶⁾

가

가

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(flange)

. Armst-

rong¹⁾

환기관의 삽입위치와 환기관의 유지기간과의 관계

가 41 (33.1%),
가 74 (59.7%), 가 9
(7.2%)
가 9.50 (SD=4.22), 가
9.42 (SD=4.54), 가 10.18 가
(SD=4.03) (Table 2).

고막절개의 방법과 환기관의 유지기간과의 관계

가 51 (41.1%),
가 73 (58.9%)
가 9.50 (SD=4.22),
가 9.42 (SD=4.54)
(Table 1).

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가

저류액의 성상과 유지기간과의 관계

12 (9.7%),
33 (26.6%), 51 (41.1%), 가 ⁷⁾

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