

## 소아 진주종의 임상적 특징

정연훈 · 박기현 · 문성균 · 최호석 · 김영주 · 이승주

### Clinical Characteristics of Cholesteatoma in Children

Yun Hoon Choung, DDS, MD, Keehyun Park, MD, Sung-Kyun Moon, MD,  
Ho Seok Choi, MD, Young Ju Kim, MD and Seung Joo Lee, MD

*Department of Otolaryngology, Ajou University School of Medicine, Suwon, Korea*

#### – ABSTRACT –

**Background and Objectives** : Cholesteatoma occurring in childhood is usually said to be more aggressive, more frequent recurrence and residual disease than in adults. Cholesteatoma in children is more often associated with larger mastoid air cells, shorter disease history and common secondary infection. Child cholesteatoma often appears behind an intact drum or with a central perforation in clinical feature. The purpose of this study was to investigate the clinical characteristics of cholesteatoma in children by comparing them with those of adult cholesteatoma, and eventually to determine the pathogenesis of childhood cholesteatoma. **Materials and Method** : The subjects were 62 patients with childhood cholesteatoma who visited Ajou University Hospital between June, 1994 and March, 2000 and the age criteria defining children was less than 16 years. They were carefully analyzed on the basis of OPD charts, temporal bone CTs and operation records, retrospectively. We analysed cholesteatoma classifications, eardrum findings, extents of cholesteatoma, status of ossicular destructions and middle ear status comparing with 157 adult cholesteatoma in the same period. **Results** : Eardrum findings in childhood cholesteatoma were attic perforation in 37.1%, central perforation in 17.7%, intact in 14.5%, posterosuperior perforation in 11.3%, respectively. Attic perforation in childhood cholesteatoma was less than that in adult cholesteatoma (56.7%) but was most common type. Intact drum and central perforation were more than that in adult cholesteatoma. Cholesteatoma in children most frequently extended to the whole middle ear cleft (33.7%), while localization in the attic was most frequently found in adult cholesteatoma (36.9%). The rates of incus and malleus destructions were slightly lower in childhood cholesteatoma, but the rate of stapes suprastructure destruction was slightly higher in children (48.4%) than in adult (43.7%). Involvements of the facial nerve, dura and lateral sinus were less prevalent in children than in adults. **Conclusion** : The cholesteatoma in children showed some different clinical characteristics from that in adult cholesteatoma suggesting there may be different pathogenesis in children cholesteatoma. And we think this clinical evidences may possibly be a greater source of congenital origin in some childhood cholesteatoma than we had expected. (**J Clinical Otolaryngol 2001;12:208-213**)

**KEY WORDS** : Cholesteatoma · Children · Adults · Surgery.

---

: 2001 9 29  
: 2001 10 9  
: , 442 - 749 5  
: (031) 219 - 5266 · : (031) 219 - 5264 E - mail : parkkh@madang.ajou.ac.kr

## 서 론

가 .

가 .

가 , , (1-4)

(5-7)

Parisier

가 가 (8)

16

10.3

14 (22.6%)

(59.7%),

25 (40.3%)

37

3~15

가 48 (77.4%)

가

62

37

결 과

5 ,

가 , 57 , 2

**Table 1.** Eardrum findings of cholesteatoma in children and adults

Findings	Children		Adults	
	n	%	n	%
Intact	9	14.5	0	0.0
Intact with EAC destruction	4	6.5	8	5.1
Central perforation	11	17.7	8	5.1
Total perforation	3	4.8	20	12.7
Attic perforation	23	37.1	89	56.7
PSQ perforation	7	11.3	14	8.9
Central with attic perforation	3	4.8	5	3.2
Attic with PSQ perforation	2	3.2	13	8.3
Total	62	100.0	157	100.0

EAC : external auditory canal, PSQ : posterior superior quadrant

고막소견 (Table 1) 가 33.7% 가 , 가 36.9% 가 17.7%, 가 16%, 37.1% , 가 가 9.7% . 가 24.2%, (56.7%). 17.7% 20.4% 5.1% 가 14.5% , 이소골의 파괴소견 (Table 3) 43.5%, 25.8%, 53.2% 72. 11.3%, 6%, 47.1%, 74.5% , 가 6.5%, 4.8%, 69.4% 77.7% 가 4.8%, 48.4% 가 3.2% . 42.7%

진주종의 침습범위 (Table 2) 주변구조물의 파괴소견 (Table 4) , S 21.0%, 11.3%, 6.5%, 3.2%

**Table 2.** Extent of cholesteatoma in children and adults

Extent	Children		Adults	
	n	%	n	%
Mesotympanum only	4	6.5	8	5.1
Posterior tympanum only	5	8.1	2	1.3
Epitympanum only	11	17.7	58	36.9
Antrum only	0	0	4	2.6
Epitympanum + antrum	6	9.7	14	8.9
Posterior tympanum + epitympanum	10	16	38	24.2
Posterior tympanum + antrum	1	1.6	1	0.6
Mesotympanum + epitympanum + antrum	21	33.7	32	20.4
EAC	4	6.5	0	0
Total	62	100.0	157	100.0

EAC : external auditory canal

**Table 3.** Status of ossicular destruction from cholesteatoma in children and adults

Destroyed ossicles	Children		Adults	
	n	%	n	%
Malleus head	27	43.5	114	72.6
Malleus handle	16	25.8	74	47.1
Incus body	33	53.2	117	74.5
Incus long process	43	69.4	122	77.7
Stapes suprastructure	30	48.4	67	42.7
Stapes footplate	2	3.2	20	12.7



가 Aimi, Michael 가  
 가 33.7% 가 가 .  
 20.4% ,  
 가 36.9% 가 .  
 가 ,  
 가 가 ,  
 가 Parisier <sup>8)</sup> 가 ) 가  
 65%, 61%, 48%, (si -  
 nus tympanum) 35% (remo -  
 가 60% deling) 가  
 77.1%, 45%, 59.4% (sclerotic)  
 90.4%, 32.5%, 46.5%  
 Parisier

### 결 론

가 . 1)  
 69.4% 77.7% . 2)  
 48.  
 4% 42.7% . 3)  
 가 . 4)  
 가  
 . Aimi<sup>13)</sup>  
 (tympanic ring)  
 , Michael<sup>14)15)</sup> 가  
 (epidermoid formation)

중심 단어 :

## REFERENCES

- 1) Charachon R. *The surgical treatment of cholesteatoma in children. Clin Otolaryngol* 1985;10:177-84.
- 2) Palva A, Karma P, Karja J. *Cholesteatoma in children. Arch Otolaryngol (Stockh)* 1977;103:74-7.
- 3) Glasscock ME, Dickins JR, Wiet R. *Cholesteatoma in children. Laryngoscope* 1981;91:1743-53.
- 4) Jahnke V. *Clinical, pathological and therapeutic aspects of cholesteatoma in children. In: Sade J, editor. Cholesteatoma and mastoid surgery. Amsterdam; Kugler publ; 1982. p.25-7.*
- 5) Tos M. *Treatment of cholesteatoma in children: a long-term study of results. Am J Otol* 1983;4:189-97.
- 6) Sheehy JL. *Cholesteatoma surgery in children. Am J Otol* 1985;6:170-2.
- 7) Edelstein DR, Parisier SC, Ahuja GS, Juarbe C, Chute P, Wening S, et al. *Cholesteatoma in the pediatric age group. Am Otol Rhinol Laryngol* 1988;97:23-9.
- 8) Parisier SC, Edelstein DR, Bindra GS, Han JC, Chute P. *Is cholesteatoma the same disease in children and adults? Trans Am Otol Soc* 1988;76:161-6.
- 9) Bujia J, Holly A, Antok-Candela F, Tapia MG, Kastebauer E. *Immunobiological peculiarities of cholesteatoma in children: Quantification of epithelial proliferation by MIB 1. Laryngoscope* 1996;106:865-8.
- 10) Derlacki EL, Clemis JD. *Congenital cholesteatoma of the middle ear and mastoid. Ann Otol Rhinol Laryngol* 1965;74:706-27.
- 11) Levenson MJ, Michaels L, Parisier SC. *Congenital cholesteatoma of the middle ear in children: Origin and management. Otolaryngol Clin North Am* 1989;22:941-54.
- 12) Park K, Chun YM. *Congenital cholesteatoma in the middle ear which can cause acquired cholesteatoma: fact or fancy? In: Sanna M, editor. Cholesteatoma and mastoid surgery. Proceedings of the 5th international symposium, Rome, CIC Edizioni Internazionali;1997. p.472-6.*
- 13) Aimi K. *Role of the tympanic ring in the pathogenesis of congenital cholesteatoma. Laryngoscope* 1983;96:119-29.
- 14) Michaels L. *An epidermoid formation in the developing middle ear: Possible source of cholesteatoma. J Otolaryngol* 1986;15:169-74.
- 15) Michaels L. *Origin of congenital cholesteatoma from a normally occurring epidermoid rest in the developing middle ear. Int J Pediatr Otorhinolaryngol* 1988;15:51-65.