

## 자연유양골절제의 전산화단층촬영 소견 : 유양돌기절제술후 측두골 결손과의 비교

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### CT Findings of Automastoidectomy : Comparison with Postmastoidectomy Defect of the Temporal Bone

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#### – ABSTRACT –

**Background and Objectives :** To describe the CT findings of automastoidectomy caused by cholesteatoma, and to evaluate the natural course of cholesteatoma by comparing it with the postmastoidectomy defect of the temporal bone. **Materials and Methods :** We retrospectively reviewed the CT findings of 21 cases of automastoidectomy in 17 patients with cholesteatoma and of 19 cases of postmastoidectomy in 16 patients. **Results :** 1) In automastoidectomy, the posterior walls of bony defects of the temporal bone were thinner (mean thickness in automastoidectomy/postmastoidectomy : 2 mm/3.5 mm and smoother (n=14) than postmastoidectomy cases (n=8). 2) Defects of the posterosuperior wall of the bony external auditory canal were present in all cases of automastoidectomy (100%). 3) There were gross defects of the lateral bony cortex of the mastoid (68%), Henle's spine (100%) in cases of postmastoidectomy, but in some cases of automastoidectomy (19%, 24%). 4) There were soft tissue densities within the bony defect and sinus tympani in all cases of automastoidectomy (100%) and in some cases of postmastoidectomy (63% and 37%). **Conclusion :** When comparing automastoidectomy and postmastoidectomy, CT findings concerning bony defects were different with regard to the remaining posterior wall, the extent of bony defect, and the presence of findings which suggested an active disease process. These differences are helpful in differentiating automastoidectomy and postmastoidectomy and in understanding the natural course of cholesteatoma. **Background and Objectives :** Since the concept of functional sinus surgery and optical aids such as. (J Clinical Otolaryngol 2000; 11:222-229)

**KEY WORDS :** Temporal bone CT · Cholesteatoma · Automastoidectomy · Postmastoidectomy.

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### 서 론

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### 결 과

#### 대상 및 방법

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(21 )  
(19 )

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**Table 1.** CT findings of bony defect of the temporal bone in the automastoidectomy and postmastoidectomy

Findings	Automastoidectomy (n = 21)	Postmastoidectomy (n = 19)
1. Thickness (mm) of the posterior wall of bony defect	0 - 6.4 (2.0)	0 - 6.7 (3.5)
2. Cases with smooth surface of bony defect	67%	42%
3. Presence of soft tissue density within bony defect	100%	63%
4. Defect of bony EAC	100%	79%
5. Cortical defect of lateral wall	19%	68%
6. Defect of Henle's spine	24%	100%



**Fig. 1.** Postmastoidectomy. The axial (A) and coronal (B) CT scans of temporal bone show gross defect of lateral bony cortex of the mastoid (white arrow). Posterior wall of bony defect (black arrow) is relatively thick.

4, 19% (Figs. 1 - 4).  
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 68% 2 mm, 12, S-



**Fig. 2.** Postmastoidectomy. The axial (A) CT scans of temporal bone show defect on the posterior wall of bony external auditory canal and lateral bony cortex of mastoid is relatively preserved. Posterior and superior to bony external auditory canal (white arrow) in coronal CT scan (B).

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8-10)

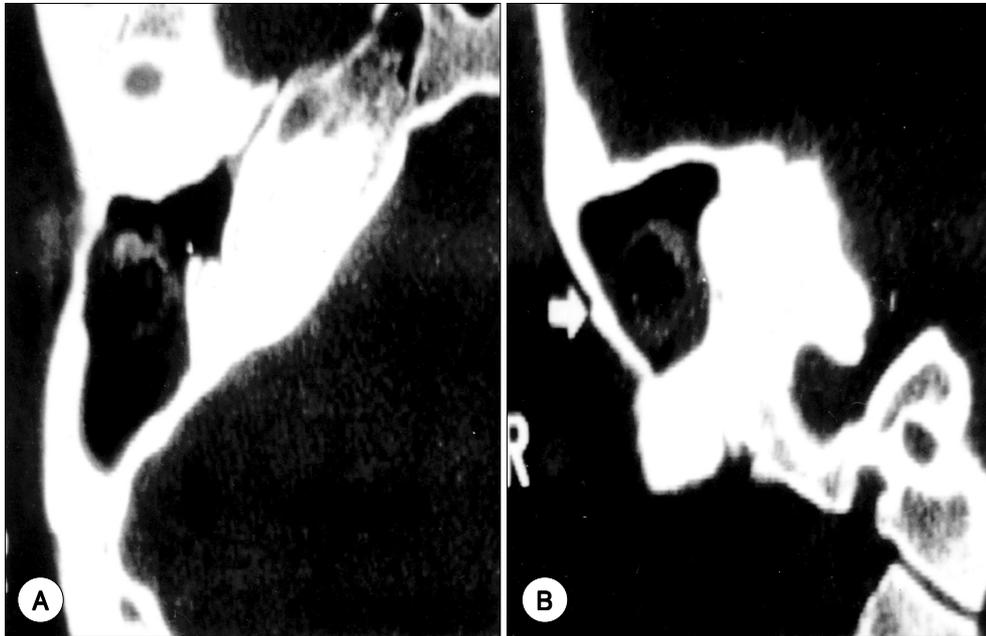
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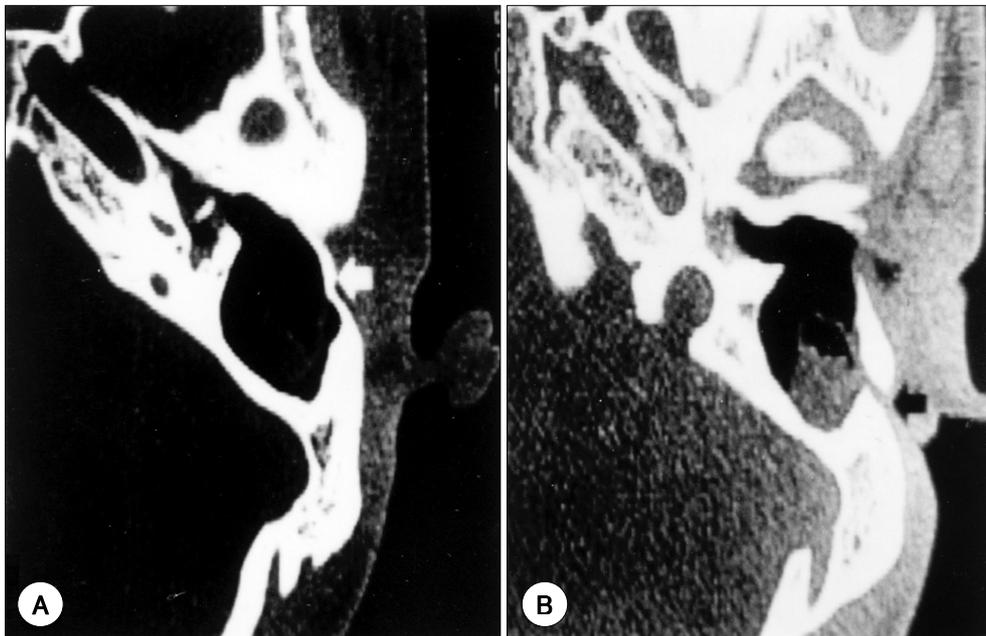
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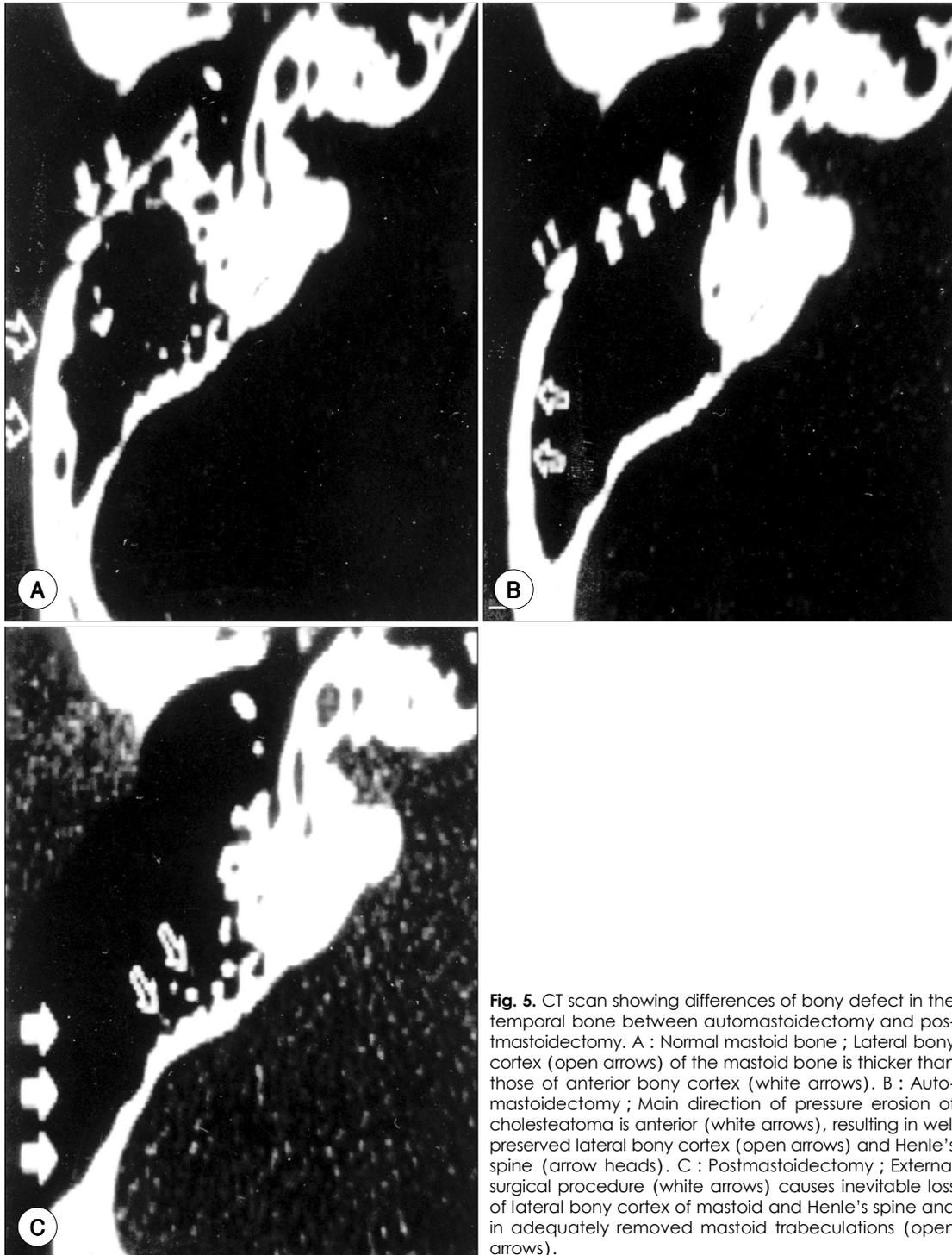
(Fig. 5).



**Fig. 3.** Automastoidectomy. The axial (A) and coronal (B) CT scans of right temporal bone reveal large bony defect of mastoid bone with preservation of lateral bony cortex of mastoid. Soft tissue density is seen in mastoid cavity. Henle's spine (white arrow) is preserved (B).



**Fig. 4.** Automastoidectomy. The axial (A, B) scans of the left temporal bone. Lateral bony cortex of mastoid and Henle's spine (white arrow) are grossly preserved (A). Caudal scan (B) shows small defect (black arrow) of lateral bony cortex of mastoid bone with the dimpling of the skin.



**Fig. 5.** CT scan showing differences of bony defect in the temporal bone between automastoidectomy and postmastoidectomy. A : Normal mastoid bone ; Lateral bony cortex (open arrows) of the mastoid bone is thicker than those of anterior bony cortex (white arrows). B : Automastoidectomy ; Main direction of pressure erosion of cholesteatoma is anterior (white arrows), resulting in well preserved lateral bony cortex (open arrows) and Henle's spine (arrow heads). C : Postmastoidectomy ; External surgical procedure (white arrows) causes inevitable loss of lateral bony cortex of mastoid and Henle's spine and in adequately removed mastoid trabeculations (open arrows).

**Table 2.** Associated CT findings in patients with automastoidectomy and postmastoidectomy

Findings	Automastoidectomy(n = 21)	Postmastoidectomy(n = 19)
1. Blunting of scutum	100%	68%
2. Erosion of CN canal	14%	5%
3. Labyrinthine fistula	29%	21%
4. Defect of tegmen tympani	5%	5%
5. Defect of sigmoid sinus plate	19%	5%
6. Soft tissue density in sinus tympani	100%	37%

S- 가 (Fig. 5).

Kim<sup>11)</sup> 가 가 가 8 Kim<sup>11)</sup> CT 가 7 (Fig. 5). 79% 가 68% 19% 가 가 Kim<sup>11)</sup> 가 12-14) 결론 가 S- 가 가 가<sup>4)</sup>

중심 단어 :

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