

## 외이도 악성종양의 이하선 침범 및 이하선 림프절 전이 양상

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### Mode of Parotid Invasion and Parotid Lymph Node Metastasis in External Auditory Canal Carcinoma

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#### ABSTRACT

**Background and Objectives** : Until now, only a little is known about the mode of parotid involvement in external auditory canal (EAC) carcinoma. We examined the incidence of parotid node metastasis and direct parotid invasion in patients with EAC carcinoma. The purpose of this study was to evaluate the role of parotidectomy and to provide the guidelines for performance of parotidectomy when dealing with EAC carcinoma. **Materials and Method** : The study comprised of 11 patients with squamous cell carcinomas (SCC) and 10 patients with adenoid cystic carcinomas (ACC). A retrospective review of the surgical specimens was undertaken with specific reference to parotid node metastasis and parotid invasion. **Results** : Parotid node metastasis was noted only in two cases of advanced staged SCC, whereas none of the ACC patients showed parotid node metastasis. Direct parotid invasion occurred only in advanced staged SCC ; however, it did occur in early stage ACC. **Conclusion** : Our data indicated that elective parotidectomy for control of occult parotid node metastasis is necessary only in advanced SCC carcinoma, whereas parotid management to secure adequate safety margin is mandatory for advanced SCC and all cases of ACC. (Korean J Otolaryngol 2004;47:99-102)

**KEY WORDS** : Parotid gland · Carcinoma · External auditory canal.

항목	SCC (n=11)	ACC (n=10)
Parotid node metastasis	2 (18.2%)	0 (0%)
Direct parotid invasion	1 (9.1%)	2 (20%)
Parotid node metastasis + Direct parotid invasion	1 (9.1%)	0 (0%)
Neither	8 (72.7%)	8 (80%)
Parotid management	10 (90.9%)	10 (100%)
Parotid node metastasis	2 (20%)	0 (0%)
Direct parotid invasion	1 (10%)	2 (20%)
Parotid node metastasis + Direct parotid invasion	1 (10%)	0 (0%)
Neither	6 (54.5%)	8 (80%)

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1989 8 1996 3  
 21  
 11 (squamous cell carcinoma)  
 , 10 (adenoid cystic carcinoma)  
 , CT MRI  
 modified  
 Pittsburgh tumor staging system<sup>8)</sup>  
 T1 가 2 , T2 가 3 ,  
 T3 가 2 , T4 가 4 ,  
 T1 가 2 , T2 가 3 , T3 가 1 , T4  
 가 4 .  
 (Table 1 and 2).  
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**Table 1.** Characteristics of patients with squamous cell carcinoma of the external auditory canala

Patient	Sex/ Age	Preoperative T Stage	Surgery	Radiation	Status (Mo)
1	M/61	T1	LCR	None	NED (136)
2	M/37	T1	PTBR	None	NED (29)
3	M/67	T2	PTBR	None	NED (25)
4	F/67	T2	PTBR	None	NED (21)
5	F/60	T2	PTBR	None	NED (19)
6	F/64	T3	STTR	Postop RT	NED (98)
7	F/49	T3	STTR	Postop RT	DWD (32)
8	M/56	T4	STTR	Postop RT	DWD (34)
9	M/62	T4	STTR	Postop RT	LWD (19)
10	M/48	T4	STTR	Postop RT	DWD (29)
11	M/35	T4	TTBR	None	DWD (6)

LCR : local canal resection, PTBR : partial temporal bone resection, STTR : subtotal temporal bone resection, TTBR : total temporal bone resection, NED : no evidence of disease, DWD : die with disease, LWD : live with disease, Postop RT : postoperative radiation therapy

(local canal resection)  
 7 (partial  
 temporal bone resection) , 12  
 (subtotal temporal bone resection)  
 , 1 (total  
 temporal bone resection)  
 Goodman<sup>6)</sup>  
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 (T3 1 , T4 1 ). ,  
 가 가 (Table 3).

(T1, 2 0 ; T2, 3 0 ; T3, 2  
 1 ; T4, 4 2). ,  
 가  
 (T1, 2 1 ; T2, 3 1 ; T3, 1 1 ; T4, 4

**Table 2.** Characteristics of patients with adenoid cystic carcinoma of the external auditory canal

Patient	Sex/ Age	Preoperative T Stage	Surgery	Radiation	Status (Mo)
11	F/47	T1	PTBR	None	NED (26)
12	F/49	T1	PTBR	Postop RT	NED (36)
13	F/71	T2	PTBR	None	NED (110)
14	M/52	T2	STTR	Postop RT	NED (49)
15	F/50	T2	STTR	None	LWD (61)
16	F/60	T3	STTR	None	DWD (98)
17	M/50	T3	STTR	Postop RT	DWD (65)
18	F/60	T4	STTR	Postop RT	LWD (25)
19	F/67	T4	STTR	Postop RT	NED (28)
20	F/53	T4	STTR	Postop RT	LWD (19)

PTBR : partial temporal bone resection, STTR : subtotal temporal bone resection, Postop RT : postoperative radiation therapy, NED : no evidence of disease, DWD : die with disease, LWD : live with disease

3)(Table 4). Fig. 1 55 T1 MRI(A) (B) 가 (n=3), MRI 1 1 (Table 5, case 15) T2

(subtotal temporal bone resection)

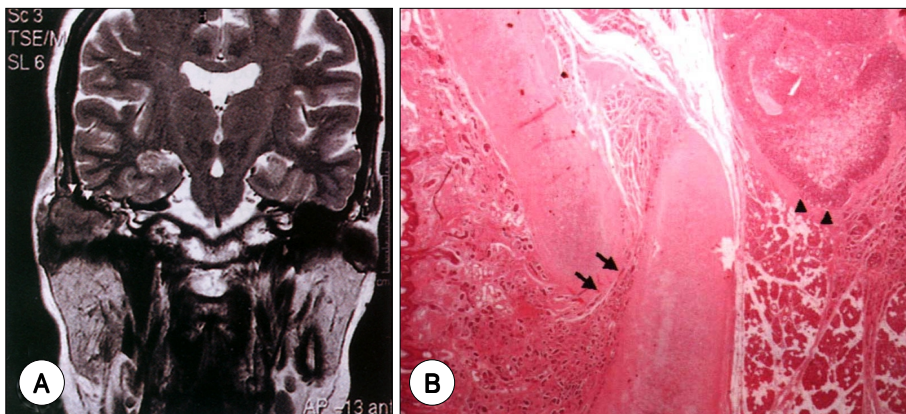
3 가 (2 , 1 ), 7 (Table 5).

**Table 3.** Patterns of parotid node metastasis according to stage and pathology

Preoperative T stage	Squamous cell carcinoma		Adenoid cystic carcinoma	
	Patients (n)	Node metastasis (n)	Patients (n)	Node metastasis (n)
T1	2	0	2	0
T2	3	0	3	0
T3	2	1	1	0
T4	4	1	4	0

**Table 4.** Patterns of direct parotid invasions according to stage and pathology

Preoperative T stage	Squamous cell carcinoma		Adenoid cystic carcinoma	
	Patients (n)	Direct invasion (n)	Patients (n)	Direct invasion (n)
T1	2	0	2	1
T2	3	0	3	1
T3	2	1	1	1
T4	4	2	4	3



**Fig. 1.** (A) MRI illustrating the findings of EAC carcinoma. The tumor (arrow heads) is confined to the EAC without parotid involvement. (B) Histopathological specimen from the same patient. Note the tumor extending through the cartilage defect (arrows) and metastatic lesion in the parotid gland/node/area (arrow heads).

**Table 5.** Patterns of initial treatment failures

Patient	Sex/Age	Pathology	Preoperative T stage	Initial treatment	Time to recurrence (Mo)	Recurred or remained site
7	F/49	SCC	T3	STTR, postop RT	19	Mastoid air cell
8	M/56	SCC	T4	STTR, postop RT	11	Infratemporal fossa
9	M/62	SCC	T4	STTR, postop RT	15	Posterior fossa dura
10	M/48	SCC	T4	STTR, postop RT	12	Middle fossa dura
11	M/35	SCC	T4	TTBR	Remained tumor	Carotid artery
15	F/50	ACC	T2	STTR	24	Parotid deep lobe
16	F/60	ACC	T3	STTR	16	Glenoid fossa
17	M/50	ACC	T3	STTR, postop RT	32	Posterior fossa dura
18	F/60	ACC	T4	STTR, postop RT	Remained tumor	Carotid artery
20	F/53	ACC	T4	STTR, postop RT	Remained tumor	Posterior fossa dura

SCC : squamous cell carcinoma, ACC : adenoid cystic carcinoma, STTR : subtotal temporal bone resection, TTBR : Total temporal bone resection, postop RT : postoperative radiation therapy

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가 . 7)

.<sup>9)</sup> , (external ear)  
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.<sup>10)11)</sup> Lee 14  
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.<sup>11)</sup> 11  
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T3, T4

T4  
Gacek Goodman  
Santorini fissures

T3

가  
T1

가

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