

비·부비동 악성종양의 내시경하 절제술

노환중·안정혁·이현순·조규섭

Endoscopic Management of Sinonasal Malignancy

Hwan-Jung Roh, MD, Jung-Hyug Ahn, MD, Hyun-Sun Lee, MD and Kyu-Sup Cho, MD

Department of Otolaryngology, College of Medicine, Pusan National University, Busan, Korea

-ABSTRACT-

Background and Objectives : Since introduction of nasal endoscope to treat chronic sinusitis, its use has been extended to a variety of sinonasal disease. Although the endoscopic technique has some limitation, the role of nasal endoscope for resection of sinonasal malignancies has increased these days. The purpose of this study is to evaluate the treatment results of endoscopically managed sinonasal malignant tumors. **Subjects and Methods** : Medical records of twelve patients with sinonasal malignant tumor who were treated with only endoscopic technique between 1991 and 2003 were retrospectively reviewed. The study group consisted of six men and six women ranging in age from 24 to 77 years with mean age of 50.9 years. **Results** : Follow-up ranged from 28 to 93 months (mean 61.1 months). Combined radiotherapy with or without chemotherapy was given to all patients except one with squamous cell carcinoma combined with inverted papilloma. Four cases had recurrence. Three patients had local recurrence and, after treatment, they have been disease free now for more than four years. One patient with a malignant melanoma died of distant metastasis at postoperative ten months. Overall survival rates were 91.6% and disease free survival rates were 91.6%. **Conclusion** : Endoscopic resection of sinonasal malignant neoplasm may be considered an alternative to traditional approaches in carefully selected patient with several advantages including excellent illumination, maximal preservation of uninvolved vital structures and sparing of facial incision. (J Clinical Otolaryngol 2005;16:258-263)

KEY WORDS : Endoscopy · Paranasal sinuses · Nasal cavity · Neoplasm.

서 론

비·부비동 악성종양은 최근 들어 증가하는 추세이다. 1) 그러나, 비·부비동 악성종양의 내시경하 절제술은 2000년대 초반에 소개된 이후, 2) 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다. 3) 본 연구는 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다. 4) 본 연구는 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다. 5) 본 연구는 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다. 6) 본 연구는 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다. 7) 본 연구는 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다. 8) 본 연구는 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다. 9) 본 연구는 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다. 10) 본 연구는 2005년 9월 4일부터 2005년 10월 7일까지 602-739번의 환자 1)가 10명이었다.

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가 10 : (051) 240 - 7333 · : (051) 248 - 1248
E - mail : rohhj@pusan.ac.kr

1980

12
 가 6 , 가 6
 50.9 (24~77)
 Kadish ⁷⁾
 AJCC (2002, 6th ed.)

2-6)

가

결 과

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 2 , 1 , 1 ,
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 . Kadish A 1
 가 T1, T2 9 , 2

대상 및 방법

가
 가 2

1991 1 2003 12

1
 28 93

Table 1. Case summary

Case	Sex/Age	Diagnosis	Tumor extent	Stage	Adjuvant Tx.	Recur	F/U (mo)	State
1	F/24	ON	Lt. FR	Kadish A	Postop. XRT	-	39	NED
2	F/53	ACC	Rt. LNW	T1N0M0	Postop. XRT	-	37	NED
3	F/67	ACC	Lt. Septum	T1N0M0	Postop. XRT	Septum, floor	71	NED
4	F/71	UC	Lt. Septum	T1N0M0	Postop. XRT	-	37	NED
5	F/37	TCC	Lt. IT, LNW	T1N0M0	Postop. XRT	-	93	NED
6	M/47	MM	Rt. Septum	T1N0M0	Postop. XRT	IT, DM	28	DWD
7	F/35	RMS	Rt. MT, ES	T2N0M0	Postop. XRT, CTX × 5	E roof	80	NED
8	M/60	CS	Lt. IT	T1N0M0	Postop. XRT	-	66	NED
9	M/50	IP+SCC	Rt. MS, Septum	T2N0M0	Preop. CTX	-	63	NED
10	M/77	SCC	Rt. LP	T1N0M0	Preop. CTX, Postop. XRT	-	85	NED
11	M/50	SCC	Lt. Septum	T1N0M0	Postop. XRT	-	56	NED
12	M/40	SCC	Rt. Mm	T1N0M0	Postop. XRT	-	78	NED

ACC : adenoid cystic carcinoma, CS : carcinosarcoma, CTX : chemotherapy, DM : distant metastasis, DWD : death with disease, E : ethmoid, ES : ethmoid sinus, FR : frontal recess, F/U : follow up, IP : inverted papilloma, IT : inferior turbinate, LNW : lateral nasal wall, LP : lamina papyracea, Lt. : left, MM : malignant melanoma, Mm : middle meatus, MS : maxillary sinus, MT : middle turbinate, NED : no evidence of disease, ON : olfactory neuroblastoma, Postop. : postoperative, Preop. : preoperative, Recur : recurrence, RMS : rhabdomyosarcoma, Rt. : right, SCC : squamous cell carcinoma, TCC : transitional cell carcinoma, Tx. : treatment, UC : undifferentiated carcinoma, XRT : external beam radiation

(61.1) 3 cGy 39 (Fig. 1).

10
(Table 1).

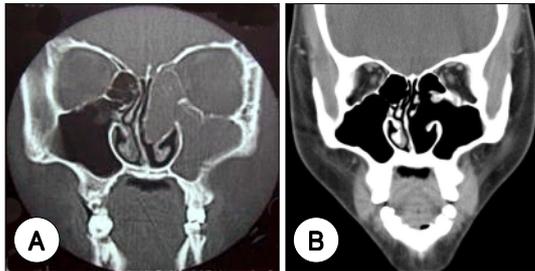
증례 2, 3 :

증례

증례 1 :

가 6840 cGy 37 (Fig. 2). 3

(6300 가 32



(6300 cGy) 39 (Fig. 3).

증례 4 :

가 4 (6660 cGy) 37

Fig. 1. CT images of case 1. Preoperative coronal CT image (A) shows mass filling left nasal cavity without skull base or bone erosion. Soft tissue density was noted at left maxillary sinus and anterior ethmoid sinus. There is no evidence of residual or recurrent tumor on follow up coronal CT image (B) after 15 months.

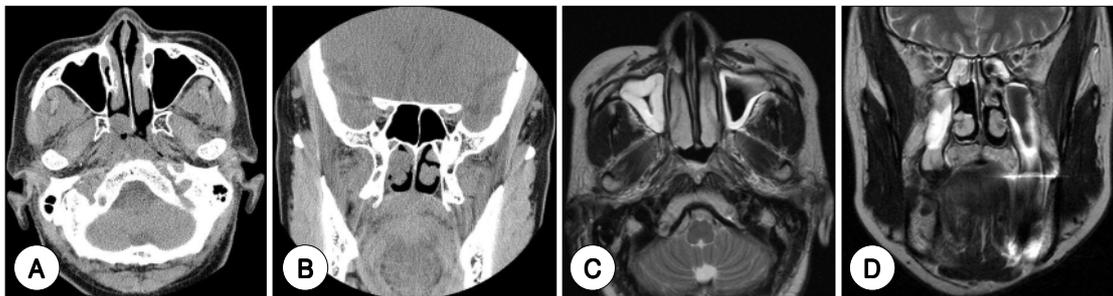


Fig. 2. Images of case 2. Axial (A) and coronal (B) CT images show round mass originated from lateral nasal wall near the posterior end of middle turbinate. There is no evidence of residual or recurrent tumor on axial (C) and coronal (D) T2 MRI images after 25 months.

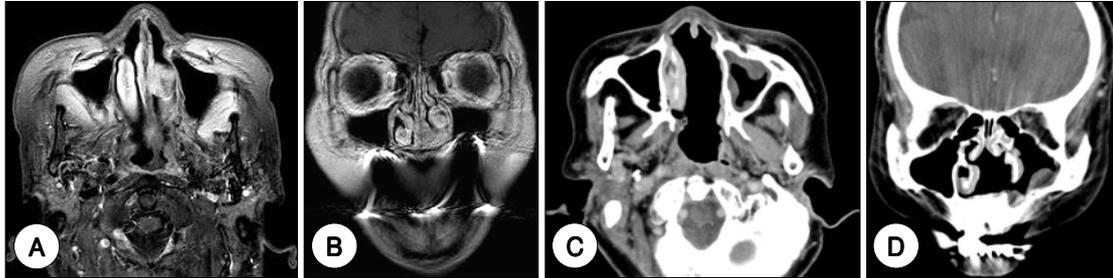


Fig. 3. Images of case 3. Axial (A) and coronal (B) T1 enhanced images show well enhancing recurrent mass abutting nasal cavity floor and invading nasal septum after 32 months operation. There is no evidence of residual or recurrent tumor on axial (C) and coronal (D) CT images after 39 months post reoperation.

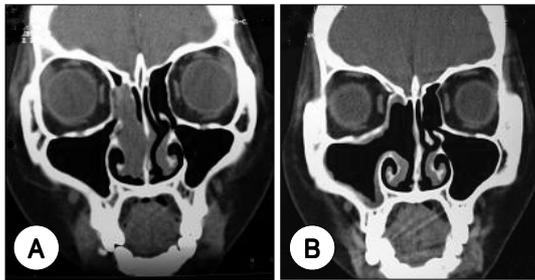


Fig. 4. CT images of case 7. Preoperative coronal CT image (A) shows mass filling right nasal cavity with abutting lamina papyracea and invading middle turbinate and ethmoid sinus. There is no evidence of residual or recurrent tumor on follow up coronal CT image (B) after 50 months.

증례 5 :

37

가

dactinomycin

vincristine
(5940 cGy)

5

73

(Fig. 4).

증례 9~12 :

9

2

(5940 cGy)

93

증례 6 :

0.5~2%

가

5

5~20%

3 mm

가

cisplatin

5 - fluorouracil

2

가

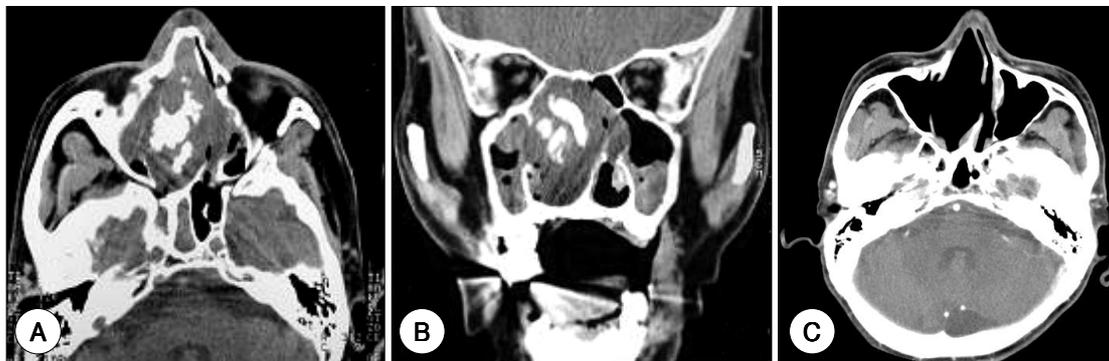


Fig. 5. Images of case 9. Axial (A) and coronal (B) CT images show mass filling right nasal cavity, ethmoid sinus invading nasal septum. Osteoma formation was noted in mass. There is no evidence of residual or recurrent tumor on follow up axial CT image (C) after 49 months.

63 가 (Fig. 5).

4 가 2) (soft tissue shaver), (intranasal bipolar electrocoagulator)

70.5

고 찰

가 (organ preservation) Nas-¹³⁻¹⁵⁾ hino¹⁶⁾ 5

76%

가

가 (piecemeal)

가 가

가 (10-12) 가

가

REFERENCES

- 1) Muir CS, Nectoux J. *Descriptive epidemiology of malignant neoplasms of nose, nasal cavities, middle ear and accessory sinuses. Clin Otolaryngol Allied Sci* 1980;5:195-211.
- 2) Lanza DC, O'Brien DA, Kennedy DW. *Endoscopic repair of cerebrospinal fluid fistulae and encephaloceles. Laryngoscope* 1996;106:1119-25.
- 3) Kennedy DW, Goodstein ML, Miller NR, Zinreich SJ. *Endoscopic transnasal orbital decompression. Arch Otolaryngol Head Neck Surg* 1990;116:275-82.
- 4) Nasser SS, Kasperbauer JL, Strome SE, McCaffrey TV, Atkinson JL, Meyer FB. *Endoscopic transnasal pituitary surgery: report on 180 cases. Am J Rhinol* 2001;15:281-7.
- 5) Tufano RP, Thaler ER, Lanza DC, Goldberg AN, Kennedy DW. *Endoscopic management of sinonasal inverted papilloma. Am J Rhinol* 1999;13:423-6.
- 6) Carrau RL, Snyderman CH, Kassam AB, Jungreis CA. *Endoscopic and endoscopic-assisted surgery for juvenile angiofibroma. Laryngoscope* 2001;111:483-7.
- 7) Morita A, Ebersold MJ, Olsen KD, Foote RL, Lewis JE, Quast LM. *Esthesioneuroblastoma: prognosis and management. Neurosurgery* 1993;32:706-14.
- 8) Walch C, Stammberger H, Anderhuber W, Unger F, Kole W, Feichtinger K. *The minimally invasive approach to olfactory neuroblastoma: combined endoscopic and stereotactic treatment. Laryngoscope*. 2000;110:635-40.
- 9) Howard DJ, Lund VJ. *Reflections on the management of adenoid cystic carcinoma of the nasal cavity and paranasal sinuses. Otolaryngol Head Neck Surg* 1985;93:338-41.
- 10) Casiano RR, Numa WA, Falquez AM. *Endoscopic resection of esthesioneuroblastoma. Am J Rhinol* 2001;15:271-9.
- 11) Matthews B, Whang C, Smith S. *Endoscopic resection of a nasal septal chondrosarcoma: first report of a case. Ear Nose Throat J* 2002;81:327-9.
- 12) Roh HJ, Batra PS, Citardi MJ, Lee J, Bolger WE, Lanza DC. *Endoscopic resection of sinonasal malignancies: a preliminary report. Am J Rhinol* 2004;18:239-46.
- 13) Thaler ER, Kotapka M, Lanza DC, Kennedy DW. *Endoscopically assisted anterior cranial skull base resection of sinonasal tumors. Am J Rhinol* 1999;13:303-10.
- 14) Senior BA, Lanza DC, Kennedy DW, Weinstein GS. *Computer-assisted resection of benign sinonasal tumors with skull base and orbital extension. Arch Otolaryngol Head Neck Surg* 1997;123:706-11.
- 15) Yuen AP, Fung CF, Hung KN. *Endoscopic cranionasal resection of anterior skull base tumor. Am J Otolaryngol* 1997;18:431-3.
- 16) Nishino H, Miyata M, Morita M, Ishikawa K, Kanazawa T, Ichimura K. *Combined therapy with conservative surgery, radiotherapy, and regional chemotherapy for maxillary sinus carcinoma. Cancer* 2000;89:1925-32.
- 17) Dhong HJ, Kim HY, Chung SK. *Endoscopic management of benign tumors of the nose and paranasal sinuses. Korean J Otolaryngol* 1998;41:896-900.

중심 단어 :

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