

6

: 6 가

: 1994 2000 41

: 41 6 (14.6%) 6 가 4 ,

: 6 , (, ,), , , , ,

6 가

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2 14 81 , , , , ,

(60%)가 가 (41%),

(37%), (29%), (16%), , 6

(8%) ¹⁻³

6

가

가 25 (60.9%), 가 16 (39.0%), 8

(19.5%), 6 가 6

(14.6%), 7 가 3 (7.3%), 9

1994 2000 가 2 (4.8%), 5 가 2 (4.8%),

41 19 72 (47.9) 12 가 1 (2.4%) (Table

가 29 , 가 12 1). 6 가 6 4 ,

, 2

< : 2002 1 23 , : 2002 9 2 >

* 2001 85

가

1

가

24 1

(Fig. 1).

, 4

2

1.0
9 mmHg

59

10

1.0,

10

가

0.63()

15 mmHg,

9 mmHg

16

가

가 12

가

가

가

(Fig. 2).

Table 1. Symptoms and Sign

Symptoms and Sign	Number of patients	Percents
Neck Mass	25	60.9%
Hearing Difficulty	16	39.0%
Nasal Obstruction	8	19.5%
CN* Paralysis	11	26.8%
6th CN	6	14.6%
7th CN	3	7.3%
5th CN	2	4.8%
9th CN	2	4.8%
12th CN	1	2.4%

* : Cranial Nerve

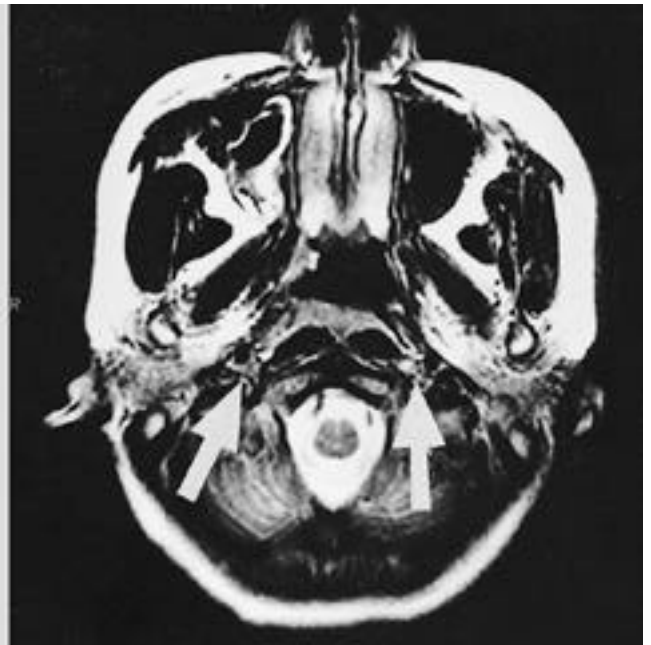


Figure 1. Magnetic resonance imaging of nasopharynx shows mass lesion in right posterior lateral wall of nasopharynx and enlargement of lymph node along bilateral jugular chain (arrow).

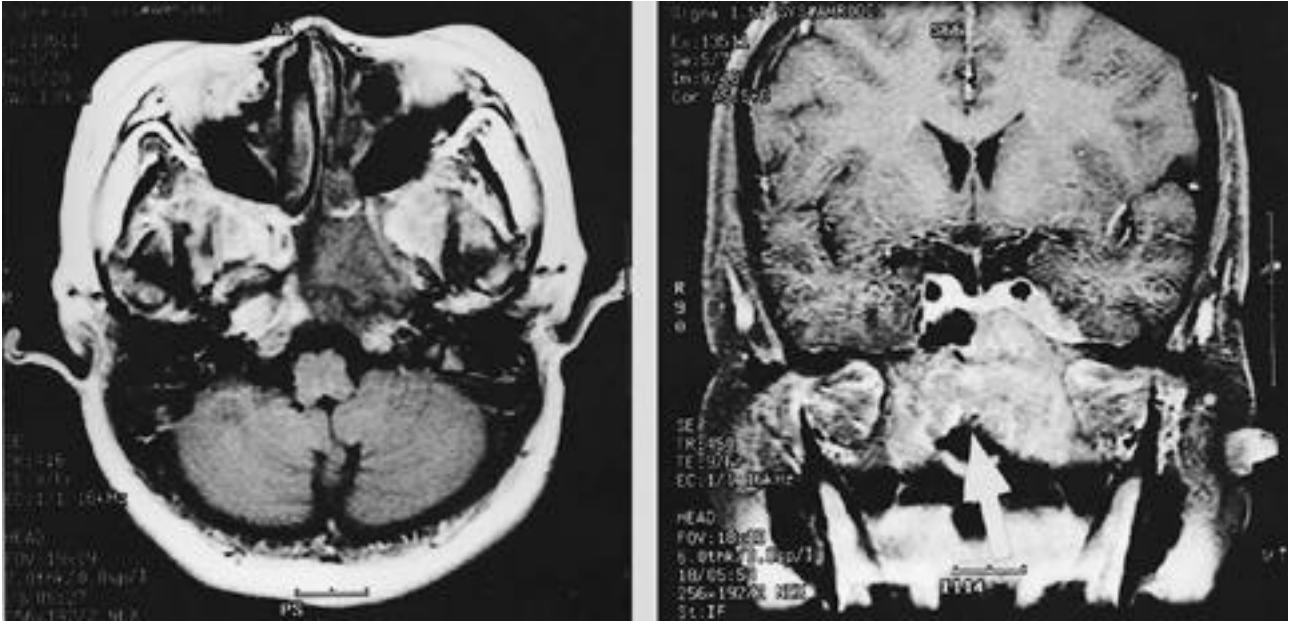


Figure 2. Magnetic resonance imaging of brain shows diffuse mass lesions in bilateral upper nasopharynx (arrow) with extension to left clivial cavernous sinus.

(Horner's Syndrome) 가 가^{1,4}
 가
 20 ~ 30%^{5,8-11} 6
 가 70% 가 5
 (54%), 3 (39%), 7 (34%), 4
 (28%), 12 (28%), 10 (27%),
 9 (25%), 2 (18%), 11 (4%)
 Epstein-Barr 가
 10 1
 1995
 265 0.4%
 2 14
 81
 40^{1,2} 가 가
 (60%) 가 가
 (41%), (29%)
 1 ~ 2
 가
 가
 1-3
 1,4-7
 (petrosphenoidal) 5, 6
 (poststyloid)
 7 12
 9, 10, 11 가
 10 ~ 30%
 2

Table 2. Frequency of Involved Cranial Nerves

Cranial Nerves	Number of Patients	Percents
6th	4	36.3%
9th	2	18.2%
7th	1	9.1%
12th	1	9.1%
5th and 7th	1	9.1%
5th and 6th	1	9.1%
6th and 7th	1	9.1%
Total	11	100%

.1
70%
20%
12,13 Hoppe 14 가
가
가가
6
6
4
6
가
가
가
가
가
가
Rucker¹⁷ 3, 4, 6
18 21 6
13 3
2 8
1 19 17

6 (35.3%), 6 (35.3%),
2 (11.8%),
1 (5.9%) . 20 116
38 (32.8%) 가
27 , 17
가 10 ,
가 4 , 가 3
10
(pontine glioma) 2 , 3 , 8
(acoustic neurinoma) 3 , 1 ,
1 4
가 4 , 가 6
(arte-riove-nous mal-for-
mation) 2 , (carotico-cav-
ernous fistula)가 1 , 가 2 ,
2 , 3
Turgman 4 150 가
74 가
6 3
Shoji 21 3
18
가
가
가

- 1) , 2000;320-30.
- 2) Bailey BJ. Head and Neck Surgery-otolaryngology, 2nd ed. Philadelphia-New york: Lippincott-Raven, 1998;1518-25.

- 3) Pang LQ. Carcinoma of the nasopharynx. Experiences with 66 patients. *Arch Otolaryng* 1965;82:622-8.
- 4) Turgman J, Braham J, Modan B, Glodhammer Y. Neurological Complication in Patients with Malignant Tumors of the Nasopharynx. *Eur Neurol* 1978;17:149-54.
- 5) Thomas JE, Waltz AG. Neurological manifestations of nasopharyngeal malignant tumors. *JAMA* 1965;192:95-106.
- 6) Godtfredsen E, Lederman M. Diagnostic and prognostic roles of ophthalmoneurologic signs and symptoms in malignant nasopharyngeal tumors. *Am J Ophthalmol* 1965;59:1063-9.
- 7) Rosenbaum HE, Seaman WB. Neurologic manifestations of nasopharyngeal tumors. *Neurol* 1955;5:868-74.
- 8) Ho JH. An epidemiological and clinical study of nasopharyngeal carcinoma. *Int J of Radiat Oncol, Biol, Phys* 1978;4:182-97.
- 9) Huang SC. Nasopharyngeal cancer: a review of 1605 patients treated radically with cobalt 60. *Int J of Radiat Oncol, Biol, Phys* 1980;6:401-7.
- 10) Lynn TC, Hsu MM. The integrated treatment for nasopharyngeal carcinoma. *J of Formosan Med Association* 1982;81:921-7.
- 11) Chen MS, Lin FJ, Simon ST et al. Clinical significance of cranial nerve deficit in the therapy of nasopharyngeal carcinoma. *The British J of Radiol.* 1989;62:739-43.
- 12) Kaseff LG. Early X-ray diagnosis of occult infiltrating nasopharyngeal carcinoma. *Ann Otol Rhinol Laryngol* 1977;86:864-70.
- 13) Wang CC, Meyer JE. Radiotherapeutic management of carcinoma of the nasopharynx. An analysis of 170 patients. *Cancer* 1971;28:566-70.
- 14) Hoppe RT, Goffinet DR, Bagshaw MA. Carcinoma of the nasopharynx, Eighteen years's experience with megavoltage radiation therapy. *Cancer* 1976;37:2605-12.
- 15) . . . 2 . . . : . . . , 1999; 353-6.
- 16) Wright KW. *Pediatric Ophthalmology and Strabismus*. 2nd ed. Baltimore, Boston, Carlsband: Mosby, 1995;760-1.
- 17) Rucker CW. Paralysis of the third, fourth, and sixth cranial nerves. *Am J Ophthalmol* 1966;61:1293-8.
- 18) . . . 3, 4, 6 1981;22:137-42.
- 19) . . . 3, 4, 6 1997;38:1432-6.
- 20) . . . , . . . 3, 4, 6 1991;32:283-8.
- 21) Shoji B, Hiroshi H, Masaaki F et al. Nasopharyngeal Malignancies Causing Abducens Palsy. *Neurol Med Chir* 1983; 23:571-6.

= ABSTRACT =

The Sixth Cranial Nerve Paralysis Caused by Nasopharyngeal Cancers

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Purpose : To investigate cases of the nasopharyngeal cancer with the sixth cranial nerve paralysis and review the current literatures on the nasopharyngeal cancer and the sixth nerve paralysis.

Methods : We analysed retrospectively clinical characteristics of 41 patients diagnosed with the nasopharyngeal cancer from January 1994 to December 2000.

Results : In 41 patients with the nasopharyngeal cancer, 6 patients (14.6%) had the sixth cranial nerve involvement. 4 patients of them visited ophthalmologic department after diagnosed with nasopharyngeal cancer with symptom of neck mass or tinnitus. 2 patients visited ophthalmologic department and then were diagnosed with nasopharyngeal cancer with magnetic resonance imaging and biopsy.

Conclusions : The sixth cranial nerve paralysis may be caused by trauma, intracranial disorder (tumor, meningitis, demyelination), vascular disorder, diabetes, hypertension, and viral illnesses. We emphasize the suspicion for the possibility of the nasopharyngeal cancer in patients with unexplained sixth cranial nerve paralysis causing diplopia and limitation of extraocular muscle.

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Key words : Nasopharyngeal cancer, Sixth cranial nerve paralysis

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