

비인강암의 치료 성적과 예후인자 및 치료 실패의 분석

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Treatment Outcome, Prognostic Factors and Patterns of Failure of Nasopharyngeal Carcinoma

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ABSTRACT

Purpose : The first treatment of choice for nasopharyngeal carcinoma (NPC) is radiotherapy as NPC is more responsive to radiotherapy than any other head and neck cancer. We analyzed the clinical characteristics and prognostic factors of NPC patients treated at the Severance Hospital. **Subjects and Method** : Charts of 123 patients diagnosed with NPC at the Severance Hospital from 1995 to 2002 were reviewed and retrospectively analyzed. They were staged according to the 1997 AJCC criteria. According to the WHO classification, the type I included 14 cases, type II 44 cases, and type III 65 cases. Sixty-five cases were treated with radiotherapy only and 58 cases were treated with a combined modality of chemotherapy and radiotherapy. **Results** : The factors for a poor prognosis were age over 47 years' old, histologic findings of WHO type I and advanced T, N stage. The overall 5 year survival rate was 66.22%. According to treatment modality, only the radiotherapy group was 68.6%, while the chemoradiotherapy group was 63.6%. There was no difference in survival ($p>0.05$). In chemoradiotherapy group, the survival of induction chemoradiotherapy group was 82.1% and the concurrent chemoradiotherapy group was 36.8%. There was significant difference in survival. **Conclusions** : There was no significant difference in the 5 year survival rate between the patients who were treated with radiotherapy only and those who were treated with both radiotherapy and chemotherapy. (Korean J Otolaryngol 2005; 48:1254-60)

KEY WORDS : Nasopharyngeal carcinoma · Treatment outcome · Radiotherapy · Chemotherapy · Prognostic factor.

7.2~23.1%²⁾³⁾
Epstein - Barr virus¹⁾ 가 5 가 45.6~53.6%
가 가 가⁴⁾⁵⁾ 1995
: 2005 3 30 / : 2005 6 14 2002
: , 120 - 752 134

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1995 1 2002 3
 , 가 ,
 138 가 123
 , 가
 108 51 (complete
 remission)
 , 가 4 (re-
 currence) (treatment failure)
 6
 ,
 (CT) (MRI)
 1997
 5 AJCC (The 5th Edition of the American
 Joint Committee on Cancer Staging System, Table 1)
 .⁶⁾ T1 24 (20%), T2가 60
 (49%), T3가 5 (4%), T4가 34 (27%) ,
 N0가 22 (18%), N1 28 (22%), N2가 45 (36%),
 N3a가 13 (11%), N3b가 15 (12%) .
 level 가 71.5% , level
 (Table 2). (paraph-
 aryngal extension) T2a T2b
 , (retropharyngeal lymphadenopa-

Table 1. The 5th Edition of the AJCC* staging system of Nasopharynx

| | |
|-----|--|
| T1 | Tumor confined to the nasopharynx |
| T2 | Tumor extends to soft tissue of oropharynx and/or nasal fossa |
| T2a | Without parapharyngeal extension |
| T2b | With parapharyngeal extension |
| T3 | Tumor invades bony structures and/or paranasal sinuses |
| T4 | Tumor with intracranial extension and/or involvement of cranial nerves, infratemporal fossa, hypopharynx, or orbit |
| Nx | Regional lymph node cannot be assessed |
| N0 | No regional lymph node metastasis |
| N1 | Unilateral metastasis in lymph node (s) measuring 6 cm in greatest dimension above supraclavicular fossa [†] |
| N2 | Bilateral metastasis in lymph node (s) measuring 6 cm in greatest dimension above the supraclavicular fossa [†] |
| N3 | Metastasis in a lymph node (s) |
| N3a | 6 cm in greatest dimension |
| N3b | Extension to the supraclavicular fossa [†] |
| MX | Distant metastasis cannot be assessed |
| M0 | No distant metastasis |
| M1 | Distant metastasis |

*AJCC : American Joint Committee on Cancer
 †Supraclavicular zone or fossa is relevant to the staging of nasopharyngeal carcinoma and is the triangular region originally described by Ho. It is defined by three points : (1) the superior margin of the sternal end of the clavicle, (2) the superior margin of the lateral end of the clavicle, (3) the point where the neck meets the shoulder. Note that this would include caudal portions of Levels IV and V. All cases with lymph nodes (whole or part) in the fossa are considered N3b.

Table 2. Neck node presentation of nasopharyngeal carcinoma (n=123)

| Level of neck node | Number of patients (%) |
|--------------------|------------------------|
| I | 5 (4.0) |
| II | 88 (71.5) |
| III | 50 (40.6) |
| IV | 18 (14.6) |
| V | 31 (25.2) |
| None | 22 (17.9) |

thy)가
 (pharyngobasilar fascia)
 가 T2a T2b
 (Table 3).
 SPSS for Windows(Release 11.0.1)
 Kaplan - Meier

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Table 3. TNM staging of nasopharyngeal cancer (n=123)

| | T1 | T2 | T3 | T4 | Total |
|-------|----------|----------|--------|----------|------------|
| N0 | 3 | 7 | 2 | 10 | 22 (18%) |
| N1 | 7 | 14 | 1 | 6 | 28 (22%) |
| N2 | 7 | 25 | 1 | 12 | 45 (36%) |
| N3a | 5 | 6 | 0 | 2 | 13 (11%) |
| N3b | 2 | 8 | 1 | 4 | 15 (12%) |
| Total | 24 (19%) | 60 (49%) | 5 (4%) | 34 (27%) | 123 (100%) |

, log - rank test . 7)

123 가 102 (83%)
 가 21 (17%) . 12 75
 46.8 . WHO
 1 (, Keratinizing squamous cell carcinoma) 14 (11%), 2 (, Non - keratinizing squamous cell carcinoma) 44 (36%), 3 (, Undifferentiated carcinoma) 65 (53%) .
 78 (63.4%), 39 (31.7%), 34 (27.6%), 20 (16.3%),
 가 17 (13.8%), 16 (13.0%), 16 (13.0%), 8 (6.5%) . 가
 2 48
 , 5.6 . 20
 5, 6 가 11
 9 가 .
 가 80
 (65.0%), (excisional biopsy)
 가 32 (26.0%),
 가 10 (8.0%) 3가
 가 1 (1.0%) .
 65 (53.0%)
 3 가 58 (47.0%) .
 7020cGy,
 가 (N0) 5040
 cGy, 가 (N+) 7020cGy

Table 4. Treatment modalities of nasopharyngeal carcinoma (N=123)

| Treatment modality | Number (%) |
|-------------------------|------------|
| Radiotherapy only | 65 (53.0) |
| Surgery+radiotherapy | 3 |
| Chemo-radiotherapy | 58 (47.0) |
| Induction chemotherapy | 22 |
| 5-FU | 1 |
| 5-FU+DDP | 17 |
| 5-FU+DDP+Taxotere | 1 |
| 5-FU+DDP+Vinblastine | 3 |
| Concurrent chemotherapy | 36 |
| 5-FU+DDP | 32 |
| 5-FU+DDP+Taxotere | 2 |
| 5-FU+Vinblastine | 1 |
| Oral UFT | 1 |

(target dose)
 , 1
 (residual mass)가 가
 (booster radiotherapy) .
 6620cGy
 8100cGy(6878cGy) 4500
 cGy 7800cGy(5408cGy)
 6120cGy 9700cGy(6757cGy),
 4500cGy 8000cGy(5896cGy)
 .
 () (induction chemotherapy) 가 22 ,
 (CCRT : Concurrent Chemo - Radio Therapy,) 가 36
 . ,
 (pre - radiotherapy dental care)
 가 1 , 2
 .
 5 - FU 가 1 , 5 - FU+platinum
 가 49 , 5 - FU+platinum+Taxotere
 가 3 , 5 - FU+platinum+Vinblastine
 가 3 , 5 - FU+Vinblastine
 가 1 , oral UFT granule
 (5 - FU) 가 1 (Table 4).
 1 가 4 , 2
 가 8 , 3 가 9 , 4
 가 4 , 5 가 2 , 6
 가 27 가 4 .

가 6 cm
(central necrosis)
(peripheral rim enhancement)
가 3
2
1 가

(Fig. 5).

5 (n=65) 68.6%
(n=58) 63.6% (p>0.05).
5 82.1% 36.8%
(Fig. 6).

Kaplan - Meier
66.22% (Fig. 1).
61.8%, 84.8%
(p>0.05). 47

123 22 (18%)
21 (17%) 15
54

5 47 48.9%, 47
86.1%
(Fig. 2).
WHO 1 40.1%, 2 61.4%, 3
76.4% 가 (Fig. 3).
5 48.4%
70.0%
(p<0.05).

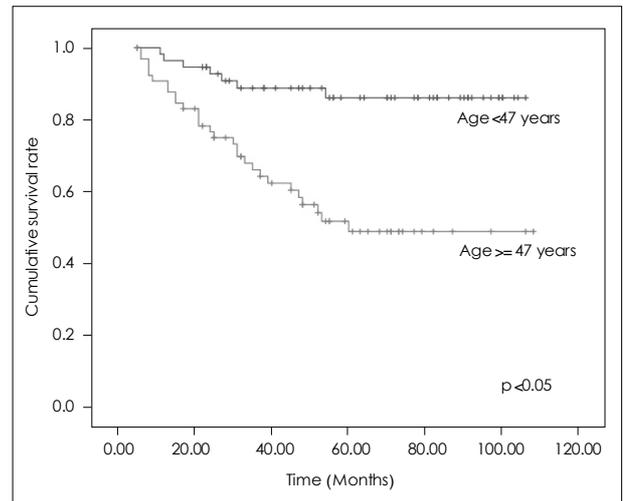


Fig. 2. Overall survival rate of nasopharyngeal carcinoma by age group.

5 , T - stage
T1 80.5%, T2가 70.3%, T3가 80.0%, T4가 47.8%
(Fig. 4). N - stage
N0가 71.1%, N1 77.0%, N2가 66.3%, N3a
가 65.6%, N3b가 27.3%

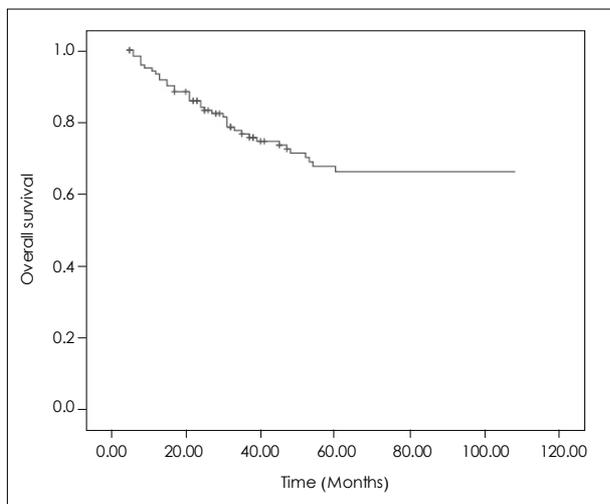


Fig. 1. Overall cumulative survival rate of 123 patients with nasopharyngeal carcinoma.

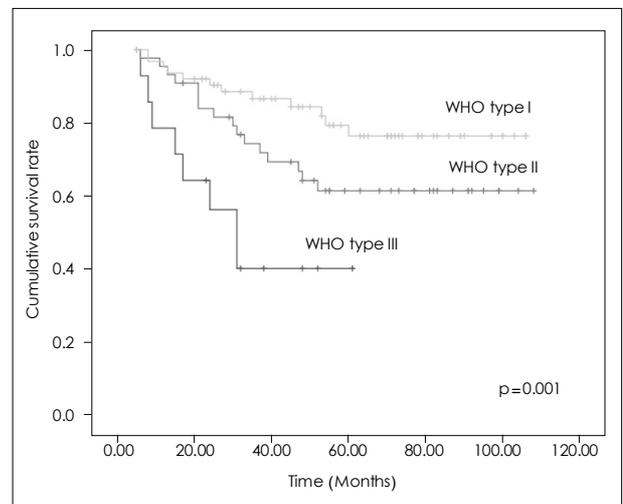


Fig. 3. Overall survival rate of nasopharyngeal carcinoma by pathology.

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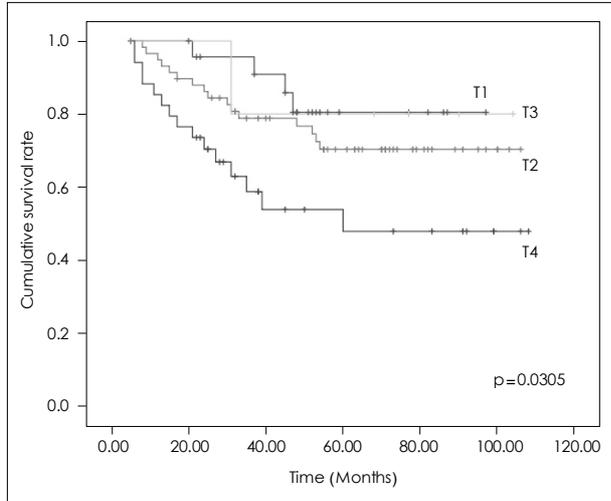


Fig. 4. Survival rate of nasopharyngeal carcinoma by T-stage.

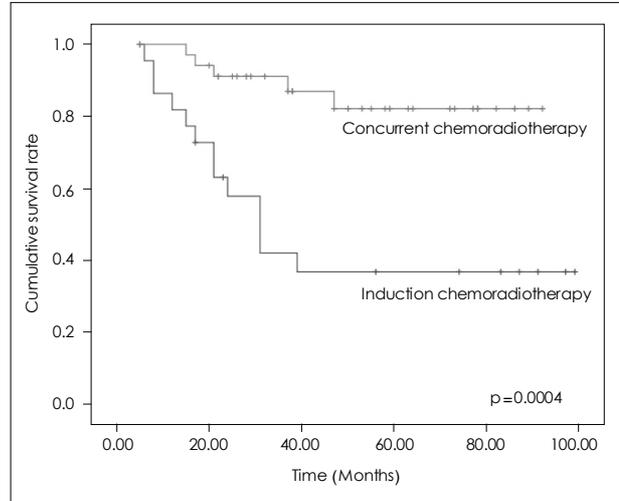


Fig. 6. Overall survival rate of induction chemoradiotherapy and concurrent chemoradiotherapy.

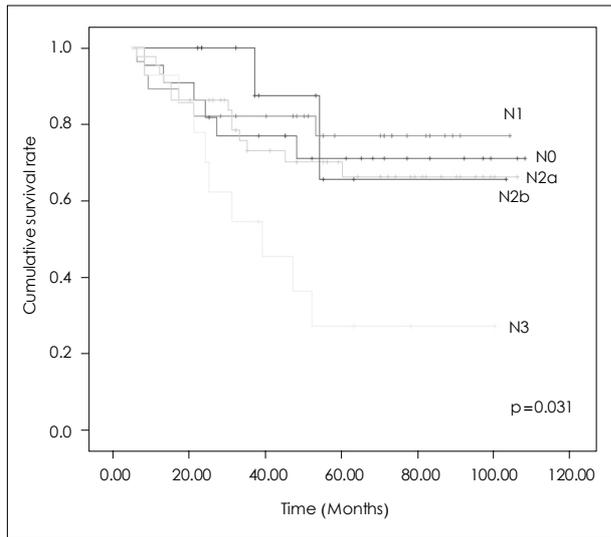


Fig. 5. Survival rate of nasopharyngeal carcinoma by N-stage.

치료실패

가 10 (16%),
 5 (8%),
 5 (8%)
 1, 2
 15
 3 (2.4%)
 2 (3%),
 1 (2%)
 2
 가 가

13 . 6
 9 (7%)
 5 (8%),
 4 (7%)
 가 4 , 가 3 , 가 2 .
 1
 , 2 , 1
 가 5
 가 가
 , 15 .
 재 발
 10 (8%)
 , 8 (13%),
 2 (3%)
 가 가 6 , C
 (type C infratemporal fossa approach)
 가 가 2 ,
 가 1 ,
 가 가 가
 4 , 3 (NED : No evidence
 of disease) 4 (3%)
 가 3 , 1
 3
 가 가 . 7 (5%)
 , 가 1
 7 가 가 .

가

가

가

가

⁹⁾

가

T2b

가

가

가

가

가

가

5

16

3, 4

N3b

가

30~40

¹⁰⁾

⁸⁾

5

3, 4

47

5 - FU+platinum

platinum

3

가

3

5

30%

WHO 3

가

¹¹⁾

가

WHO 1

5

가

(53%) 가

(36%),

(11%)

가

1 가 가

가

1 5

(40.1%)

가

0.0017).

1

가 가

가 가

가

가

, 가

T

가

T

가

가

5

p-

T3

0.03

가

9

