CHARACTERISTICS OF RECURRENCE NASOPHARYNGEAL CARCINOMA IN HASAN SADIKIN HOSPITAL PERIOD 2017-2019

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Abstract

Introduction: Nasopharyngeal carcinoma is a malignancy that occurs in the squamous epithelium in the nasopharynx region. Recurrent Nasopharyngeal carcinoma is defined as tumor recurrence after the complete remission. Patients with recurrent NPC may experience local, regional, or both failure, with or without distant metastases and can damage surrounding tissue.

Objective: To improve early diagnosis, early treatment, and the level of long-term survival for patients with recurrent nasopharyngeal carcinoma

Methods: This research method was a retrospective descriptive based on medical record data in patients with recurrent nasopharyngeal carcinoma at ORL-HNS outpatient clinic subdivision of Head Neck Surgery, RSHS, Bandung from 2017 to 2019.

Result: In RSHS Bandung, there were 1727 patient NPC period 2017-2019. There were 135 recurrent nasopharyngeal carcinoma patients (7,8 %) consist of 96 male and 39 female, aged over 40 years as many as 107 patients. More patients were found in T3-T4 (56%), N2-N3(56%), M0 (91%), stage III-IV (75%). The duration of the patient experienced a relapse after initial therapy was less than 24 months (52%).

Conclusion: Characteristics of recurrent nasopharyngeal carcinoma most of them come with stage III-IV, T3-T4 without distant metastases, with a recurrence within less than 24 months. There was 7,8% recurrent nasopharyngeal carcinoma patients

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1. INTRODUCTION

Nasopharyngeal carcinoma is a malignancy that occurs in the squamous epithelium in the nasopharyngeal region. Nasopharyngeal carcinoma is a malignancy that often occurs in the head and neck region, as well as cancers that are placed according to empirically after cervical cancer, breast cancer, and skin cancer [1,2].

Nasopharyngeal carcinoma incidence in Western countries is rare but mostly found in Eastern countries, such as China, Japan, and Singapore. The average worldwide prevalence of nasopharyngeal carcinoma is around 20 cases per 100,000 population. The incidence of Nasopharyngeal Carcinoma in Indonesia is 12,000 new cases per year. In 2016, there were 493 NPC patients in RSHS Bandung and often patients come with an advanced stage [2, 3].

Recurrent nasopharyngeal carcinoma is defined as tumor recurrence after complete remission with radiotherapy. Recurrent nasopharyngeal carcinoma arises in the nasopharyngeal mucosa. Patients with recurrent NPC mostly have a failure of local, regional, or both, with or without distant metastases, thus extensively recurrent tumors can damage surrounding tissue, especially in the spread of paranasopharyngeal involvement of the skull base [4, 5].

Based on previous studies that the clinical features of recurrent nasopharyngeal carcinoma are different from the primary nasopharyngeal carcinoma. Therefore, it is very important to improve early diagnosis, early treatment, and the level of long-term survival for patients with recurrent nasopharyngeal carcinoma [6].

2. MATERIAL AND METHODS

This research method is a retrospective descriptive based on medical This research method is a retrospective descriptive based on medical record data in patients with recurrent nasopharyngeal carcinoma based on inclusion and exclusion criteria. Inclusion criteria were all patients diagnosed with recurrent NPC at ORL-HNS outpatient clinic subdivision of Head Neck Surgery, RSHS, Bandung from 2017 to 2019. Exclusion criteria were incomplete medical records.

3. RESULT

There were 1727 patients during period 2017-2019 in Hasan Sadikin Hospital Bandung and around 7.8% recurrence NPC. Patients who were diagnosed with recurrent nasopharyngeal cancer in the outpatient clinic ORL-HNS oncology division at Hasan Sadikin Hospital Bandung, there were 135 patients from 2017-2019. Sufferers consisted of 71% men and 29% were women. Most patients were found at the age of more than 40 years by 79% while those under the age of 40 were 21%. Each patient's educational status was classified as primary school (40%), junior high school (24%), high school (19%), and bachelor's degree (17%). There were 36% of patients unemployed, 22% as private workers, 26% entrepreneur and 16% government employee.

Table 2 shows that patients generally come in stages III-IV followed by 75% of patients who come in stage I-II as much as 25%. There are 135 recurrent nasopharyngeal carcinoma patients who came with T3-T4 tumors by 56% while the rest of T1-T2. Based on lymph node metastasis as much as 51% at N2-N3 and the remaining 49% at N0-N1. Most of the patients who come have M0 (91%) and the rest are M1 (9%).

Patients who experienced recurrence for less than 24 months were 70 people (52%) and the rest occurred recurrence for more than 24 months were 65 people (48%). Chemotherapy in 45% of patients who come with Recurrent Nasopharyngeal Carcinoma, while 25% given radiotherapy and 30% did combination therapy.

Table 1. Characteristics of Recurrent Nasopharyngeal Carcinoma Patients

Characteristics	Patients	
	Amounts	%
Sex		
Male	96	71
Female	39	29
Age		
≤40	28	21
≥40	107	79
Educational Status		
Elementary school	53	40
Junior high school	37	24
Senior high school	25	19
Bachelor's degree	20	17
employment status		
Unemployed	48	36
Private workers	30	22
Entrepreneur	35	26
Government employee	22	16
Total	135	100

Table 2. Special Characteristics of Recurrent Nasopharyngeal Carcinoma Patient

Variable	Patients	
	Amounts	%
T		
T1-T2	59	44
T3-T4	76	56
N		
N0-N1	66	49
N2-N3	69	51
M		
M0	123	91
M1	12	9
Stage		
I-II	34	25
III-IV	101	75
Interval to recurrence		
≤ 24	70	52
≥ 24	65	48
Therapy		
Chemotherapy	61	45
Radiotherapy	34	25
Combination	40	30

4. DISCUSSION

Research on the characteristics of recurrent NPC is still less common than studies that focus on the prevention of recurrent NPC. Recurrence of NPC has become a failure of treatment for Nasopharyngeal Carcinoma [6].

In this study, the gender distribution among NPC cases showed 96 males and 39 females yielding a 2.3:1 ratio. according to the study by Wang Lijun et.al regarding more nasopharyngeal carcinoma patients are male with a ratio of 4.2:1 [2, 7]. In Asia, NPC prevalence is much higher in male than in females [8]. Deviana et.al showed that the incidence of NPC is more prevalent in patients aged 40-49 years [9]. The incidence of NPC increased with age correspond with this study that NPC patients are over 40 years as many as 107 people.

Galuh et.al Showed that the distribution of educational status in patients with recurrent NPC mostly in primary education as much as 86.6% [10]. These results are correspond with this study that the most recent patient educational status is elementary school which is 40%. This study shows that the most patients with NPC have jobs with a total of 87 people according to a study conducted by Deviana et.al with the number of patients who have jobs (62.5%) compared to those who do not have jobs (37.5%) [9].

The study about prognosis conducted in China found that 83.33% was stage III-IV, while stage I-II only 16.67% Stage III NPC is the stage most often found as a new case and recurrence case in an endemic area that highest NPC incidence (included Asia) [6]. Supporting examination for recurrence of NPC can be found by biopsy. Generally, patients who relapse was found in end-stage of the disease and has been accompanied by enlargement of the cervical lymph node (75.8%), damage at the base of the skull, intracranial invasion, and encephalopathy [6, 11].

The study found that in 52% of cases of recurrence of NPC has a range of fewer than 24 months since the last treatment of the primary carcinoma. The recurrence NPC reaches its peak in the 6-12 months after the first treatment ended and most were found about 2 years after treatment [6, 11]. The recurrence risk was reduced gradually between 5-10 years that found only about 14% of the total incidence, and less than 5% were found relapse after 10 years from the first treatment [6, 12].

Patients with recurrent NPC cases have an 82% risk classification of tumor (T) according to the T classification when first diagnosed [6]. In a study conducted by Xin Jia et.al more than 50% of recurrence cases were found in the T3-T4 classification, this is suitable with this study found that 56% of recurrence cases were found in T3-T4 [6]. Patients with the recurrence NPC (73.5%) most of them found localized in the nasopharyngeal region and followed by lymph node metastases in the neck (21.7%), but these results are different from this study that found recurrence NPC patients with N2-N3 lymph node metastases about 51% [6, 13]. In a study conducted by Xin Jia et.al that 23 patients out of 351 patients who experienced a recurrence of NPC occurred distant metastasis and 43.5% experienced bone metastasis. The data of this study show that M0 (no distant metastases) occurred in 123 of 135 cases in recurrence NPC. Recurrence patients has more serious TNM classification than the previous TNM classification of primary Nasopharyngeal Carcinoma [6, 13].

The first-line therapy for recurrent NPC is chemotherapy with the drug of choice most commonly are cisplatin and gemcitabine [8]. The risk of

recurrence after the use of radiotherapy is associated with clinical end-stage, advanced T classification (T3-T4) and greater tumor volume can reduce radiation sensitivity so that conventional radiotherapy doses are not enough to kill all cancer cells. Patients with recurrent NPC of T1-T2 is more effective with radiotherapy than T3-T4. Correspond with this study of patients found more in T3-T4 so that more patients were treated with chemotherapy (45%) than treated with radiotherapy [8, 14]. IMRT is used to prevent the dose insufficiency. The majority of NPC patients have a recurrence after systemic therapy (chemotherapy). In a study conducted by Leong et al, 41% of patients who underwent radiotherapy had a survival rate of 5 years longer than those without radiotherapy [15].

5. CONCLUSION

Characteristics of recurrent nasopharyngeal carcinoma most of them come with stage III-IV, T3-T4 without distant metastases, with a recurrence within less than 24 months. There was 7,8% recurrent nasopharyngeal carcinoma patients.

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