Nasopharyngeal Carcinoma Patient Characteristics at Sayang General Hospital Cianjur West Java

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ABSTRACT
Nasopharyngeal carcinoma (NPC) is the most common head and neck malignancy in Indonesia, placing it as the fourth most common among all malignancies in Indonesians. NPC has different characteristics from other head and neck epithelial tumors in respect of epidemiology, histopathology findings, diagnosis and treatment modalities. NPC is one of the iceberg phenomenons in Indonesia that needs to be solved. Because the symptoms related to NPC in the early stage are usually nonspecific, which often lead to situations where NPC is considered as the most commonly misdiagnosed disease. The number of NPC patients at Sayang General Hospital Cianjur is increasing every year. The objective of this study was to evaluate epidemiology, clinical characteristics and histopathology types of patients with NPC at Sayang General Hospital Cianjur. This is a descriptive retrospective study that used data from medical records of Sayang General Hospital Cianjur during 2018 - 2020 and histopathology examination as confirmation. The result demonstrated 73 cases found on that period. 49 case (67,1%) of the patients are male. The age-range from 18 to 74 years old with peak incidence between 51 - 60 years old (32,8%). Lump in the neck is the most common chief complains in presentation (69.9%), followed by nasal congestion (8,2%). Salted fish consumption was the most prevalent risk factor (57,5.%) and active smoke (36,9%). Based on the histopathologic findings, 94.5% of the cases were classified as WHO-3.

Keywords: *Nasopharyngeal Carcinoma, Characteristic, Histological Findings, Cianjur.*

1. INTRODUCTION

Nasopharyngeal carcinoma (NPC) is a non lymphomatous squamous cell carcinoma that occurs in the epithelial lining of the nasopharynx. This neoplasm shows varying degrees of differentiation and is frequently was seen in the pharyngeal recess (Rosenmuller's fossa), posteromedial to the medial crura of the eustachian tube opening in the nasopharynx [1].

Nasopharynx carcinoma has different characteristics from other head and neck epithelial tumors in respect of epidemiology, histopathology, findings, diagnosis and treatment modalities [2]. However, it is endemic in many geographical regions, including Southern China, Southeast Asia, Japan, and the Middle East/North Africa [1]. NPC presents as a complex disease caused by an interaction between chronic infection with oncogenic gamma herpes virus Epstein-Barr virus (EBV), environmental and genetic factors, involving a multi step carcinogenic [1].

The highest incidence rate in the world is in Southeast China province with 40 - 50 cases of nasopharyngeal cancer among 100.000 population. Nasopharyngeal cancer is very rare in Europe and North America with an incidence of < 1 / 100,000 population [3]. Nasopharyngeal cancer is the fourth common cancer in Indonesia following breast, cervix, and lung cancer. The risk factors for this cancer are men, race, age 30 to 50 years old, Epstein Barr virus, and family history. The symptoms of nasopharyngeal cancer include nasal congestion, mild epistaxis, sense of fullness in the ear, otalgia, diplopia, and trigeminal neuralgia (nervous III, IV, V, VI) [3].

Marlinda et al. Reported that Nasopharyngeal cancer is one of the most cancers in Indonesia, (28.4%), with a male-female ratio of 2:4 and Java island is an endemic region. As economically, nasopharyngeal

cancer will affect the economic situation of patients and their families and also affect the state health financing pattern. Population productivity also will be

affected. Knowledge about nasopharyngeal cancer begin prevention, early detection, and appropriate treatment will be able to help overcome the problems caused by nasopharyngeal cancer [3]. Because the number of visits of nasopharyngeal cancer patients at Sayang Cianjur Hospital are increasing every year, the researchers are interested in evaluating the profile and histological findings of nasopharyngeal carcinoma at Sayang General Hospital Cianjur.

2. METHODS

A retrospective descriptive study was conducted through medical records of NPC patients that included the inclusion and exclusion criteria. The inclusion criteria were all patients diagnosed with NPC at the ORL-HNS outpatient ward Sayang General Hospital Cianjur West Java from 2018 to 2020. Exclusion criteria is incomplete medical records.

3. MATH AND EQUATIONS

Between January 2018 - December 2020, there were 73 medical records including inclusion criteria at the ORL-HNS outpatient ward Sayang General Hospital Cianjur.

From Table 1 we found that male more than women with 67,1% and 32,9%. This sex distribution was consistent with previous findings, indicating dominant male predisposition among NPC patients in several studies at several region, Adham, Marlinda et al (2012) reported the comparison NPC patients between men and women was 2-3:1 [4]. Hardianti R A et al (2019) reported the comparison NPC patients between men and women was 62,2% and 37,8% [5].

The youngest age was 18 years and the oldest was 70 years. Number of cases increased over the 40 -70 range of age, most of them (32,8%) were between 51-60 years old. Its consistent with some previous findings, Bangun A (2016) reported that the highest range age are between 40-50 years (63,2%) [6]. Sulaksana MA (2019) reported that most of KNF patient aged were between 46 years to 55 years (35.10%) [7].

Table 3. Risk Factors of NPC 2018-2020

Risk Factors	n	%
Active Smokers	27	25,2
Passive Smokers	17	15,9
Alcohol consumption	4	3,7
Salt fish consumption	42	39,3
Betel consumption	3	2,8
Family History	7	6,6
Smoke and Other Combustion	3	2,8
Chronic Chemical exposure	4	3,7

As shown in Table 2, palpable lump in the neck is the most common chief complain t at presentation found in 69,9% of patients, followed by ear fullness (8,2%), Epistaxis (5,5%) and headache (5,5%). Neck lump complaint shows that the NPC has advanced stage when it was diagnosed. Because symptoms related to NPC in the early stage are usually nonspecific, most NPC patients are diagnosed in the advanced stage. As treatment results for NPC are not satisfactory in the advanced stage, early diagnosis and appropriate management are important to achieve favorable treatment results. The development of a good primary NPC screening protocol may thus contribute to the early detection and improve the treatment outcome [1].

Table 1. Social Characteristics of NPC 2018-2020

Characteristics	n	%
Sex		
Male	49	67,1
Female	24	32,9
Age (Mean ± SD = 49,68 ± 13,289)		
≤ 20	1	1,4
21-30	7	9,6
31-40	9	12,3
41-50	17	23,3
51-60	24	32,8
61-70	14	19,2
≥ 70	1	1,4

Table 2. Chief Complain Presentation of NPC 2018-2020

Chief Complain	n	%
Neck lump	51	69.9
Nasal Obstruction	2	2,7
Epistaxis	4	5,5
Ear fullnes	6	8,2
Headache	4	5,5
Diplopia	1	1,4
Nasal Discharge	2	2,7
Tinnitus	2	2,7
Hearing loss	1	1,4

From Table 3 we found that salt fish consumption was the most common risk factor (39,3%), followed by active smokers (25,2%), passive smokers (15,9%). The habit of consuming salted fish as a daily diet or consuming foods containing preservatives or marinated related to nitrosamine levels of Cianjur peoples are still high likewise the smoking habit of cianjur people is still very high. This is coherent with the literature which states that occupational exposure to fumes, smoke, dust or other chemicals such as pesticides increases the risk of nasopharyngeal carcinoma 2 to 6 times [5, 8-10].

According to a case control study in Singapore, the consumption of weekly salted fish has the risk for NPC about 2.33 (0.6-9.02) compared to 1.67 (0.93-2.99) if the consumption is only monthly. Consuming the smoked fish weekly was also a risk factor for NPC with the odd

ratio 1.33 (0.33-5.96) [11]. On the other research, found that salted fish consumption not significantly related to NPC, however the wood exposure correlated significantly [12].

From Table 4, based on the histopathological findings we found data that WHO-3 is the most common tumor type with 95,5%, WHO-2 with 5,5%, whereas WHO-1 tumor type is not found. From previous research, Harianto (2019) reported that the WHO type III classification is the most frequent with 61,3%, followed by WHO type I and WHO type II with the same percentage 19,4 % [13**].**

Table 4. Histological Findings

Tumor Type	N	%
WHO-1	0	0
WHO-2	4	5,5
WHO-3	69	94,5

4. CONCLUSION

Men still have a higher incidence rate in the case of NPC than women. The 5th decade was the most common NPC case. Lump in the neck is the most common chief complaint at presentation, salt fish consumption was the most common risk factor, followed by active smokers and passive smokers. WHO-3 is the most common histological type found.

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