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Pictures Of Remote Metastasis In Patients Naspharyngeal Carcinoma In RSUP. H. Adam Malik Medan For The Period Of 2014-2016

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ABSTRACT

Other malignant ENT tumors in Indonesia. NPC is one of the five superior malignant tumors with the highest frequency (altogether with cervical cancer, breast tumor, lymph node tumor and skin tumor). Meanwhile, leading in the first place are the tumors in the head and neck region. Objectives. To know the characteristics of distant metastases in nasopharyngeal carcinoma patients in Haji Adam Malik General Hospital in Medan during 2014-2016 period. Methods. The population in this study is nasopharyngeal carcinoma patients in Haji Adam Malik General Hospital with total sampling as the sampling technique. This study is a descriptive study using cross-sectional design retrospective, and the technique used for collecting data by using secondary data from medical records. Results. (4.7%) had lung metastases, 10 patients (4.7%) had cardiac dysfunction, and others (0.9%). Conclusion. The biggest amount of patients was found in the age group of 38-47 years, mostly men with last education was high school, stage IV, and the most common damaged organ was liver.

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1. INTRODUCTION

Nasopharyngeal Carcinoma (NPC) is the most common malignant tumor among malignant Ear Nose and Throat (ENT) tumors in Indonesia, where NPC is included in the top five malignant tumors, with the highest frequency (along with cervical cancer, breast tumors, lymphomas). and skin tumors), while the head and neck region occupies the first place (NPC accounts for nearly 60% of tumors in the head and neck area, followed by malignant tumors of the nose and paranasal sinuses 18%, larynx 16%, and malignant tumors of the oral cavity, tonsils, hypopharynx in a low percentage) (Pahala, 2009) found about 80,000 incidents of nasopharyngeal cancer worldwide, and is estimated to cause death in 50,000 sufferers. In Indonesia, of all head and neck cancers, nasopharyngeal cancer shows different entities epidemiologically, clinical manifestations, biological markers, risk factors, and prognostic factors. The prevalence of nasopharyngeal cancer in Indonesia is 6.2/100,000, with nearly 13,000 new cases, but it is a documented small proportion. Marlinda et al.

reported that nasopharyngeal cancer is the most common head and neck cancer (28.4%), with a male-to-female ratio of 2.4, and is endemic in the Javanese population (Adham, 2012).

The prevalence of nasopharyngeal carcinoma in Indonesia is 3.9 per 100,000 population annually. At H. Adam Malik Hospital, Medan, North Sumatra Province, patients with nasopharyngeal carcinoma were found in five ethnic groups, where the ethnic group that suffered the most from nasopharyngeal carcinoma was the Batak tribe, which was 46.7% of 30 cases. In a study conducted in Medan (2008), a ratio of male and female patients was found to be 3:2. The dominant testosterone hormone in men is suspected of causing a decrease in the immune response and tumor surveillance so that men are more susceptible to Eipstein-Barr virus infection and cancer (Munir, 2010).

Metastasis is the spread of a tumor from the site where it first appeared as a primary tumor to other locations in the body. Metastasis depends on 2 influencing factors, namely cell motility and the degree of invasion. Basically, the cells that metastasize are the same as the cells in the primary tumor. Metastases that occur can be distant and near metastases.

At initial diagnosis, metastases are found in only 5 to 7% of patients. later discovered during the course of his illness. Generally during a period of 3 years after undergoing treatment, with a percentage of 25-30%. (Bensouda, 2010).

The most common sites of metastases are bone (70-80%), followed by the fissure organs (30% liver, 18% lung) and followed by lymph nodes that are not in the cervical region (axillary, mediastinal, pelvic, and inguinal). (Bensouda, 2010).

2. RESEARCH METHOD

The type of research used in this study is a descriptive observational study with a retrospective cross-sectional design, where this study will see how distant metastases are in patients with nasopharyngeal carcinoma.

The data obtained will be analyzed descriptively and presented in the form of data tabulation using the Statistical Package for the Social Science (SPSS) program. Analysis of the data used is univariate analysis in which to determine the frequency distribution of each variable. This frequency distribution is made to obtain an overview of each variable.

3. RESULTS AND DISCUSSIONS

This research was carried out at the medical record installation of the Haji Adam Malik Hospital in Medan from September to October 2017 using secondary data. The number of population needed in this study was 396 people, which were all patients with nasopharyngeal carcinoma in RSUP. H. Adam Malik Medan in 2014-2016, but the number of samples that were met were 212 people. The characteristics studied were age, sex, education, stage, and incidence of distant metastases in patients with nasopharyngeal carcinoma. Various characteristics of the research subjects are presented in the following tables.

Table 1. Description of the age of the research subjects.

Age group	n	%
0-17	6	2.8
18-27	16	7.5
28-37	21	9.9
38-47	67	31.6
48-57	65	30.7
58-67	29	13.7
68-77	4	1.9
78-87	4	1.9
Total	212	100

Based on table 1, it can be seen a description of the incidence of nasopharyngeal carcinoma by age. The incidence of nasopharyngeal carcinoma was most commonly found in the age group 38-47 years, namely 67 people (31.6%), followed by the age group 48-57 years as many as 65 people (30.7%), 58-67 years 29 people (13 ,7%), 28-37 years old 21 people (9.9%), 18-27 years old 16 people (7.5%), 0-17 years old 6 people (2.8%), then 68-77 years old and 78-87 years 4 people

(1.9%). This is in accordance with a study conducted by Adham which showed that the incidence of nasopharyngeal carcinoma in Indonesia peaked at the age of 40 to 49 years, and more than 80% of nasopharyngeal carcinoma patients were diagnosed for the first time in the age range of 30 to 59 years. (Adham et al., 2012).

Table 2. Description of the gender of the research subjects.

Gender	n	%
Man	147	69.3
Woman	65	30.7
Total	212	100

Based on table 2, it can be seen that the incidence of nasopharyngeal carcinoma is higher in men (69.3%). This is in accordance with research conducted by Wei et al. in China in 2013 which said that the incidence of nasopharyngeal carcinoma in men was higher than in women. In this study, 15,730 cases of nasopharyngeal carcinoma were found in men, and 5580 cases in women (Wei et al., 2017).

Table 3. Description of the education level of the research subjects.

Education	n	%
Not completed in primary school	4	1.9
SD	32	15.1
junior high school	43	20.3
senior High School	118	55.7
Bachelor	15	7.1
Total	212	100

In table 3, it can be seen that nasopharyngeal carcinoma has a high incidence in patients with high school as the last education, namely 118 people (55.7%), then junior high school which is 43 people (20.3%), elementary school 32 people (15.1%), 15 graduates (7.1%), and did not finish elementary school, namely 4 people (1.9%).

Table 4. Description of the stage of the research subject.

Stadium	n	%
I	2	0.9
II	9	4.2
III	66	31.1
IV	135	63.7
Total	212	100

Patients with nasopharyngeal carcinoma who became the research subject were most diagnosed at stage IV, as many as 135 people (63.7%).

Table 5. Description of the study subject's organ disorders and metastases.

	Liver disfunction	Functional disorders kidney	Lung Metastasis	Disturbance in heart	Etc
Yes	52 (24.5%)	18 (8.5%)	10 (4.7%)	10 (4.7%)	2 (0.9%)
No	160 (75.5%)	194 (91.5%)	202 (95.3%)	202 (95.3%)	210 (99.1%)
Total	212 (100%)	212 (100%)	212 (100%)	212 (100%)	212 (100%)

In table 5 it can be seen that the most common organ damage found was impaired liver function as many as 52 people (24.5%), then kidney function disorders in 18 people (8.5%), lung metastases and heart disorders respectively. 10 people (4.7%), and others in 2 people (0.9%). Research conducted by Bensouda et al. in 2011 which stated that the most common location of metastases found in patients with nasopharyngeal carcinoma is bone, which is 70-80% of cases, visceral organs such as liver in 30%, and lungs in 18%. Metastases are less often found in lymph nodes other than cervical (axillary, mediastinal, pelvic, and inguinal) (Bensouda et al., 2011). In this study, no examination was carried out on bone metastases due to the lack of facilities at the study site.

Some of the obstacles in this study are the limitations and lack of facilities in carrying out related examinations to diagnose metastases in patients with nasopharyngeal carcinoma such as bone scans, ultrasound of the liver, kidneys, and others. Therefore, the results obtained in this study need to be confirmed by analytical studies or other studies with more variable location of metastases. The weakness in this study is that the variables of this study have not been able to directly describe the metastatic data of nasopharyngeal carcinoma.

4. CONCLUSION

Most patients with nasopharyngeal carcinoma came from the age group of 38-47 years (31.6%), most patients with nasopharyngeal carcinoma are male (69.3%), stage in nasopharyngeal cancer with the highest incidence is stage IV (63.7%), most other organ disorders found in patients with nasopharyngeal carcinoma is disturbance function heart (24.5%)

REFERENCES

Adham M, Kurniawan AN, Muhtadi AI, et al. 2012, Nasopharyngeal carcinoma in indonesia: Epidemiology, incidence, signs, and symptoms at presentation. p185–96.

American Cancer Society, 2013. 'Nasopharyngeal Cancer' [online], Accessed 17 April 2017, Available from: http://www.cancer.org/acs/groups/cid/documents/webcontent/003124- pdf.pdf.

Bensouda.Y., Kaikani.W., Ahbeddou.N., Rahhali.R., Jabri.M., Mrabti.H., Boussen. H., Errihani, H., 2011, 'Treatment for Metastatic Nasopharyngeal cancer', *European Annals of Otorhinolaryngology, head and neck diseases.* Vol.128, pp 79-85.

Brennan, B., 2006. *Nasopharynx Carcinoma, Orphanet Joural of Rare Diseases.* Accessed 25 April 2017 Available from : http://www.ojrd.com/content/pdf/1750-1172-1-23.pdf.

Chan J, PIlch B, Kuo T, Wenig B, Lee A. 2013. Tumours of the nasopharynx. In Barnes. L.,editor. WHO classification of tumours: head & neck tumours.IARC Press, Lyon.

Chang ET, Adami H-O, 2006. *The Enigmatic Epidemiology of Nasipharyngeal Carcinoma*. Cancer epidemology biomarkers. Accessed 17 April 2017, Available from: http://cebp.aacrjournals.org/content/15/10/1765.full.

Cotriil, C.P., & Nutting, C.M., 2009, Tumours of the Nasopharynx, Evans PHR, Montgomery PQ, Gullane PJ, ed. Principle and Practice of Head and Neck Oncology, CRC, Florida, Martin Dunitz,pp. 193-218.

Ferlay, J., Soerjomataram, I., Dikshit, R., et al. 2015. Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012. *International Journal of Cancer*, *136*(5), E359– E386. https://doi.org/10.1002/ijc.29210.

Hasselt CAV, Gibb AG. 2002, Nasopharyngeal Carcinoma. Hong Kong and London: The Chinesse University Press, Greenwich Medical Media LTD, Greenwich.

Leung, S. W., Lee, T. F., 2013. *Treatment of Nasopharyngeal Carcinoma by Tomotherapy: Five Year Experience.* Accesed 20 April 2017 Available from : http://www.ro- journal.com/content/pdf/1748-717X-8-107.pdf.

Li, JIa-Xin, 2014. *Asian Pacific Journal of Cancer Prevention, Vol 15.*

Lok B, Setton J, Ho F, Riaz N, Rao S, Lee N. Nasopharynx. In: Halperin E, Wazer D, Perez C, Brady L, (ed).2013. *Perez and Brady's Principles and Practice of Radiation Oncology. 6th ed.* Philadelpia. p. 730–60.

Munir, D., 2010. Karsinoma Nasofaring Kanker Tenggorok. Medan: FK-USU . USU press, Medan.

Nasir N,2009. *Karsinoma Nasofaring*. Kedokteran Islam. Accessed 27 April 2017 Available From Http://www.Nasriyadinasir.co.cc/2009/12/karsinomanasofaring_20.html

Nasution, I., 2008. Hubungan Merokok degan Karsinoma Nasofaring. Tesis : Fakultas Kedoteran Universitas Sumatera Utara, Medan.

National Cancer Institute 2009. Accessed 18 April 2017 Available from: http://www.cancer.gov/cancertropics/pdq/treatment/nasopharyngeal/Heal th /Professional.

NCCN. 2015 NCCN Guidelines: Head and Neck Cancer version 2015. NCCN; 2015.

Pahala, H.M., 2009. Expresi Vascular Endothelial Growth Factor Pada Karsinoma Nasofaring. Accessed 24 April 2017 Available from: http://repository.usu.ac.id/handle/123456789/6425.

Prakoso. A, 2015 Gambaran Beberapa Faktor Resiko Karsinoma Nasofaring Di RSUP H. Adam Malik Medan Di Tahun 2014. Tesis : Fakultas kedokteran Universitas Sumatra Utara, Medan.

Rozein A, Syafril A,2012. Karsinoma Nasofaring, Dalam Buku Ajar Ilmu Kesehatan Telinga Hidung Tenggorok Kepala Leher, edisi ketujuh. Balai penerbit FK UI, Jakarta

Tabuchi, K., *et al*., 2011. 'Early Detection of Nasopharyngeal Carcinoma: A Review'. International Journal of Otolaryngology. Hindawi Publishing Corporation.

Wei K., Zheng R., Zhang S., et al. 2017, 'Nasopharyngeal Carcinoma Incidence and Mortality in China, 2013'. Chinese journal of cancer.

Wei, W.I., & Sham, J.S.T., 2005, 'Cancer of The Nasopharynx', Cancer of The Head and Neck.Philadephia, pg 277-91

Wei, W.I., 2006, 'Nasopharyngeal cancer'. Bally, B.J., Johnson, J.T. and Newlands, S.D., editor. Head and Neck Surgery Otolaryngology. Ed ke-4. Philadelphia: Lippincot Williams and Wilkins. pg. 1657-71.

Witte MC, Bryan H.N, 2013. Nasopharyngeal Cancer. In: Bailey, Byron J. Head and Neck Surgery Otolaryngology 5th ed, LWW,Philadelphia.

Zhang, Z.S., Nisancioglu, K. H., Chandler M.A.et al. 2013. Mid-Pliocene Atlantic Meridional Overtuning Cirulation not unlike modern, Climate of Past, 9(4), 1495-1504, https://doi.org/10.5194/cp-9-1495-2013.