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Nasal Associated Lymphoma Tumors

Reno Keumalazia Kamarlis[1], Vera Dewi Mulia[2], Benny Kurnia[3]
[1,2,3]*Medical Faculty, Universitas Syiah Kuala, Banda Aceh, Indonesia*
renosppa@unsyiah.ac.id

Abstract: This study analyses nasal associated lymphoma tumors, the results of histopathological examination obtained a picture that supports the establishment of a *diffuse large B-cell lymphoma* (DLBCL) with the characteristics of typical cells. This patient does not support an *extranodal NK / T nasal lymphoma* type cell because there are no glandular mucosa and *clear cell peculiar* changes as well as areas that experience necrosis, vascular destruction and fibrinoid deposits in blood vessel walls
Keywords: nasal; lymphoma tumors; disease

I. Introduction

Every health problem, generally caused by three factors that arise simultaneously, that are (1) the existence of other germs or disruptors,(2) the existence of an environment that allows the development of germs, and (3) the behavior of community not care about germs and the environment. Health and illness are largely determined by the human behavior. (Yeni, 2020). Nasal neoplasm are rare, but show a variety of variations that often form as a polypoid mass covering the nasal cavity. Benign or malignant tumors can cause ulceration and cause bleeding that causes epitasis.

Malignant lymphoma originating from the rice cavity and paranasal sinuses is uncommon. This situation is found to be 5.8 - 8% of extranodal lymphoma in the head-neck region. Malignant lymphoma of the nasal cavity is most often a fast-growing, high-grade T-cell lymphoma. This lymphoma is characterized by a polymorphic cell population including malignant T cells. These lesions are characterized by extensive necrosis and sufferers can present with progressive destructive lesions in the midline of the nasal cavity and palate (Chandrasoma, 2001). Immunohistochemical examination shows the certainty of diagnosis of lymphoma of the rice cavity. Found several lesions that can be found such as *lethal midline granuloma, idiopathic midline destructive disease* or *polymorphic reticulosis* that shows extensive ulceration and necrosis. The purpose of this paper is to report a case of extranodal lymphoma found in the nasal cavity.

II. Review of Literatures

Lymphoma in the rice cavity is a tumor that is rarely found. This case is about 3% of all extranodal lymphomas and 8% of extranodal lymphomas found on the head - neck. About 45% of all malignant lymphomas in the nasal and nasopharyngeal cavity come from NK / T cells, 21% from T cells and 34% from B.11 cells.

Primary non-Hodgkin's lymphoma can be found in the rice cavity or paranasal sinuses. Synonyms of this tumor are *polymorphic reticulosis, lethal midline granulomas or angiocentric immunoproliferative lesions* which are now known as *extranodal NK / T cell lymphoma of nasal type*. (Barnes, 2005)

2.1 Epidemiology

Malignant lymphoma in the rice cavity is the second state of malignancy that is found in the rice cavity and paranasal sinuses after after squmous cell carcinoma. The

incidence is around 14% of all types of malignancy in this area. The most common type of lymphoma is extranodal NK / T cell lymphoma, especially found in Asia and Latin America when compared to Caucasians. Another type of lymphoma that can be found in a rice cavity is anaplastic large cell lymphoma. The most frequent type of lymphoma is B cell lymphoma with diffuse large B-cell.5,7 In addition, it can also be found Burkitt lymphoma, follicular lymphoma, extranodal margin zone B-cell lymphoma type MALT and mantle cell lymphoma (Juan, 1996). Non-Hodgkin's lymphoma the rice cavity is often found in men compared to women (3: 1) at around 53 years of age. Patients with DLBCL are often found at around 63 years of age, male and female ratio of 1.2: 1. In children rarely found and if there is a Burkitt lymphoma

2.2 Etiology

It is definitely unknown, but it is thought to be strongly associated with a history of Ebstein-Barr virus infection, patients with long-term immunosuppressant administration (post-transplantation and AIDS sufferers) also increase their risk of developing this tumor.

2.3 Localization

Lymphoma in the rice cavity can cause local destruction so that it interferes with the airway and damages the maxillary sinus and can damage other adjacent areas such as the alveolar bone, hard palate, nasopharynx and orbital cavity

2.4 Clinical Description

In patients, nasal obstruction, epistaxis, nasal discharge, pain and swelling of the nose and face can be found. If the condition continues it can cause destruction of the midline of the face and perforation of the rice septum and palate. Metastasis occurs in the adjacent lymph nodes.

2.5 Spread of Tumors and Staging

In the majority (80%) extranodal NK / T cell lymphoma is localized to the nose (stage IE / IIE). Bone marrow involvement is rare. Although extranodal NK / T cell lymphoma is localized to the nose, it can also metastasize to the skin, gastrointestinal tract, liver, lymph nodes and testes. Most sufferers with DLBCL (75%) in the rice cavity and paranasal sinuses can metastasize to the cervical lymph nodes (60%) and if there is a relapse it can affect the lymph nodes, liver and lungs.

a. Extranodal NK / T cell lymphoma

In extranodal NK / T nasal type lymphoma cells, diffuse lymphomatous infiltration is characteristic of the rice cavity or paranasal sinuses which are limited by destruction of the glandular mucosa and changes in the clear cell peculiar. In addition, extensive necrosis can be found, ulceration, destruction of blood vessels and fibrinoid deposits in blood vessel walls. The size of lymphoma cells varies greatly, from small, medium and large. The nucleus is round - oval, with uneven edges, pale and granular cytoplasm. In some places infiltrated inflammatory cells consisting of lymphocytes, plasma cells and eosinophils.

b. Diffuse large B-cell lymphoma

This species is found in 33% of all LNH in the United States. DLBCL is the most complex and heterogeneous type. This condition is related to old histolytic lymphoma and sarcoma reticulum cell. DLBCL can affect children, but is most common in adults. In comparison to other types of lymphoma, DLBCL is most extranodal. The progression of the

disease is very fast and has a poor prognosis, but when treated gives a very good response to chemotherapy. In more than half of the cases, the tumor is confined to one side of the diaphragm. Bone marrow or liver involvement is less common when compared to small cleaved or small lymphocytic tumors. Approximately 40% are found extranodal, for example in the digestive system, skin and skeletal system. The lymph nodes involved are large, homogeneous, and individual and can or are not accompanied by necrosis. About 50-60% of large cell lymphoma is derived from B cells, 5-15% is from T cells and only a few are from histiocytes and in one third of cases are null lymphoma. (Devita,2005) Morphologically, cell nuclei are sized large, about 3-4 times the size of normal lymphocytes and in various forms. In general, the nucleus is round, irregular and cleaved nuclear, vesicular, rough chromatin and prominent nucleoli. The cytoplasm appears small and pale. Immunophenotypically, it is mature B cell tumor and expresses pan-B-cell markers (CD 19, CD 20 and CD 79a), while also expressing IgM and or IgG.

Some subtypes that are thought to be related to diffuse large B-cell lymphoma are:

c. Ebstein-Barr virus (EBV)

This virus is associated with the pathogenesis of diffuse large B-cell lymphoma that develops in people with AIDS and iatrogenic immunosuppressant (post-transplant patients). 2,11,12

d. Human Herpes Virus Type 8 (HHV-8)

Infection with HHV-8 causes malignant effusion, tumor cells infected with HHV-8 encode homologous proteins to become oncoproteins including cyclin D1. This virus is found in Kaposi's sarcoma which attacks AIDS sufferers.

e. Mediastinal large B-cell lymphoma

This tumor attacks young women with predilection for spread in the visceral abdomen and central nervous system. (Mills, 2004) In DLBCL, the mucous cavity of the rice or paranasal sinuses appears to be thickened, the boundaries are not clear due to infiltration of medium or large lymphoid cells. Sometimes it can be accompanied by ulceration and necrosis. In the blood vessels, angioinvation can be found by tumor cells. Tumors usually consist of setroblas or immunoblast cells with a round, multilobular nucleus and multiple nuclei that are prominent. (Robbins, 2003)

2.6 Histogenesis

In the majority of extranodal NK / T nasal lymphoma type cells activated by NK cells while the cause of neoplasms is cytotoxic T-cells. DLBCL is a neoplasm of B cells that have matured at the germinal center or have differentiated at the germinal center.

2.7 Prognosis

Radiotherapy followed by or without chemotherapy is the therapy of choice. In patients with extranodal NK / T cell lymphoma type nasal survival rates for five years around 30-50%. About one third or half of sufferers will experience a recurrence. This is related to increased staging, decreased endurance and large tumor mass. The expression of CLA (cutaneous lymphocyte antigen) worsens the situation. In DLBCL the prognosis is better with a recurrence rate of around 35 -60%.

Case Report

Name : Mr. X, male, 50 years old
Clinical note : Recurrent epitasis

Histopathological examination

Macroscopic

Received tissue from nasal biopsy that has undergone fragmentation, with a volume of about 1 cc, brownish red color, and soft consistency. Tissues are taken randomly to be made into preparations.

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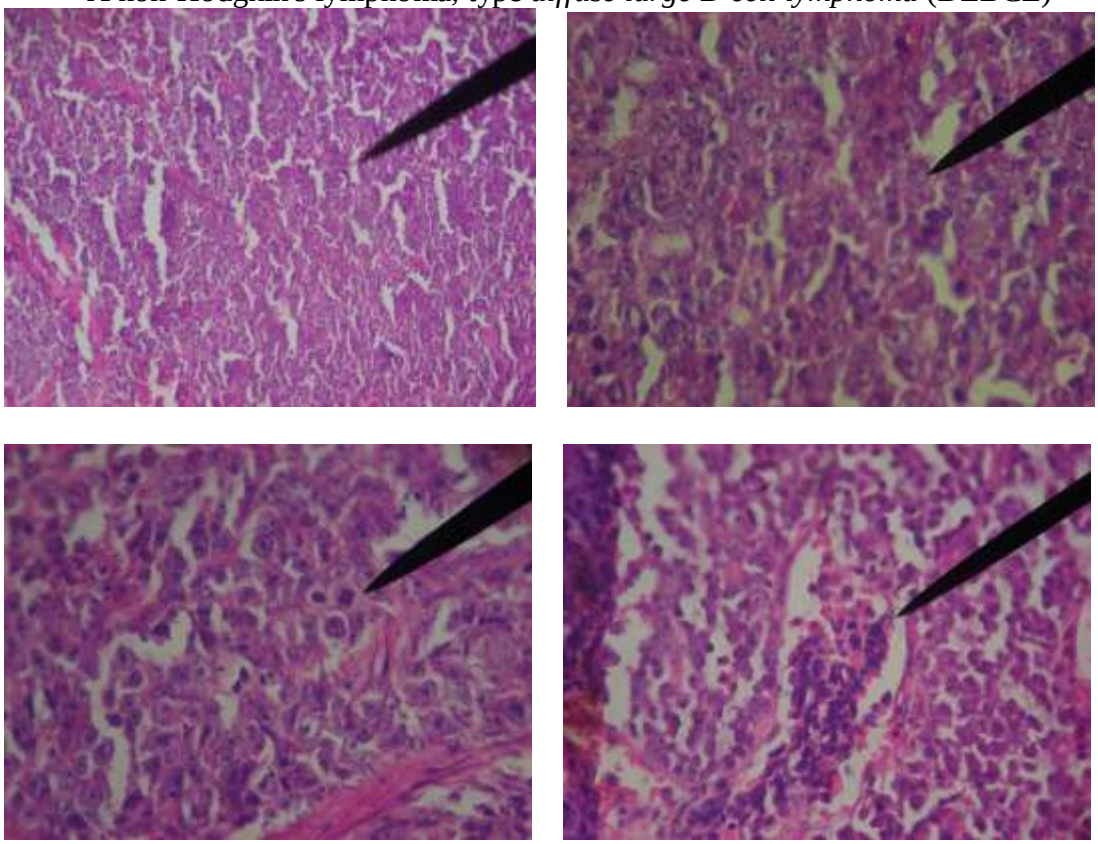
Microscopic

Tissue preparation from nasal biopsy without epithelial coating. The distribution of large, monotonous cells of similar size, rounded and oval nuclei, some vesicular and some lobes, rough chromatin, prominent, basophilic, little cytoplasmic, eosinophilic nuclei. Locally seen chronic lymphocyte inflammation cells. Mitosis is easy to find. The boundaries between cells are unclear and in some places blood vessels appear to have proliferated, dilated and congested and angioinvated. Local appearance of interstitial hemorrhage is evident.

III. Conclusion

A non-Hodgkin's lymphoma, type *diffuse large B-cell lymphoma* (DLBCL)



Based on the results of histopathological examination obtained a picture that supports the establishment of a *diffuse large B-cell lymphoma* (DLBCL) with the characteristics of typical cells. This patient does not support an *extranodal NK / T nasal lymphoma* type cell because there are no glandular mucosa and *clear cell peculiar* changes as well as areas that experience necrosis, vascular destruction and fibrinoid deposits in blood vessel walls

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