

Laporan Kasus

Nasopharyngeal Non Hodgkin Lymphoma

Non Hodgkin Lymphoma Nasofaring

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ABSTRACT

Non Hodgkin lymphomas (NHL) are tumors originating from lymphoid tissue, mainly from lymph nodes. These tumors may result from chromosomal translocation, infections, environmental factors, immunodeficiency states, and chronic inflammation. In general, the incidence of NHL is slightly higher in men than in women. The incidence of NHL nasopharynx is rare. A high degree of suspicion is required to avoid unnecessary radiologic and surgical procedures since NHL can be mistakenly diagnosed as carcinoma. We reported a 16 year old male patient with gradual epistaxis, hearing impairment, decreased body weight, and multiple nodules in right forehead, right axilla, right colli posterior, and left waist. The patient also suffered from inferior paraplegic extremities. The Head CT scan result showed carcinoma nasopharynx. After biopsy of nodules was done, it revealed differential diagnoses such as blastoma, Non Hodgkin lymphoma, and small cell carcinoma. Immunohistochemistry result showed Leucocyte Common Antigen (LCA) positive, and MRI thorax showed suspect of schwannoma. Based on the data, chemotherapy with regiment CHOP (cyclophosphamide, hydroxydaunorubicin, oncovin/vincristine, and prednisone) was given. The prognosis of NHL Nasopharynx was better than nasopharyngeal squamous cell carcinoma. The prognostic of NHL depends on the age, performance status, staging, extranodal involvement, serum Lactate Dehydrogenase (LDH) and response of therapy. The prognosis in our patient was poor.

Keywords: *Mass, Non Hodgkin Lymphoma, nasopharyngeal carcinoma, prognostic*

ABSTRAK

Non Hodgkin Lymphoma (NHL) adalah tumor yang berasal dari jaringan limfoid, terutama nodul limfe. Tumor-tumor ini sebagai akibat dari translokasi kromosom, infeksi, faktor lingkungan, status imunodefisiensi, dan inflamasi kronis. Secara umum, kejadian NHL sedikit lebih tinggi pada laki-laki dibanding perempuan. Angka kejadian NHL nasofaring tersebut jarang. Tingkat kecurigaan yang tinggi diperlukan untuk menghindari prosedur radiologis dan bedah yang tidak diperlukan karena NHL dapat keliru didiagnosis sebagai karsinoma. Kami melaporkan, pasien, laki-laki, 16 tahun, dengan mimisan yang hilang timbul, gangguan pendengaran, penurunan berat badan, dan nodul pada dahi kanan, leher belakang kanan, lipatan ketiak kanan, dan pinggang kiri serta pembesaran kelenjar getah bening pada inguinal kanan. Pasien juga mengalami paraplegi ekstremitas inferior. CT scan kepala menunjukkan karsinoma nasofaring. Setelah dilakukan biopsi pada nodul, hasilnya menunjukkan diagnosa banding seperti: blastoma, Non Hodgkin Lymphoma (NHL), small cell carcinoma. Hasil imunohistokimia menunjukkan *Leucocyte Common Antigen* (LCA) positif. Selain itu MRI thorax menunjukkan suspek schwannoma. Berdasarkan data-data diatas kami memutuskan untuk memberikan kemoterapi dengan regimen CHOP (cyclophosphamide, hydroxydaunorubicin, oncovin/vincristine, dan prednison). Prognosis of NHL Nasofaring lebih baik daripada nasopharyngeal squamous cell carcinoma. Prognosa dari NHL berdasarkan usia, status performa, staging, keterlibatan extranodul, serum Laktat Dehidrogenase (LDH), dan respon terapi. Prognosa pada pasien kami buruk.

Kata Kunci: *Karsinoma nasofaring, massa, Non Hodgkin Lymphoma, prognostic*

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INTRODUCTION

Lymphomas are malignant neoplasms of the lymphocyte cell lines. This disease mainly involve lymph nodes, spleen, and other non-haemopoietic tissues. They are mainly classified as either Hodgkin's or non-Hodgkin's lymphoma (NHL), and of either B-lymphocyte or T-lymphocyte origin (1). It represents 2,5% of head and neck tumours. Oral and para-oral regions constitute the second most affected localizations by extra nodal lymphomas after that of the gastrointestinal tract (2). Most of the lymphomas localized in the nasopharyngeal region are non-Hodgkin lymphomas (3).

NHL is a group of histologically and biologically heterogeneous clonal malignant diseases arising from the lymphoid system. B-cell type NHL comprises about 85%, while the remaining is being of T cell-type or NK cell-type. Primary extra-nodal site is the form of presentation of approximately 25-40% of all NHL. After the gastrointestinal tract, extra-nodal NHL arising in the head and the neck (the Waldeyer's ring tonsils being the most common affected site) follows, accounting for 10% of all NHL and 1% of head and neck tumours. Within this region, primary NHL of the nasopharynx is rare (4). Non-Hodgkin's lymphomas are more frequent in men (5). The disorders vary in clinical presentation and course from indolent to rapidly progressive (6). These tumours may result from chromosomal translocation, infections, environmental factors, immunodeficiency states, or chronic inflammation (7).

Schwannoma is the most common benign tumour of peripheral nerves (6). Arisen from neural sheath of peripheral, cranial, or autonomic nerves, it usually presents as a solitary and well demarcated lesion and is usually extirpable (8,9). It may cause secondary symptoms such as hoarseness of voice, nasal obstruction, and dysphagia depending upon the location of the lesion (9). Pain, paresthesias, and motor weakness may occur when the tumour reaches sufficient size (8).

We report the case of a 16 year old man diagnosed as nasopharyngeal non hodgkin lymphoma due to the rarity of this case and the difficulties of diagnosing process at the time.

CASE REPORT

A 16 year old male was brought to RSSA because of general weakness occurring for 2 months. It was advancing in the last week before admission. He also complained about epistaxis although it could stop or a while. Epistaxis occurred approximately 4 times per day, each about 3-5 cc.

He also suffered from fever for 2 month. The fever was gradually onset. The fever was accompanied by hearing impairment. Because of this complain, he was brought to the doctor, and the doctor said that he suffered from Dengue Haemorrhagic Fever (DHF) and sinusitis. In addition, he also suffered from nodules in forehead, right neck, upper right chest, and left waist. Initially the nodules were only the size of corn seed and within one month in the shape of meatballs. It was painful. After Head CT scan was performed, he was diagnosed as carcinoma nasopharynx. Furthermore, the patient also lost his weight about 7 kilograms within 2 months. After three days in the hospital, he complained about paraesthesia and gradually evolve as paraplegia in the lower extremities. History of family revealed no one of his family

had the same disease like the patient (malignancy). He was an active person before, and he studied at senior high school with no limitation of daily activity.

The physical examination revealed that he had severely ill looking, malnutrition, with GCS 4-5-6, BP 130/80mmHg, HR 100bpm, RR 18tpm, Tax 38°C, and also had pale conjunctive, slightly icteric conjunctiva, mass in forehead, colli posterior dextra, axilla dextra, waist sinistra which were ± 3 cm in diameter, smooth surface, tight in the base, painful. There was lymphadenopathy inguinal dextra. The others were within normal limit.

Laboratory result revealed anaemia hypochromic mycrocytair with haemoglobin level was 9,3mg/dl, MCV 65,30mm³, MCH 21,90pg. This situation may be due to epistaxis and cancer related anaemia. Increasing Lactate Dehydrogenase/LDH (1001U/L) would worsen the prognosis of NHL. Abdominal USG showed widening CBD-IHBD with hydrops gall bladder et causa distal obstruction CBD. Sludge Gall bladder, enlargement of ren sinistra, susp parenchymatous renal disease, ren ectasis focal right lower pole. Distal obstruction CBD et causa lymphoma suppression.

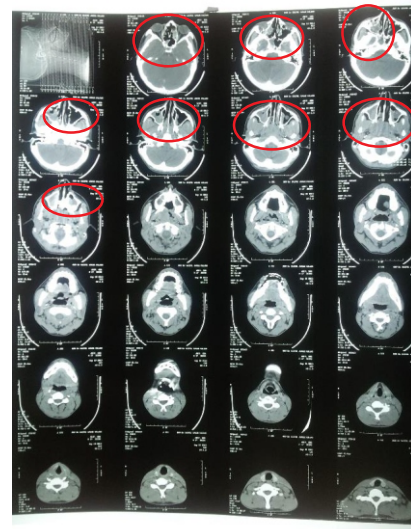


Image 1. Head CT scan shows nasopharynx carcinoma with extension into the sinus paranasalis, according to T3M0Nx causing total obliteration nasopharyngeal cavity

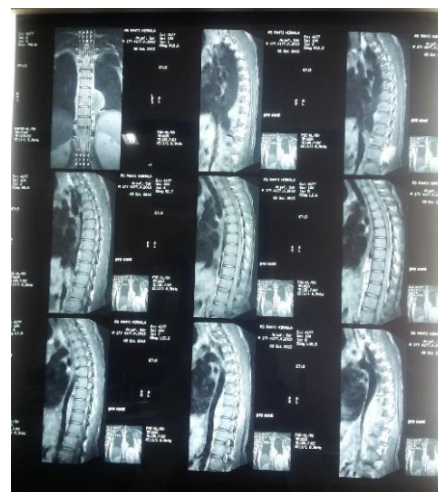


Image 3. Thorax MRI shows suspect schwannoma

The result of head CT scan examination, was concluded as nasopharynx carcinoma with extension into the sinus paranasalis (T3MONx). This condition will lead to total obliteration nasopharyngeal cavity. Because there were multiple nodules, we suspected this patient suffered from lymphoma. Based on the result of FNAB nodul frontal, axilla D, colli D and abdomen S, the differential diagnose are blastoma, non-hodgkin lymphoma, and small cell carcinoma. The immunohistochemistry showed Leucocyte Common Antigen /LCA(+), Neuron Specific Enolase / NSE (-), cytokeratin (-) while the thoracal MRI revealed suspected schwannoma. Finally, nodules biopsy proved that the patient was suffering from non-Hodgkin lymphoma, and LCA immunoreactivity is recognized to be highly specific for non-Hodgkin lymphoma.

DISCUSSION

Patients who have NHL (Non Hodgkin Lymphoma) represent a heterogeneous group of malignant proliferation of the lymphoid system. According to REAL (Revised European-American Lymphoma) classification, NHL is a heterogeneous group of diseases with peculiar, morphological, phenotypic, and molecular features (B-cell neoplasms, T-cell and putative natural killer (NK)-cell neoplasms) (10). NHL of the head and neck comprises a diverse group of distinct clinicopathologic entities. Although representing the second most common neoplasm found in the head and neck region in the adult population, it is very uncommon which constitutes only 1% of head and neck cancers, and the majority of them are being squamous cell carcinomas or one of their variants (4). The origin of the disease was extra-medullary. This heterogeneity induces different clinical, pathological, immunological, and cytogenetical presentations. Despite the close anatomical relationship between the various structures in the head and neck region, non-Hodgkin's lymphomas arising in these areas are a diverse group of diseases and may have a different natural history and response to therapy (2). A high degree of suspicion is required to avoid unnecessary radiologic and surgical procedures since NHL can be mistakenly diagnosed as carcinoma. Virtually any site in the extracranial head and neck can be affected by NHL, and three distinct categories of involvement can occur. Nodal NHL is the most common, followed by extranodal lymphatic (Waldeyer's lymphatic ring) and extranodal extralymphatic sites (orbit, sinus, nose, mandible, deep facial spaces, parotid gland, and dermis) (4). According to the picture on a head CT scan, expansion of carcinoma can occur to the paranasal sinuses.

Beside NHL, our patient also suffered from paraplegic inferior extremities that indicated a suspected schwannoma. Schwannoma is the most common benign tumour of the peripheral nerves (8). Arisen from neural sheath of peripheral, cranial, or autonomic nerves, it usually presents as a solitary and well demarcated lesion and is usually extirpable (8,9). Pain, paresthesias, and motor weakness may occur when the tumour reaches sufficient size (8).

The immunohistochemistry showed positive LCA (+), and negative NSE and cytokeratin, while the MRI result suggested a schwannoma that we think as lymphoma mimicking schwannoma. The Leucocyte Common Antigen/CD45 is a transmembrane protein tyrosine phosphatase located on most haematopoietic cells. It has

several isoforms, and haematopoietic cells express one or more of the isoforms - CD45RO, CD45RA and CD45RB. CD45 immunoreactivity is recognized to be highly specific for non-Hodgkin's lymphomas (11). NSE (Neuron Specific Enolase) is a glycolytic enzyme found in tumours of neuroendocrine origin. Significantly elevated serum NSE values are seen in SCLC (Small Cell Lung Cancer) patients, and it is used in routine for monitoring the therapy. It is also used as a marker for tumours of the nervous system, especially for childhood tumours serum NSE levels were elevated in non-Hodgkin lymphoma, especially in pyothorax-associated lymphoma and tended to decrease after chemotherapy (12).

These all data showed that patient was suffered from NHL nasopharynx with extranoduls, not nasopharyngeal carcinoma. Nasopharyngeal carcinoma (NPC) is a tumour that has a propensity to invade extensively and deeply, and in some cases, tumour spread occurs superiorly into the skull base. In contrast, nasopharyngeal non-Hodgkin's lymphoma (NPNHL) is associated with an absence, or a minimal extent, of tumour invasion. However, when NPNHL invasions do occur, they more often spread along the pharynx into the nasal cavity or tonsils, rather than extending deeply into parapharyngeal structures or infiltrating superiorly into the skull base. Therefore, there are differences between the tumour invasion associated with NPC versus NPNHL tumours (13).

The NHL are usually treated with radiotherapy in low grade stage I and II disease, however combined modality treatment including chemotherapy and radiotherapy is advocated in localized, intermediate to high grade aggressive forms of the disease. For advanced disseminated disease and high grade histology, aggressive chemotherapy with or without radiotherapy is recommended. The CHOP regimen (cyclophosphamide, hydroxydaunorubicin, oncovin/vincristine, and prednisone) plus Rituximab (if CD 20 positive in immunochemistry) is considered as the standard combined chemotherapeutic treatment (4). Based on the data, suggested that this patient suffered from NHL st IV, we treated with supportive treatment and chemotherapy regimen CHOP. However, we could not evaluate the treatment response because the patient sadly passed away after receiving the first cycle of chemotherapy.

Prognosis of NNHL is better than nasopharyngeal squamous cell carcinoma (2). The prognosis of NHL depends on the stage of the tumour, the aggressiveness of the malignant cell type, and treatment response (14). The International Prognostic Index is widely used to categorize patients with intermediate-grade lymphoma into risk groups. Factors that confer adverse prognosis are of age over 60 years, elevated serum LDH, stage III or stage IV disease, and poor performance status. Patients with no risk factors or one risk factor have high complete response rates (80%) to standard immunochemotherapy, and most responses (80%) are durable. Patients with two risk factors

have a 70% complete response rate, 70% of which are long-lasting. Patients with higher-risk disease have lower response rates and poor survival with standard treatment regimens, and alternative treatments are needed (6). The prognosis in our patient is poor (*dubia at malam*).

In summary NHL nasopharynx is a rare incidence, about 10% of all NHL and 1% of head and neck tumours. It can be misdiagnosed with nasopharyngeal carcinoma. If there are

patients with suspected nasopharyngeal carcinoma with nodules, we should perform nodule biopsy to rule out the

differential diagnosis to assure that the patients will get the corresponding treatment.

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