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A 67-year-old Female with Malignant Splenic Non-Hodgkin Lymphoma at Banten Regional General Hospital: A Case Report

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ABSTRACT

Non-Hodgkin's lymphoma (NHL) is a type of lymphoproliferative disorder primarily involving lymph nodes but can extend to extranodal sites like the spleen. When NHL originates in the spleen, it is classified as primary splenic NHL. Due to its unusual presentation, it may resemble other splenic conditions in clinical appearance. In this Journal we report a rare case of splenic lymphoma in a 67-year-old female with symptoms of abdominal pain in the left quadrant of the abdomen. Multislice Computerized Tomography (MSCT) scan of the abdomen to axial pelvis section showed splenomegaly with solid mass et causa suspect splenic lymphoma. The diagnosis of malignant splenic non-Hodgkin lymphoma can be made after splenectomy and histopathology examination which is consistent with clinical and radiologic examination found in the Patient.

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CASE REPORTS

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- This case report highlights the uncommon presentation of malignant splenic non-Hodgkin lymphoma in a 67-year-old female, underlining the need for early recognition and prompt diagnosis, especially in cases presenting with systemic symptoms such as fever, night sweats, and weight loss. The findings emphasize the role of splenectomy and histopathological examination as definitive diagnostic tools for confirming splenic lymphoma, particularly in patients exhibiting splenomegaly and related symptoms, as non-Hodgkin lymphoma in the spleen is rare and may mimic other splenic disease.

Introduction

Lymphomas are a heterogeneous group of malignancies that arise from the clonal proliferation of lymphocytes, a type of white blood cell at different stages of maturation that consist B- cell, T- cell and natural killer (NK) (1). Non-Hodgkin lymphoma (NHL) is a neoplasm of the lymphoid tissue originating from B cell precursors, mature B cells, T cell precursors and mature T cells, Non-Hodgkin Lyphoma and Hodgkin lymphoma can be differentiated by the presence of Sternberg cell under microscope. If the Sternberg cell is not present. The lymphomas is classified as Non-Hodgekin (2). Non-Hodgkin lymphoma by contrast has 60 different classified subtypes (3). These subtypes can be categorised into two groups: aggressive (60%) and indolent (40%). Diffuse large B-cell lymphoma (DLBCL) is the most common subtype of indolent NHL, comprising 85% of aggressive and follicular lymphomas (4). The most common mature B cell neoplasm are Follicular lymphoma, Burkitt lymphoma, diffuse large B cell lymphoma (DLBCL), Mantle cell lymphoma, marginal zone lymphoma, and primary CNS lymphoma. The most common mature T cell lymphomas are Adult T cell lymphoma and mycosis fungoides (2).

Patients present with complaints of fever, weight loss, or night sweats, also known as B symptoms. Systemic B symptoms are more common in patients with a high-grade variant of non-Hodgkin lymphoma. More than two-thirds of the patient present with painless peripheral lymphadenopathy. Waxing and waning episodes of lymphadenopathy, along with other symptoms, can be seen in low-grade lymphoma. Patients have different presentations and vary according to the site involved, in the

gastrointestinal lymphoma usually present with nonspecified symptoms such as epigastric pain or discomfort, anorexia, weight loss, nausea, or vomiting, occult gastrointestinal bleeding (2).

Non-Hodgkin lymphoma ranked as the 10th most commonly diagnosed cancer, with nearly 553.389 new cases, and the 11thleading cause of cancer-related death in 2022, globally with an estimated 250.679 deaths. Asia is ranked 1st for both incidence of new cases and mortality rate with an estimated new cases is 235.442 (42,5%), and mortality rate of 121.525 (48,5%). The incidence of new cases of NHL in Indonesia is ranked 7th with nearly 16.175 new cases and the incidence of mortality is ranked 9th with total death of 9.440 (5).

Case Description

A 67-year-old female was admitted to the emergency room of Banten Regional General Hospital on March 26, 2023. The patient came with complaints of abdominal pain in the left quadrant of the abdomen four days before the admission to the hospital. There was nothing that aggravated or alleviated the pain. Initially, the patient felt the abdominal pain for the first time around one month ago that occurred persistently without being affected by time, the patient hasn't tried to treat the pain and has never massaged the abdomen, the patient is not taking any regular medication. The patient came to the surgery polyclinic of Banten Regional General Hospital and was diagnosed with intrabdominal mass with previous Multislice Computerized Tomography (MSCT) scan of the abdomen to axial pelvis section on February 09, 2023, showed splenomegaly with solid mass et causa suspect splenic lymphoma (Figure 1). The patient is scheduled to have surgery (Splenectomy). Before the scheduled time the patient felt a sudden acute pain in the abdomen and was admitted to the emergency room of Banten Regional Hospital, in the emergency room the patient admitted aggravated abdominal pain four days before the admission to the hospital with a VAS score of 5. The pain was only felt in the abdomen. The patient complained of fatigue, nausea, and vomiting after eating, decreased appetite, unexplained fever, night sweat, and weight loss of approximately 7 kg kilograms, discomfort during defecation, bloody stools (-), diarrhea (-), there were no complaints during urination. The patient never felt similar symptoms before, uncontrolled hypertension (+), diabetes mellitus (-), history of pulmonary or heart treatment (-). There is no one with similar symptoms in the family history, hypertension in the family (-), or diabetes mellitus (-). The patient does not smoke, or alcohol consumption (-), and the patient is not working.

Physical examination at the time the patient was admitted to the emergency room found the patient looked moderately ill with blood pressure 180/97 mmHg, heart rate 90x/minute, respiratory rate 20x/minute, temperature 38 °C, anemic conjunctiva, visible mass in the left quadrant abdomen, normal bowel sound, splenomegaly with Schuffner score of 6, pressure pain on the left quadrant of the abdomen, there was no sign of abdominal obstruction darm contour (-), darm steifung (-). Supporting examination on March 26, 2023, found the patient with anemia, leucocytosis, and thrombocytopenia (Table 1). The patient was transferred to the medical ward on March 27, 2023. Albumin level was checked with the result of hypoalbuminemia (2.9 g/dL) therefore the patient is treated until the blood routine test and albumin level is normal and the general condition stabilized to prevent problems during the surgery.

Table 1. Laboratory Test Result

Laboratory Test	Result	Reference Range	Measure	Description
Hematology				
Blood Routine				
Hemoglobin	9.3	11.7 - 15.5	**g/dL**	**Low**
Hematocrit	27	35 – 47	**%**	**Low**
Leucocytes	218.8	3.6 – 11.0	**10^3/µL**	**High**
Thrombocyte	77	150 – 440	**10^3/µL**	**Low**
Erythrocyte	3.1	3.8 – 5.2	**10^6/µL**	**Low**
Clinical Chemistry				
Random Blood Glucose	101	74 – 106	**mg/dL**	**Normal**
Renal Function				
Ureum	33	15 – 40	**mg/dL**	**Normal**
Creatinine	0.91	0.60 – 1.20	**mg/dL**	
Electrolyte & Blood Gas				
Serum Electrolyte				
Natrium (Na)	135	135-155	**mEq/L**	**Normal**
Kalium (K)	4.4	3.5 – 5.0	**mmol/L**	**Normal**
Chlorida (Cl)	104	95 – 105	**mmol/L**	**Normal**

The patient underwent a scheduled splenectomy on April 3, 2023. The surgery proceeded smoothly. A significantly enlarged spleen, measuring 26 x 19.5 x 9 cm, was excised and sent to the histopathology laboratory for further analysis. During hospital treatment, the patient was given antibiotics ceftriaxone 2gr once daily, omeprazole 40mg once daily, ketorolac 10mg three times a day, and phytomenadione 10 mg three times a day. Postoperative laboratory tests found anemia and leucocytosis (Table 2).

Table 2. Postoperative Laboratory Test Result

Laboratory Test	Result	Reference Range	Measure	Description
Hematology				
Blood Routine				
Hemoglobin	10.1	11.7 - 15.5	**g/dL**	**Low**
Hematocrit	31	35 – 47	**%**	**Low**
Leucocytes	109.0	3.6 – 11.0	**10^3/µL**	**High**
Thrombocyte	327	150 – 440	**10^3/µL**	**Normal**
Erythrocyte	3.6	3.8 – 5.2	**10^6/µL**	**Low**

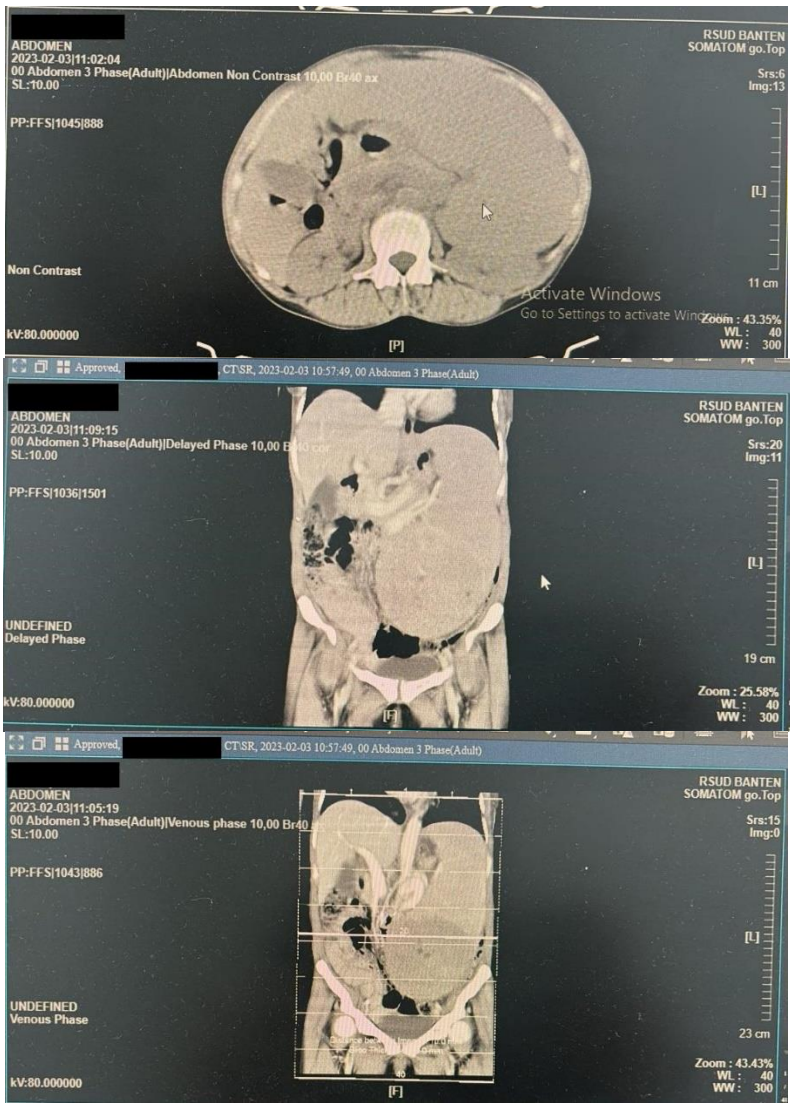

Figure 1. Multislice Computerized Tomography (MSCT) (Non-contrast)

The histopathological examination concluded that the spleen showed evidence of non-Hodgkin malignant Lymphoma. The patient was discharged from the hospital on April 8, 2023, in good general health. They were fully alert, with stable vital signs, a balanced diet, minimal complaints, and no issues with bowel movements. They were prescribed home medications, including Levofloxacin 750 mg once

daily, Omeprazole 20 mg once daily, and Paracetamol 500 mg three times a day.

Discussion

This case describes the classic presentation of malignant splenic non-Hodgkin lymphoma in a 67-year-old female. The non-Hodgkin lymphoma was diagnosed based on splenectomy which was then brought to the histopathology laboratory, this is the Gold Standard for diagnosing non-Hodgkin lymphoma (2). Anamnesis found the patient complaints of abdominal pain in the left quadrant of the abdomen and showed of systemic B Symptoms such as unexplained fever, night sweat, weight loss followed by fatigue, nausea and vomiting after eating, decreased appetite, discomfort during defecation without bloody stools. The presence of B symptoms is common in patients in non-Hodgkin Lymphoma (6,7).

Physical examination found a visible mass in the left quadrant abdomen, normal bowel sound, splenomegaly with a Schuffner score of 6, and pressure pain on the left quadrant of the abdomen followed by uncontrolled hypertension with blood pressure 180/97 mmHg. Laboratory findings showed normocritical normochromic anemia (Hb 9.3 g/dL), leucocytosis (218,8 10^3/µL), thrombocytopenia (77 10^3/µL) and hypoalbuminemia (2.9 g/dL). Previous MSCT scan of the abdomen to axial pelvis section showed splenomegaly with solid mass et causa suspect splenic lymphoma. Histopathological examination from an excised spleen sample measuring 26 x 19.5 x 9 cm concluded that the spleen showed evidence of non-Hodgkin malignant Lymphoma.

B-cell lymphomas involving the spleen may be primary splenic lymphomas that are largely confined to the spleen or splenic hilar lymph nodes, without evidence of involvement of other sites except bone marrow and possibly the liver. These lymphomas typically present in a splenomegaly fashion and lack peripheral lymphadenopathy, such as splenic marginal zone lymphoma. However, Secondary splenic lymphomas, where the organ is involved as part of generalized disease represents the more common setting. This distinction is mostly historic and may not be biologically relevant. Most primary splenic lymphomas are non-Hodgkin lymphomas; Hodgkin lymphoma confined to the spleen is rare. The most common presenting symptoms include left-sided abdominal pain and systemic symptoms such as fever, malaise, and weight loss. There are several variably well-defined entities that represent small B-cell clonal lymphoproliferations involving the spleen, but which do not fall into any of the other types of B-cell lymphoid neoplasms recognized in the WHO classification (8). Lymphadenopathy was not found in The MSCT scan of the abdomen to axial pelvis section which led to primary splenic lymphoma. Postoperative laboratory tests found anemia and leucocytosis and there were no signs of Overwhelming post-splenectomy infection (OPSI), such as flu-like symptoms and thrombocytopenia. Since splenic lymphoma is uncommon, additional research is needed to better understand this condition (9).

Conclusion

A 67-year-old female with symptoms of abdominal pain in the left quadrant of the abdomen. The patient also had symptoms of fatigue, nausea and vomiting after eating, decreased appetite, unexplained fever, night sweat, and weight loss of approximately 7 kg kilograms, unexplained fever, night sweats, discomfort during defecation. There were symptoms of anemia characterized by anemic conjunctiva. Support examination results showed norm-critical normochromic anemia, leucocytosis, thrombocytopenia, and hypoalbuminemia. Previous MSCT scan of the abdomen to axial pelvis section showed splenomegaly with solid mass et causing suspected splenic lymphoma. The patient was diagnosed with Non-Hodgkin Malignant Lymphoma confirmed after the sample sent to the histopathology laboratory. The patient was discharged from the hospital on April 8, 2023, in good general condition, fully conscious, good vital signs, good diet, minimal complaints, no complaints during defecation. The histopathological examination concluded that the spleen showed evidence of non-Hodgkin malignant Lymphoma.

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