BILATERAL CHYLOTHORAKS, CHYLOPERITONEUM, LYMPEDEMA LOWER EXTREMITY IN FOLLICULAR LYMPHOMA, ASTHMA ATTACK

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ABSTRACT

Introduction
Chylothoraksand chyloperitoneum are rare condition characterized by milky appearing fluid with elevated trigliseride. Lymphoma is found in 70%as etiology.
Case Ilustration : A women came to emergency room with chief complain shortness of breath since 4 days before admission. In physical examination found tachypnoe, tachycardia, decreased of vesicular in left side hemithorax, with wheezing in the hemithoraxdextra, dull in abdominal percussion and swelling in bilateral lower extremity. Chest radiology found a pleural effusion in bilateral thorax cavity. From CT abdominal and abdominal ultrasonography we found enlargement of paaraortalympnode, intraabdminalextraluminal mass.
Discussion: Chylothorax and chyloperitoneum diagnosed based onpleural trigliserid levels1100 mg/dL, 1290 mg/dL and 1030 in the peritoneal fluid.From sitology and immunohistochemistry showed a follicular lymphoma.We have done chest tube, pleurodesis with bleomycin, inhalation therapy and chemotherapy. Now she have finished the sixth series of chemetherapy and she have partial response.
Conclusion: We thought chylothorax in this patient caused by follicular lymphoma. Chemotherapy was given as underlying treatment.
Keywords: chylothorax, chyloperitoneum, follicular lymphoma

ABSTRACT

Introduksi

Chylothoraks dan chyloperitoneum merupakan kondisi yang jarang ditemukan yang ditandai dengan adanya cairan putih seperti susu dengan peningkatan kadar trigliserida. Lymphoma ditemkan sebagai etiologi sekitar 70%.

IlustrasiKasus

Seroang perempuan datang keruang emergensi RS Muhammad Hoesin Palembang dengan keluhan utama sesak sejak 4 hari sebelum masuk rumah sakit. Dari pemeriksaan fisikditemukan takipnoe, takikardia, penurunan vesikuler pada hemithoraks kiri disertai wheezing, redup pada saat perkusi abdomen dan edema pada bilateral ektremitas inferior. Dari foto thoraks didapatkan efusi pleura kiri. Dari pemeriksaan CT Scan dan USG abdomen didapatkan adanya pembesaran kelerjar getah bening paraaorta dan massa intraabdomen extraluminal.

Diskusi

Chylothorax dan chyloperitoneumdidiagnosis berdasarkankan dengan trigliserida pada cairan pleura kiri 1100 mg/dL, cairan pleura kanan 1290 mg/dL dan cairan ascites 1030 mg/dL. Dari pemeriksaan sitology serta imunohistokimia dengan kesan limfoma folikuler. Kami lakukan pemsangan chest tube, pleurodesis dengan bleomisin, terapi inhalasi dan kemoterapi. Pasien sudah menyelesaikan 6 seri kemoterapi dan memiliki respon remisi parsial untuk penyakitnya ini.

Kesimpulan

Kami berpikir penyebab chylothoraks pada pasien ini adalah follicular lymphoma. Kemoterapi diberikan sebagai terapi definitive.
Kata kunci: chylothorax, chyloperitoneum, follicular lymphoma

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How to cite this article :
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INTRODUCTION

Chylothorax is uncommon condition characterized by accumulation of fluid containing chylomicrons within the pleural cavity. Chylothorax was diagnosed by trigliserid levels in pleural fluid above 110 mg/dl. There are three types of chylothorax: traumatic, non traumatic and idiophatic. Lymphoma was found approximately 70% as non traumatic etiology. Chylothorax with chyloperitoneum and bilateral lymphedema was a rare manifestation in lymphoma. The management for chylothoraks depends on underlying cause, but may include dietary modification, and prevent chyle formation (drainage of fluid from the pleural space, pleurodesis or ligation of thoracic duct). [1,2,3,4]

CASE ILUSTRATION

A 56 –year-old female was admitted in the Internal Department of Mohammad Hoesin general hospital with chief complain shortness of breath since 4 days before admission, with additional complain swelling in abdominal and lower limbs.She have asthma history, and atopi in her family. General examination showed tachypnoe, tachycardia, orthopnoe. The examination of thorax, there was a decreasedmovements left hemithorax, dull in percussion and decreased of vesicular in left side hemithorax, with wheeing in expiration at auscultation in hemithoraksdextra. In abdominal examination ,dull in abdominal percussion and a palpable mass in abdominal, liever and lien was not palpable. In lower extremity, there was swelling of bilateral extremity, non pitting.We didn't found lymphadenopathy in colli, clavicula, axilla and inguinal. From thoracosintesis procedure, we find 10 ml milky bodily fluid. We assessed as asthma attack, right pelural effusion and we predict chylothorax because milky and odorless pleural fluid and intraabdominal mass as etiology.

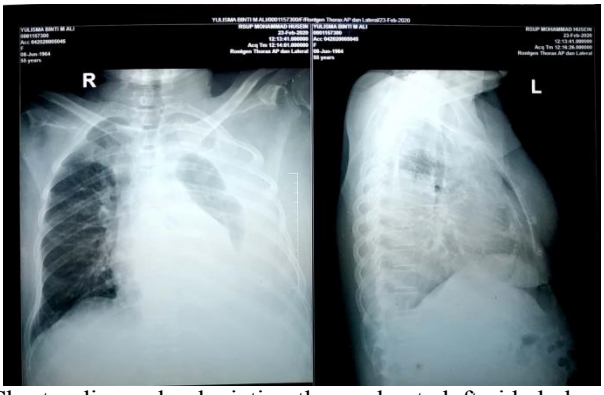

Figure 1. Chest radiography depicting the moderate left-sided pleural effusion

Routine blood examination and coagulation profile within the normal limits. Chest radiography was suggestive a left side pleural effusion. We use chest tube in this patients, we found 10.000 ml fluid for 4 weeks. Pleural fluid of both side was sent for examination that revealed total leukocyte count 1164 cells/µl, polymorhonuclear cells 2% and mononuclear cells 98%, protein 2.1 g/dL, lactate dehydrogenase 392 U/L, glucose 93 mg/dL, pleural trigliseride 1100 mg/dL. We give inhalation therapy with steroid and bronchodilator for asthma attack.

In first admission, we found massive left chylothorax, and we insert chest tube. After 2 weeks, fluid production was decrease, and we release chest tube. We performed USG and Abdominal CT-Scan to seek possible cause of chylothorax and the result were ascites in perihepatic and perisplanchnic, intraabdominal mass extra luminal with density 37 HU and paraaorta lymphadenopathy.Then we consulted to the surgical team for biopsy and laparotmy.

We found mass in intraabdominal then we performed laparotomy to do mass biopsy and we found milky white ascites fluid like thorax fluid, with trigliserid level in fluid was 1050 mg/dL. We plan outpatient while waiting for the result of cytology examination.

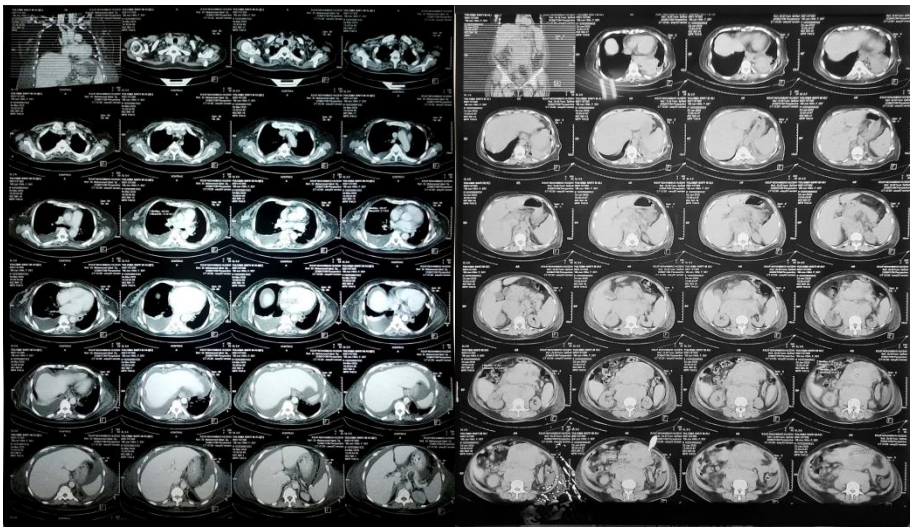

Figure 2. Chest and abdominal CT Scan

After 2 weeks, patient was come back to hospital with reccurent shortness of breath. From the chest x ray, she had left pleural effusion and minimal plueral effusion in right side.

We inserted chest tube again in therlefst side and thoracosintesis in right side. The total pleural fluid we got approximately 10.000 ml at 4 weeks and 1500 ml from thoracosintesis in the right side. Because recurrent chylothorax, we did a chest CT Scan, and the result we didn't found intrathoracal mass,accumulation in bilateral pleural cavity.. Therefore, we performepleurodesis in left side.

After 1 weeks from pleurodesis, the result of sitolgy suggested a non hodgkinlymphoma, so we did the imunnohystochemystry to found out the subtype. And the result suggested a follicular lymphomawith CD3(-), CD20 (+), Ki67 (+), BCL6 (+), BCL2(+) and CD10(+).Bone marrow aspiration was suggestive red cell aplasia. Echocardiography was done with mild aorta and tricuspid regurgitation, ejection fraction 71%.

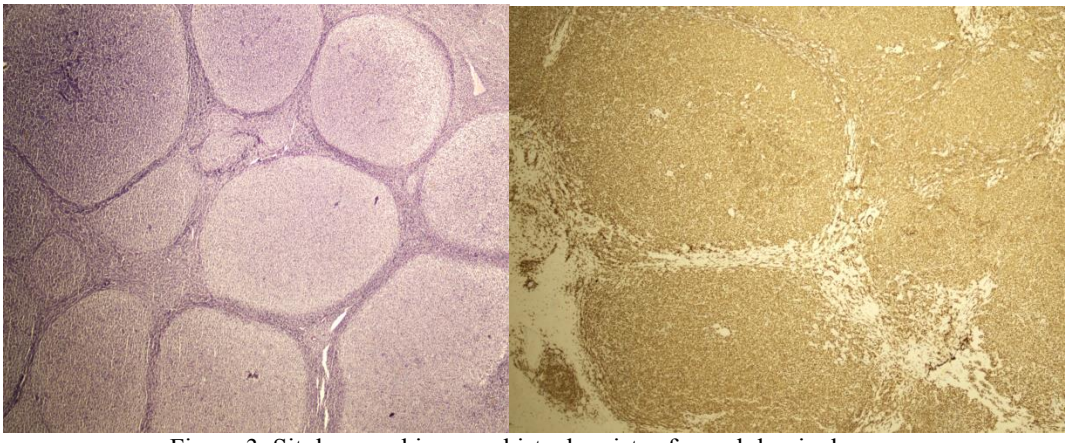

Figure 3. Sitology and immunohistochemistry from abdominal mass

In the first management in emergency we gave the inhalation therapy with steroid and bronchodilator and we put chest tube to evacuate the pleural fluid. Replacement of fluid and nutritional is a important treatment, because chyle have high levels of protein, fat, electrolyte and lymphocyte, that has risk of malnutrition and immunological status disorder. We provide a low-fat diet with content of <10 mg/days during treatment. It was intended to decrease the chyle flow.

Considering lymphoma as the etiology, vincristine 2 mg, cyclophosphamide 1200 mg and prednisone 100 mg administered for this patient. The fluid was decreased. In the left side we has done pleurodesis procedure with bleomisin 60 mg. There was significant symptomatic and radiological improvement after fisrt cycle of chemotherapy and patient is still in our follow up. She has partial remission after she have finished six series of chemotherapy. From chest x ray and abdominal ultrasonography, there was no pleural effusion, ascites but intrabdominal mass and paraaorta lymphadenopathy was still present, although the size of mass was decrease.

Figure 4. Patient at first admission (A), post 6th chemotherapy (B)

DISCUSSION

Chylothorax is characterized by fluid with a milky appearance due to high triglyceride content, more than 110 mg/dL. Chylothorax is formed when the flow chyle through thoracic duct was disrupted. Based on Light, the etiology of chylothorax divided into 4 group: trauma, trauma, idiopathic and miscellaneous. One of malignancy is lymphoma, (about 75% cases) and bronchogenic carcinoma, as the next most common. Most of the cases as a unilateral chylothorax, but bilateral chylothoraxhas also been reported in few cases. Diagnosis of chylothorax is established by direct analysis of the pleural fluid. Pleural fluid characteristically “milky” appearance, although not all milky effusions are chylous and not all chylous are milky. The triglyceride concentration was greater than 110 mg/dL (in our case 1175 in left side and 1292 mg/dL in right side), usually confirm as chylothorax. Chyloperitoneuum, also knowsas chylous ascites diagnosed from presence of milky fluid in the peritoneum in laparoscopy and the trigliseride content was 1030 mg/dl. Chyloperitoneum or chyloascites is a collection fluid in abdominal space. It is very rare and occurs approximately in 1 in 2000 cases. Lympnodeobstruction, because of involvement or cancer, cause chylous effusion in peritoneal or retroperitoneal space.[5,6,7,8]

The first step in the management of chylothoraxand chylous ascites demands a

review of the history and physical examination. Since lymphoma known as the most common cause of chylothorax in non traumatic etiology, a computed tomography and abdominal ultasonography should be performed to evaluated lymphadenopathy in mediastinal and abdominal.[9,10]

Histopathology and immunohistochemistry have play important role for identified physical characteristic and multiple antibodies. Certain principles are common to both treatmentoptions, including treating the underlying cause, decreasing chyle production, draining and obliterating the pleural space, and dietary modification. Replacement of fluid and nutritional is a important treatment, because chyle have high levels of protein, fat, electrolyte and lymphocyte, that has risk of malnutrition and immunological status disorder. The defect of thoracic duct often closes spontaneusly. In case of severe dyspnoe, placement of chest tube or pleuro peritoneal shunt drainage is mandatory. If chylothorax persists for more than 4 weeks, consideration should be given to surgical exploration with ligation ot the thoracic duct. Other modalities including pleurodesis and pleurectomy may also used.[11,12,13,14,15]

CONCLUSION

Chylothorax bilateral, chyloperitoneum as clinical manifestation of follicular lymphoma are rare case.Treatment of underlying disease, placement of chest tube as a continuous drainage, pleurodesis and conservative therapy with dietary modification.Management must be optimal to achieve resolution from the disease.

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