

A RARE CAUSE OF ACUTE ABDOMEN: NON-HODGKIN'S LYMPHOMA WHICH CAUSES SPONTANEOUS SPLENIC RUPTURE

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ABSTRACT

Introduction: Non-traumatic spleen rupture is a very rare clinical case. While infectious and traumatic ruptures are so frequent, spontaneous ruptures due to hematological and oncological malignancies are very rare. The patients with splenic rupture generally admitted to emergency department because of the acute abdomen. In this case report our aim was to demonstrate that in a patient admitting to the emergency department with acute abdominal findings the typical clinical features of spontaneous splenic rupture caused by a malignant lymphoma. **Case Presentation:** Sixty two years old Caucasian female patient seek medical advice with the complaint of constantly growing stomach ache on last ten days. There were symptoms of acute abdomen on her physical examination. Contrast-enhanced abdomino-pelvic computed tomography scan has been conducted emergently for the patient. On computed tomography, splenomegaly and the findings of ischemia and infarction in an area of 5 cm of the splenic hilus and in widespread perisplenic free fluid were found. Patient urgently underwent a surgery. So, splenectomy was performed due to spontaneous splenic rupture. This patient diagnosed with malign lymphoma on histopathological evaluation. The patient discharged from the hospital due to the recovery, during 4th postoperative day. **Conclusion:** Non-traumatic splenic ruptures are observed rarely. Spontaneous splenic ruptures due to hematological and oncological diseases are very rare. When making differential diagnosis of acute abdomen, splenic ruptures shall also be in mind. Computed tomography and ultrasonography can be important when making diagnosis. Splenectomy shall be applied emergently during the treatment of spontaneous splenic rupture.

Keywords: Acute abdomen; Non Hodgkin lymphoma; Splenic rupture.

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INTRODUCTION

Non-traumatic splenic rupture is a very rare clinical case. It can be observed during infectious diseases, portal hypertension, hematological and oncological diseases [1, 2]. Early diagnosis and quick treatment is important on splenic rupture. Delay on diagnosis and treatment increases the mortality [3]. Spontaneous rupture is so rare on a normal spleen. Splenic ruptures generally develop from a pathological spleen base. While infectious and traumatic splenic ruptures observed frequently, spontaneous splenic ruptures dependent to hematological and oncological malignancies are

really occasional [4]. Patients with splenic ruptures can have acute abdomen symptoms when they seek medical advice. For that reason if a patient has acute abdomen, splenic rupture should be kept in mind [5]. In this case presentation, spontaneous splenic rupture caused by Non-Hodgkin's lymphoma is presented on a patient who seeks medical advice for his acute abdomen.

CASE REPORT

Sixty two years old Caucasian female patient seek medical advice for her stomach ache which is continuously increasing on last ten days. Patient also

has poor appetite, listlessness and nausea along with her stomach ache. According to her physical consultation; whole the stomach area, especially distinctively on up-left quadrant, of her is sensitive. There were clues for defense and rebound on the up-left quadrant. There were palpable lymph nodes on both the inguinal areas. Figures of White blood cell $14000 \text{ } 10^3/\text{mm}^3$ ($4,8\text{-}10,8 \text{ } 10^3/\text{mm}^3$), hemoglobin 12 g/dl (12-16 g/dl), C reactive protein 148 mg/L (0-5mg/L), AST 27 U/L (5-34 U/L), ALT 23 U/L (0-55 U/L), creatinine 0,7 mg/ml (0,6-1,3mg/ml), D-dimer 6,53 ug/ml (0-0.4 ug/ml) measured. On the abdominopelvic computed tomography, findings compatible with ischemia and infarct in an area 5 cm of the splenic hilum with splenomegaly and perisplenic widespread free fluid were identified (**Fig 1**).



Figure 1: Coronal tomographic sections of the ruptured spleen

In addition, there was several lymph nodes in the peri-pancreatic area and not free liquid in the pelvis. The patient with findings of acute abdomen was immediately operated following the necessary preparations. During surgery the spleen was enormously big and quite fragile and its capsule was disintegrated. Necrotic parenchymal tissues observed around ruptured area. There were plenty of hemorrhagic liquid around the spleen. Splenectomy was performed for the patient under these conditions. On postoperative stage antibiotherapy and analgesics on a wide spectrum had given to the patient. Pneumococcus and haemophilus influenza vaccines implemented also. Size of the spleen is measured as 20x18x8 cm on the macroscopic observation (**Fig 2**).



Figure 2: Macroscopic view of the ruptured spleen (20cmx 18cmx 8cm)

This patient diagnosed with non-Hodgkin lymphoma (diffuse large B cell lymphoma) on the Histopathological evaluation. Clinical and laboratory reaction of patient was normal on postoperative stage. Patient discharged from the hospital on 4th postoperative day.

DISCUSSION

Spontaneous rupture of the spleen without a trauma is a so rare situation. There was only a limited number of cases on the current literature [6,7]. Spontaneous splenic rupture can be observed on some infectious diseases, congenital splenic lesions, portal hypertension, hematological and oncological diseases [1]. A splenic rupture dependent to hematological and oncological diseases is a very occasional thing. According to a study, hematological and oncological diseases which frequently triggers spontaneous splenic rupture can be listed as; Non-Hodgkin's Lymphoma, acute and chronic myeloid leukemia. Non-Hodgkin's Lymphoma is diagnosed in this case. Generally spontaneous splenic ruptures observed on enormously grown the spleens. There was also a spontaneous rupture on an enormously grown spleen in our case. Sub capsular hemorrhage, congestion and splenic infarct can be regarded as one of the most important causes of spontaneous splenic rupture [2]. There was also areas with splenic infarct in our case. Possible reason of spontaneous splenic rupture in this case could be congestion dependent to malign lymphoma infiltration and splenic infarct. Patient does not have impaired blood clotting and thrill. Even if splenic rupture caused by hematological malignancies observed so occasionally, delay on diagnosis and treatment can cause mortality. A

massive hemorrhage can occur following splenic rupture. Following the hemorrhage, acute abdomen caused by peritoneal irritation can occur [4, 5]. In our case there was also an acute abdomen during appeal to hospital. But there was not a massive hemorrhage within the stomach. There were plenty of free hemorrhagic liquid on the peri- splenic area. In our case existence of localized defense and rebound symptoms only in up-left quadrant can be related with irritation of hemorrhagic liquid on the peri-splenic area.

Ultrasonography and tomography is a guide on diagnosing spontaneous splenic rupture. A grown spleen and free inner stomach liquid can be a symptom of spontaneous splenic rupture [3, 6, 7] .

Emergency splenectomy is the most helpful method for treating splenic rupture. On a study 43 patient who has spontaneous splenic rupture treated in a non-operative way and mortality observed on 40 of them [2]. Since splenic ruptures caused by hematological malignancies are so rare and there is not a specific diagnosis tool for it, it is possible to have a delay and difficulty on diagnosis. Especially on patients with symptoms of left side soreness and acute abdomen, spontaneous splenic rupture should be on mind when making the diagnosis.

Consequently, Non-Hodgkin lymphoma, spontaneous splenic rupture can be observed on cases with splenic involvement. In case of spontaneous splenic rupture possibility of pathological rupture with the help of a hidden and adherent disease should always be kept in mind.

CONFLICT OF INTEREST STATEMENT:

None.

ETHICAL STATEMENT

Written informed consent was obtained from the patient.

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