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Available online at: http://www.iajps.com *A Case Report*

A RESEARCH STUDY ON THE OCCURRENCE OF ANTI HCV SPONTANEOUS RUPTURE OF SPLEEN IN A PATIENT WITH FOLLICULAR LYMPHOMA: A CASE REPORT

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Abstract:
Spontaneous rupture of the spleen is an uncommon dramatic abdominal emergency that requires immediate diagnosis and prompt surgical treatment to ensure the patients survival, we present a case of a 49-years-old male who was admitted to our emergency department with 10 days history of abdominal pain and distension. Abdominal ultrasound and computed tomography scan showed enlarged abnormal spleen with moderate intraperitoneal free fluid and suspected internal hemorrhage; Emergency splenectomy was performed successfully. Histological examination showed infiltration of the spleen by follicular lymphoma.

Key words: *Splenic rupture; Follicular lymphoma; Acute abdomen*

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INTRODUCTION:

Splenic rupture is one of the many causes of the acute abdomen and in most cases of traumatic origin. Non-traumatic causes include diseases such as infection, neoplasia and infiltrative process. The diagnosis is often missed due to the absence of any history of trauma. Various aspects of atraumatic rupture of the spleen including those of pathologic and spontaneous rupture have been reviewed. Atraumatic rapture of a normal spleen is a very rare (1).

Diseases that more commonly may induce the spontaneous rupture of the spleen are the oncologic and hematologic diseases, some infectious diseases such as infectious mononucleosis and malaria, and acute or chronic pancreatitis. Other rare causes of splenic rupture include some congenital splenic lesions as hamartoma, hemangioma, and cysts and a miscellaneous group of diseases such as autoimmune diseases, hemolytic anemias, pregnancy, amyloidosis, and portal hypertension (2).

THE CASE:

A 49-years old male presented to the Emergency Department complaining of abdominal distension for the last 10 days started gradually progressively increasing associated with mild abdominal pain, he also experienced some nausea. The patient also has small swelling in right submandibular area for three months not associated with fever, compression signs nor signs and symptoms of thyroid disease, No history of trauma or any chronic disease.

On examination, he was hypotensive with a blood pressure of 95/60 & normal other vital signs. Abdominal examination showed soft distended abdomen, full flanks, the umbilicus is flat, minimal tenderness in both right and left flanks with dullness on percussion. Fluid thrill was positive & bowel sound was audible.
Initial CBC showed, WBCs 7.4, RBCs 4.01, HB 11.7 & platelet count 128.
The patient received empirical antibiotics & intravenous fluid.

Urgent ultrasound was done and revealed enlarged heterogeneous spleen with moderate to marked intraperitoneal free fluid. Then the patient shifted to do CT abdomen with IV contrast that revealed significantly enlarged spleen measuring about 19 cm in span showing multiple variable sized focal lesions replacing the normal splenic tissue, these lesions showing progressive low contrast uptake in comparison to the residual normal splenic tissue in the post contrast phases, the largest lesion is seen measuring about 13 x 12 cm with central area of low contrast uptake that could represent central breaking down , Few para-aortic amalgamated LNs are seen anterior to the abdominal aorta at the level of the renal vessels measuring about 4 x 2 cm. Moderate to marked intraperitoneal free fluid.

On the basis of these findings, he was taken immediately to operative theatre for splenectomy. During the surgery, 2000 ml of blood and clots were found in the abdomen. The spleen was enlarged in size, showing multiple focal bulging lesions most likely neoplastic and friable splenic tissue with small lacerations which was the source of bleeding. The removed spleen was sent to the Histopathology department for further analysis. A total of 4 units of RBC and 380 ml of cell salvaged blood were given during the surgery. The patient stayed in the ITU for post-operative care and made a good recovery without requiring any organ support.

The histopathology reported that:
The sections represent splenic tissue show disturbed architecture the white pulp is expanded by proliferating neoplastic small lymphoid cells forming nodular lymphoid follicles and diffuse pattern. The lymphoid follicle show poorly defined mantle zone and no tangible body macrophages seen. The red pulp show extensive hemorrhage and hemosiderin laden macrophages. The neoplastic lymphoid cells are positive for CD20, CD10, BCL2, and negative for CD5 and Cyclin D1.

The Sections represent lymph node with effaced architecture by closely packed lymphoid follicles, formed of small cleaved lymphocytes ,poorly defined mantel zone and no tangible body macrophages are seen. These cells are positive for CD20, CD10 and BCL2, CD23 and BCL6 and negative for CD5 and Cyclin D1.
The final diagnosis was **Follicular Lymphoma, grade 1**.

PET CT scan was done and showed multiple pathological lymph nodes. He was consented for chemotherapy with R-GCVP, which is a 3-weekly cycle of rituximab monoclonal antibody along with IV gemcitabine (at 75% dose), cyclophosphamide, vincristine and prednisolone. He tolerated this well, and the

hematology plan is to continue with chemotherapy with a view to increasing the dose of gemcitabine if there is no excessive hematological toxicity.

DISCUSSION:

Follicular lymphoma (FL) is the most common indolent non Hodgkin's lymphoma (NHL).1 It presents primarily with widespread disease which may be asymptomatic and involves the bone marrow in around 40% of patients. Although the disease is widespread at presentation the incidence of complications such as splenic rupture which are usually seen with other aggressive lymphomas is rare (3).

Although the spleen is frequently involved in haematological malignancies, its rupture is infrequent. It was first described by Knoblich in 1966, with 3 cases of splenic rupture associated with malignant lymphoma (4).

Bassler et al. documented 613 cases of splenic rupture ranging from cases without any antecedent cause to cases with the presence of obvious risk factors (Table 1). The aetiology of atraumatic splenic ruptures were listed in the decreasing order of prevalence as follows: infectious (mainly malaria and infectious mononucleosis), medical procedures related (mostly related to colonoscopy), haematological (commonly non-Hodgkin Lymphoma and Acute Lymphoblastic Leukemia), neoplastic disease, medication related (anti coagulation and thrombolytics), pregnancy-related and others. Majority of these cases had a haematological origin (13.7% of the reported cases). NHL was reported as the cause for splenic rupture in 6.3% of the reported cases of atraumatic splenic rupture (5).

Table 1: Overview of different causes of non-traumatic splenic rupture (5)

Categorization of causes	Number of cases reported
Following a medical procedure	112
Infectious disease related	143
Haematological disease related	84
Rheumatological disease related	10
Pregnancy related	38
Non haematological neoplastic	48
Medication related	47
Internal trauma	17
Infiltrative disease	39
Related to splenic or adjacent physical abnormality	31
Miscellaneous	44
TOTAL	**613 CASES**

In another review by P. Renzulli et al. demonstrated a total of 845 patients who had experienced splenic rupture between the year 1980 to 2008. The six major aetiological groups were classified as follows: neoplastic (30.3%), infectious (27.3%), inflammatory, non-infectious (20%), drug or treatment related (9.2%), and normal spleen - idiopathic (7%) [12]. non-Hodgkin Lymphoma and acute Myeloid Leukemia were reported as a common finding among the neoplastic related atraumatic splenic rupture (6).

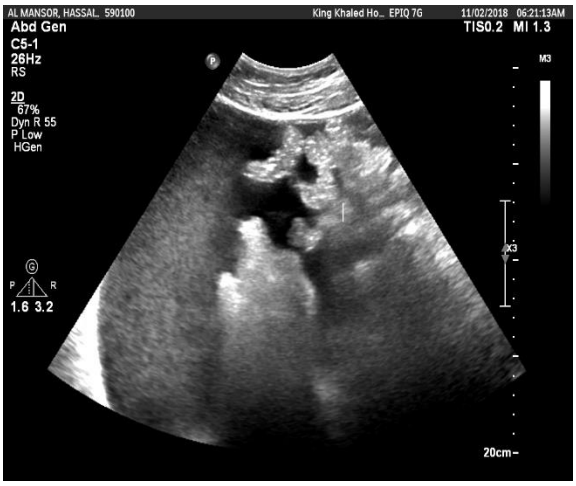
Diagnosis of a spontaneously ruptured spleen relies on both clinical and confirmatory imaging studies (7).

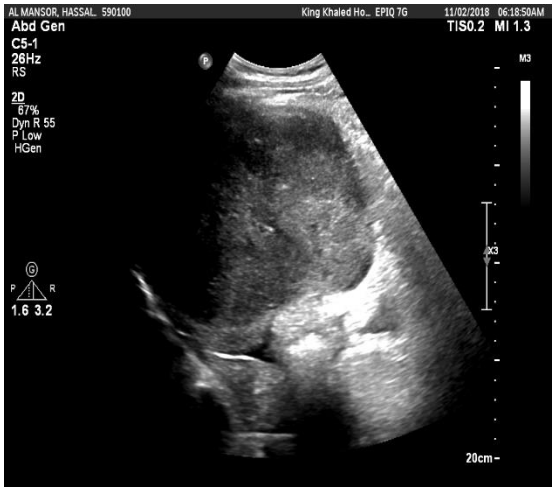
The sensitivity of ultrasound for detecting splenic pathology ranges from 72 to 78% with a specificity of 91–100% (8).

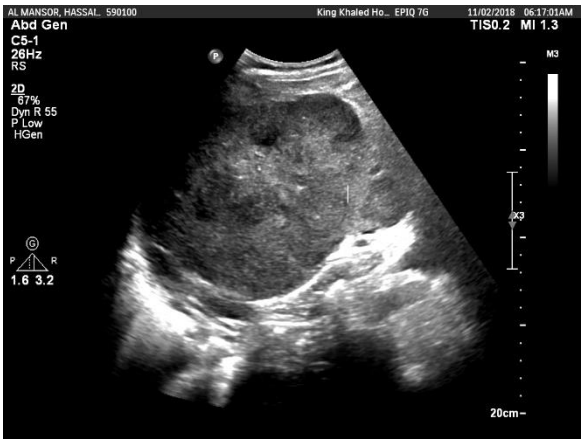
Other diagnostic tests include computed tomography (CT), positron emission tomography (PET), and diagnostic peritoneal lavage. Prompt diagnosis and surgical intervention for a ruptured spleen are essential for patient survival since the mortality rate from splenic rupture approaches 100%. Given the high mortality rate of splenic rupture, heightened suspicion for such an occurrence is warranted (9).

Peritoneal aspiration of fresh blood may assist in the diagnosis of pathological splenic rupture. When the diagnosis is made, emergency splenectomy should be performed. In this present case the CT diagnosis was based mainly on the hemoperitoneum and the huge infiltration of the splenic parenchyma. However, in some cases, the CT diagnosis of pathologic splenic rupture may be difficult because the infarction of the spleen may obscure the splenic lesions that are then found at surgical or anatomic evaluation (10).

Splenectomy in NHL plays an important role in palliation of symptoms of splenomegaly such as left upper quadrant pain, early satiety, weakness, and fatigue. Other indications for splenectomy include cytopenia, residual splenomegaly in patients successfully responding to chemotherapy in other sites, and a rapidly enlarging spleen at risk for rupture prior to enrollment in clinical drug trials (11).



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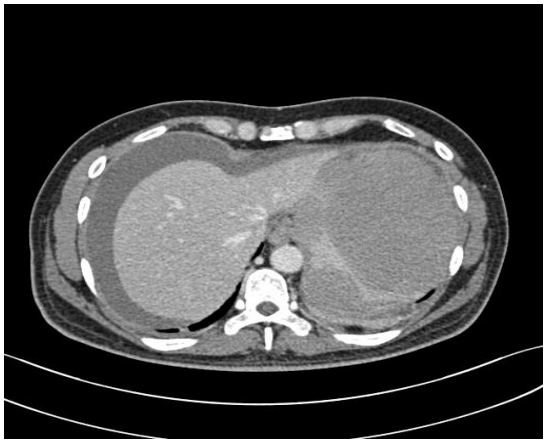

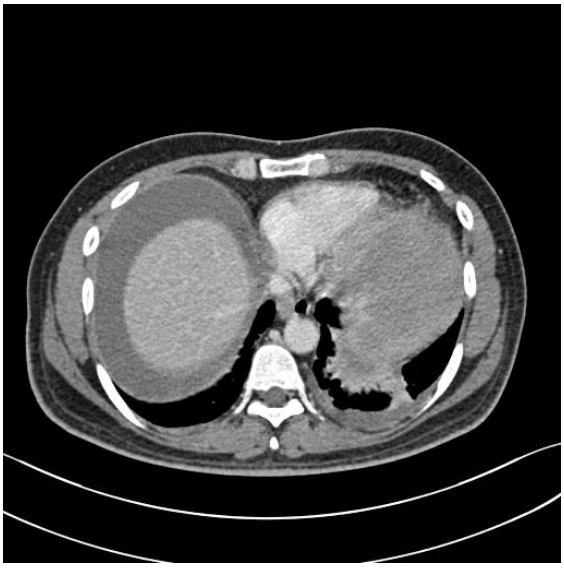

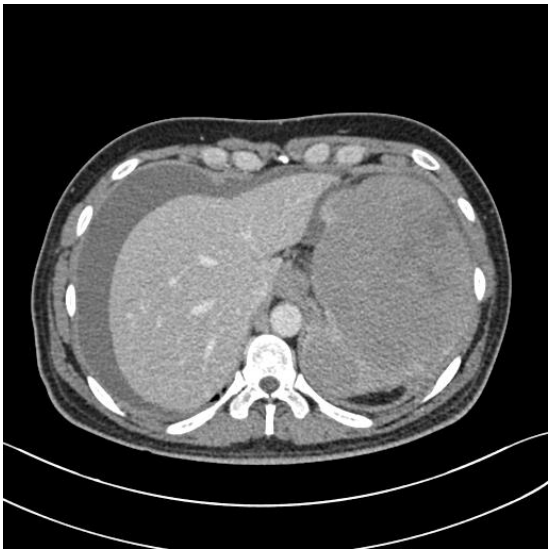

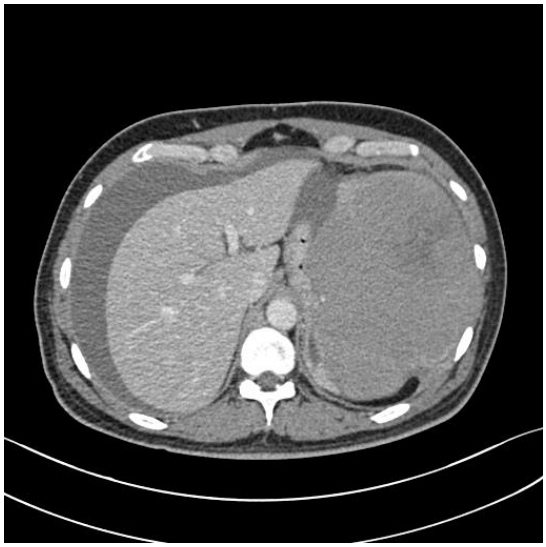

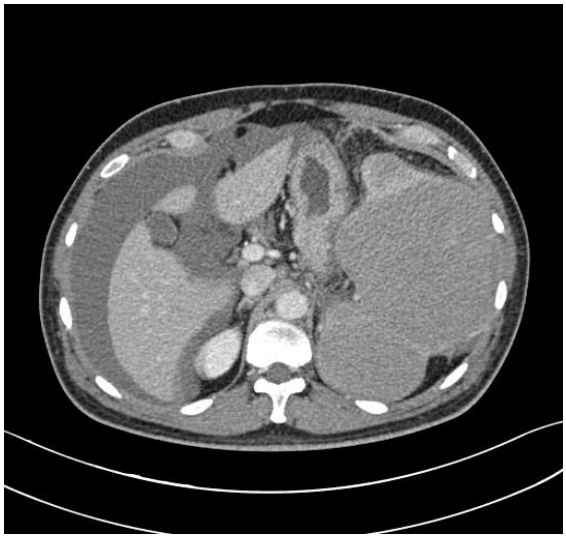

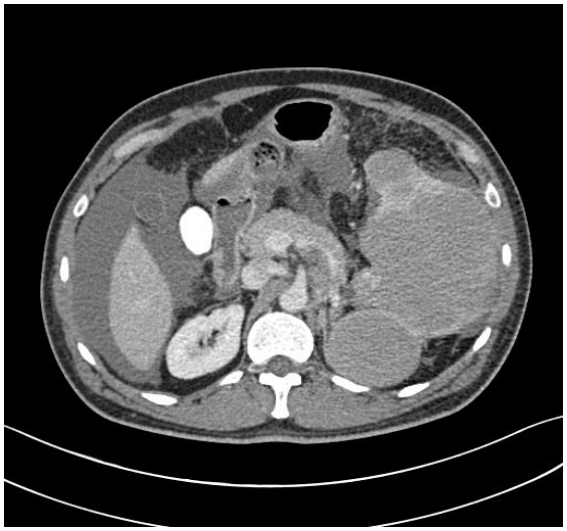

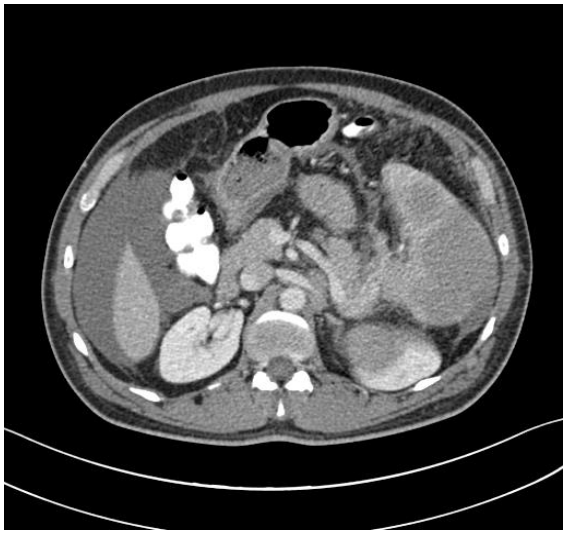

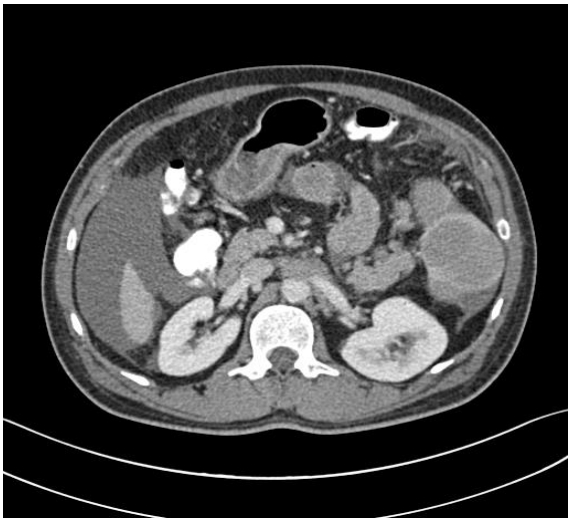

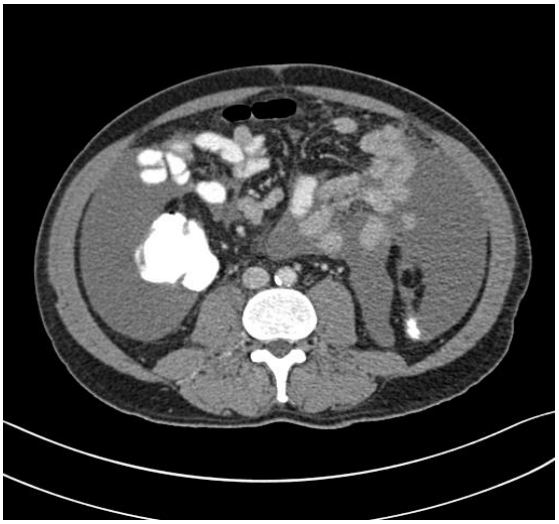

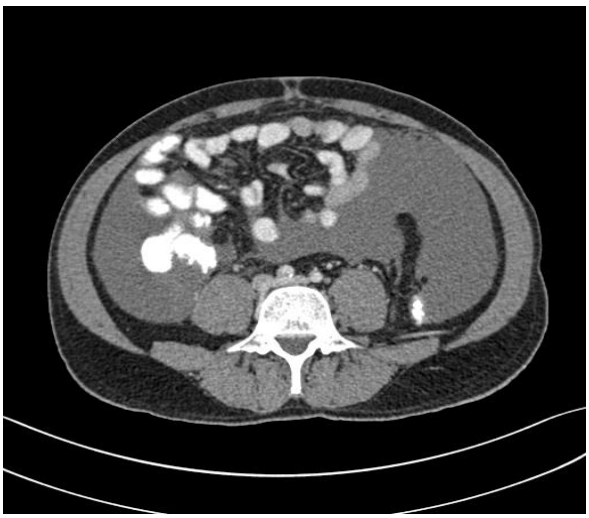

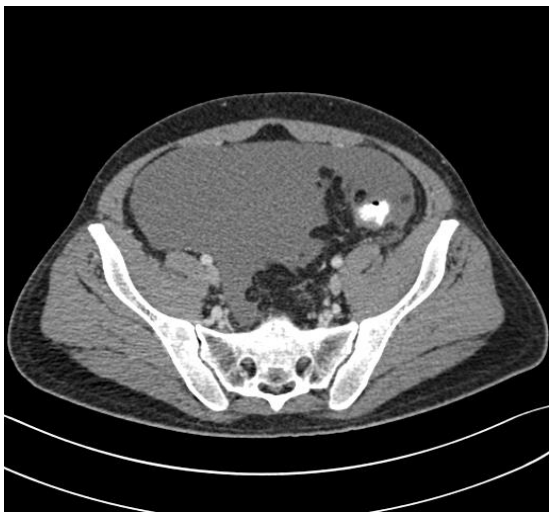

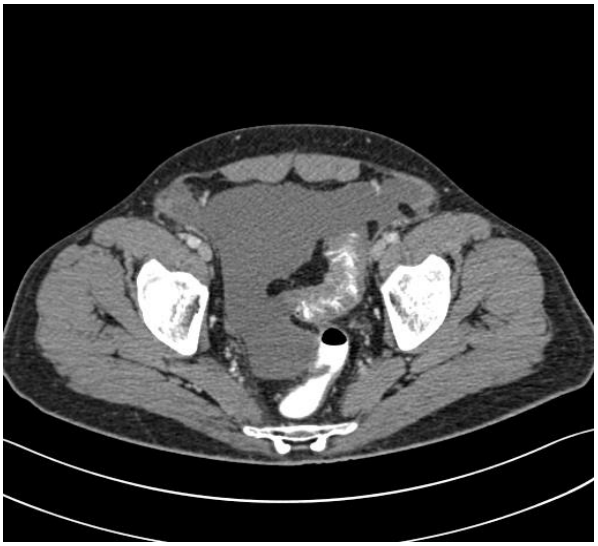

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