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Spontaneous Splenic Rupture - A Rare Complication of Cirrhosis with Portal Hypertension: A Case Report

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Abstract | **Case Report**

Spontaneous rupture rupture in cirrhotic patients with portal hypertension is a rare complication; however, the incidence, etiology and risk of rupture have not been established. The diagnosis is confirmed by abdominal imaging or exploratory laparotomy and treatment is essentially surgical. We report a case of atraumatic splenic rupture in a 30-year- old woman with hepatic cirrhosis associated with splenomegaly.

Keywords: Spontaneous splenic rupture, gastrointestinal bleeding, Portal hypertension, cirrhosis.

INTRODUCTION

Spontaneous rupture of the spleen is a serious and rare complication of portal hypertension requiring urgent treatment.

Portal hypertension is frequently associated with splenomegaly which may be massive and to a thrombocytopenia, increasing the risk of splenic rupture. However, the incidence, mechanism and prognosis are poorly understood due to the high heterogeneity and limited source of reported cases [1].

We report a new observation of a case of spontaneous splenic rupture revealed by acute abdominal pain associated with upper gastrointestinal bleeding.

CASE REPORT

A 30-year-old patient with no specific pathological history, followed for 6 years for hepatic cirrhosis with portal hypertension , admitted to the emergency room for severe acute abdominal pain in the left hypochondrium associated with upper gastrointestinal bleeding. The history did not note any known recent abdominal trauma. The examination found a patient with stage II hepatic encephalopathy and cardio circulatory failure (blood pressure at 80/60 mmHg, heart rate 140 beats per minute) as well as a massive splenomegaly and intense tenderness of the left hypochondrium with defense The patient was taken care of in an intensive care unit. The laboratory tests noted a microcytic hypochromic anemia with an hemoglobin at 5.8 g / dl, a thrombocytopenia at 7000 / ml, an acute renal failure and a prothrombin level at 40%. Abdominal CT scan was done showing an aspect of a spontaneous splenic rupture on a voluminous splenomegaly complicating a portal hypertension with a cirrhotic lever as shown in the image below. The evolution was marked by the death of the patient following a cardio respiratory arrest despite cardiopulmonary resuscitation measures.

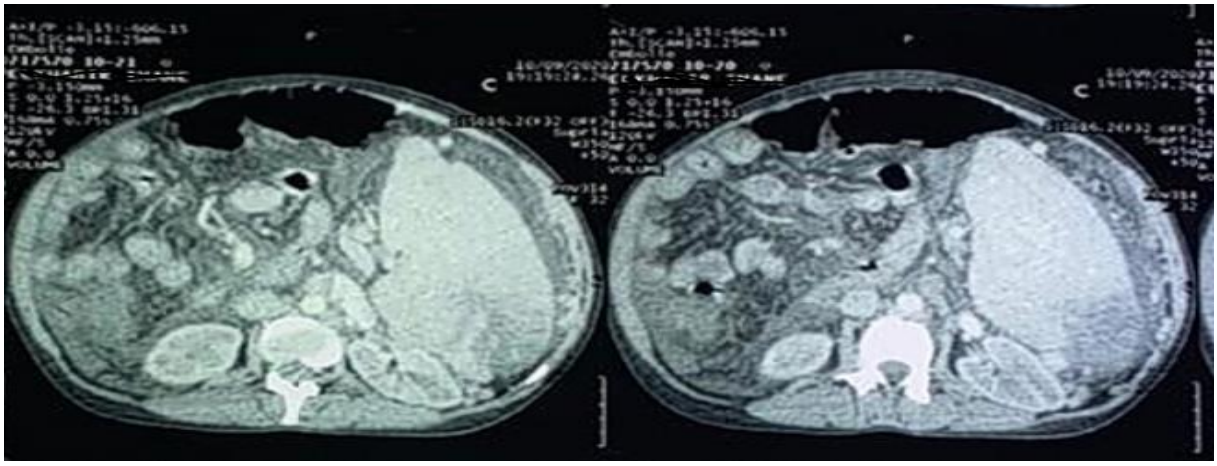

Image 1: Abdominal CT scan showing an enlarged spleen with a site of a center infarction and extra vasation of the contrast product in the arterial phase suggesting active bleeding

DISCUSSION

Spontaneous rupture of the spleen is a rare condition, first documented in the 19th century. Since then, it has been associated with several underlying pathologies, including infectious, gastrointestinal, hematological and systemic. A few cases of splenic rupture have already been reported in patients having hepatic cirrhosis with portal hypertension [2]. It is twice as common in males with an average age of 42 years [3].

There is a variation of suggestive clinical signs in patients with splenic rupture. The presence of abdominal pain has been frequently reported, tenderness of the epigastrium and discomfort in the left upper quadrant of the abdomen can be observed [5]. In 20% of cases, a sharp pain radiated to the left shoulder (Kehr's sign) specific to splenic rupture was observed. During massive splenic ruptures, signs of hypovolemic shock were a common presentation [5]. In our case, the patient presented a severe acute abdominal pain in the left hypochondrium associated with upper gastrointestinal bleeding in a context of hemodynamic and respiratory instability.

An isolated abdominal pain does not always suggest a spontaneous rupture of the spleen. Any clinician should investigate the other major causes of acute abdominal pain including cholecystitis, intestinal occlusions, pancreatitis, sigmoiditis, gastric ulcers, gastritis, peritonitis, aortic aneurysm and pneumonia [6].

Once internal bleeding is suspected the diagnosis of splenic rupture is most often confirmed by abdominal CT scan; the radiological signs being a hemoperitoneum and / or a ruptured spleen. Abdominal computed tomography is a sensitive and specific radiological test for affirming the diagnosis and assessment of the severity of splenic involvement [7]. Laparoscopy also helps for the diagnosis when the puncture aspiration removes an hemoperitoneum [7]. In our case, the diagnosis was confirmed by abdominal computed tomography showing an enlarged spleen with center infarction and extra vasation of the contrast product in the arterial phase suggesting active bleeding.

Spontaneous splenic rupture generally occurs in an organ weakened by various pathological conditions, in particular infectious diseases (infectious mononucleosis, bacterial septicemia, infectious endocarditis, ...), dysimmune pathologies (sarcoidosis, rheumatoid arthritis, systemic lupus erythematosus …), Affections with splenic blood flow disorders (Obstruction of the portal vein, obstruction of the splenic vein, Congestive heart failure) and infiltrative disorders of the spleen (benign: amyloidosis or malignant: Lymphoma) [8]. In our case the diagnosis of spontaneous splenic rupture following portal hypertension was retained.

For the therapeutic managment, splenectomy is the radical treatment of spontaneous splenic rupture. However, the morbidity of splenectomy, improved surgical techniques and intensive care as well as the role of the spleen in the immune response allow us to offer conservative treatment. This seems to be an alternative subject to certain conditions: hemodynamic stabilit, regular daily clinical and biological monitoring, rest and hospitalization in a department near a surgical center [9].

CONCLUSION

Spontaneous rupture of the spleen is a rare and serious condition that can be life-threatening. Symptoms are usually acute, but progressive forms are possible. The diagnosis is confirmed by abdominal imaging and treatment most often consists of a splenectomy.

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