



Case Report

## Delayed Rupture of Spleen Presenting As Subacute Intestinal Obstruction

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### ABSTRACT

The diagnosis of delayed splenic rupture can put most astute clinician into dilemma. The case presented below outlines the difficulty in diagnosing splenic rupture when acute history is unavailable, and symptoms misleading diagnosis. Splenic rupture is usually reported in a pathologic spleen secondary to diseases such as infection, neoplasia and infiltrative processes. Delayed splenic rupture is not a new phenomenon and was described in the literature by Perasalo in 1949. The reason behind this case report is to emphasize the fact that the patient with blunt splenic trauma can present in many ways. The clinical signs and symptoms can vary widely where some patients being asymptomatic and others present in extremis. Massive haemorrhage commonly occurs from injuries to this friable vascular organ. Usually diagnosis is easy in these cases. History of abdominal pain with left upper quadrant tenderness or signs of peritonitis in a patient is the most common presentation. Diagnosis is challenging where history is not relevant and clinical examination is not conclusive. The mortality rate from simple splenic rupture is 1 percent; delayed diagnosis of a ruptured spleen increases the rate to 10 percent. Time is of the essence in these cases and early diagnosis is important to avoid grave morbidity or mortality.

**Key words:** spontaneous rupture of spleen, pathological spleen, delayed splenic rupture, trivial trauma.

### INTRODUCTION

The spleen is one of the common organs to get ruptured in blunt trauma to abdomen. The spleen can rupture in the following circumstances: trauma to a diseased spleen; trauma to a normal spleen.<sup>[1]</sup> Spontaneous rupture of a diseased spleen (pathologic rupture) and spontaneous rupture of a normal spleen (spontaneous rupture).<sup>[2]</sup> Some authors have suggested that the atraumatic or so-called spontaneous rupture of a diseased spleen be termed 'pathologic rupture'. The latter is analogous to the accepted condition of "Pathologic

fracture" that takes place in a "diseased" bone. This has also been described as an 'occult rupture'. The term spontaneous rupture, therefore, should be reserved for the healthy spleen that has ruptured without overt trauma. This has also been described as 'idiopathic rupture'.

### CASE REPORT

65 year male patient attended emergency department with h/o distention of abdomen since 5 days, passing only flatus and no stools. With dull aching pain in left paraumbilical region. Patient was pale and

hypertensive with normal heart rate. pr examination was normal. Abdomen was soft distended, tenderness present in left paraumbilical region, no guarding or rigidity. No history of previous surgery, but he had history of stroke attack 5 yrs back, and was on antiplatelet and antihypertensive medications.

Keeping subacute intestinal obstruction in mind patient was further investigated. Hb was 8 mg/dl, x ray abdomen erect showed no air fluid levels [fig 1.1], on usg there was about 800 ml of fluid in peritoneum [fig 1.2], Contrast CT abdomen revealed surprisingly splenic rupture [fig 1.3].



Figure 1.1 X-Ray Abdomen Erect.



Figure 1.2 USG Abdomen and Pelvis.

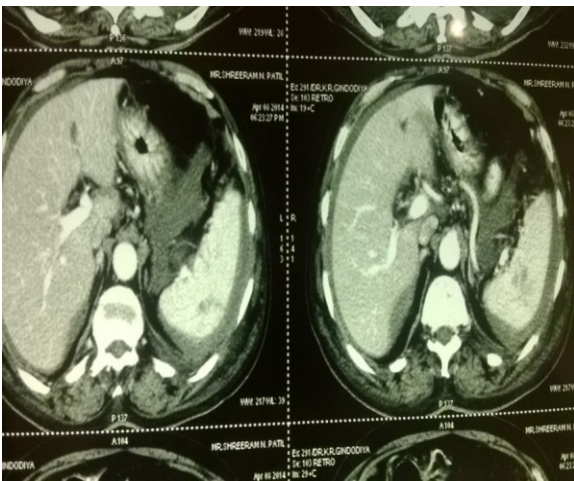


Figure 1.3. CT Contrast Abdomen and Pelvis.



Figure 1.4. CT Contrast Abdomen and Pelvis.

Further careful questioning was done to extract history trauma, then patient explained that he had mild jerk on motorbike 7 days back, made pain in left

hypochondrium for a while then pt became asymptomatic except for the presenting complaints.

Due to findings in ct abdomen contrast, hemoperitoneum and splenic rupture, pt was transferred to Operation Theater for emergency splenectomy. Intra op two blood transfusions were given. Intraop findings were hemoperitoneum with splenic rupture [fig 1.4] grade two/three.

Splenectomy was done. post op recovery was uneventful, and patient received required vaccination prior to discharge.

Histopathological examination revealed splenic rupture with subcapsular hemorrhage without any pathology. [Fig 1.5]

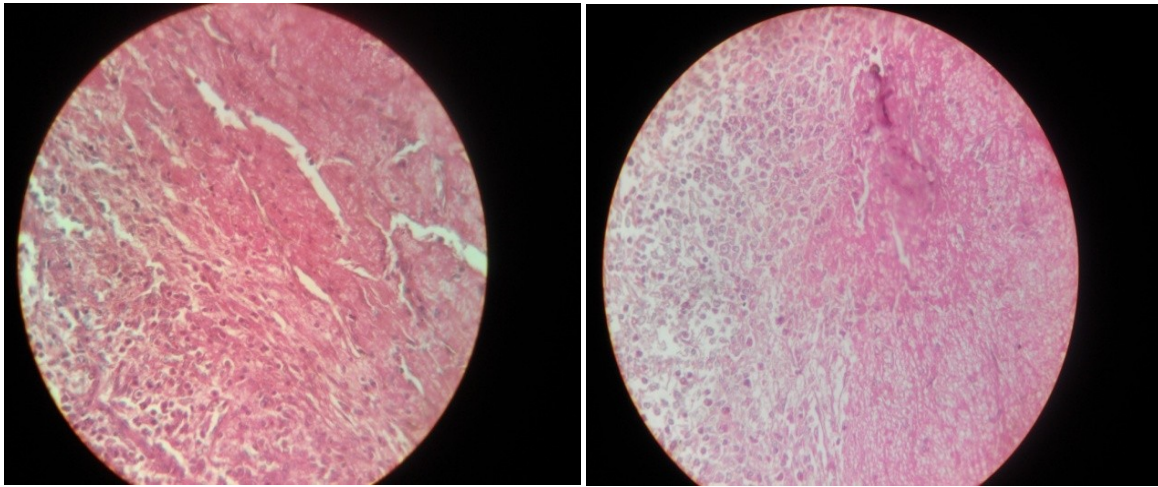


Figure 1.5. Histopathological slide.

## DISCUSSION

Diagnosis in such presentation may become difficult due history of trivial trauma and time lag between it and misleading symptoms of subacute intestinal obstruction. ct abdomen was conclusive, hence in any surgical abdomen with anemia and trivial trauma history though some days back ,diagnosis of delayed splenic rupture can't be underestimated.<sup>[3]</sup> Early diagnosis in such non relevant history and non conclusive findings is important to avoid grave morbidity and mortality. In fact diagnosis of splenic rupture is diagnosis of exclusion and not primary diagnosis when such presentation is there.<sup>[3]</sup> Carefull enough questioning and ct scan reveals story of injury in such cases.

Altered haemostatic mechanism by antiplatelet and anticoagulant therapy may unrecognize micro trauma to provoke rupture of spleen without any pathology,

which may b the cause of splenic rupture in this case.

Radiologic investigations play a major role in the diagnosis of delayed splendid rupture. Plain radiographs of the abdomen may show an elevated left hemi-diaphragm. In the emergency setting, CT scanning, which has supplanted angiography as the preferred diagnostic modality, clearly shows splenic hematoma or rupture. CT has a sensitivity and specificity of at least 95% in the detection of splenic injury.<sup>[4]</sup> Other investigations include visceral angiogram, focused abdominal sonographic technique (FAST) and diagnostic peritoneal lavage DPL method.<sup>[5]</sup>

It remains to be seen whether further careful study will detect any ultra structural abnormalities in the spleen, making it more prone to slight 'trauma', associated with normal activities of daily life and hence decision of operative or non operative

management can be taken.<sup>[6]</sup> Further research would be then being required to identify those at risk. In the meantime, it continues to pose a diagnostic challenge and dilemma in management.<sup>[5]</sup>

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