



CASE REPORT ON RUPTURED SPLENIC HAEMATOMA-A RARE COMPLICATION OF MALARIA

Radiodiagnosis

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ABSTRACT

Splenic haematoma rupture is extremely rare complication of malaria reported in 1-2% cases. Most common causes of splenic haematoma is blunt abdominal trauma, though splenic haematoma may be caused by tropical infection and malaria is most common among them. Establishment of a preoperative diagnosis using noninvasive imaging modalities can be beneficial. This case report is on patient present with abdominal pain and diagnosed as ruptured splenic haematoma.

KEYWORDS

Splenic haematoma rupture, malaria

INTRODUCTION:

During acute and chronic malaria, there are changes in splenic structure and function that can result in either an asymptomatic enlargement or a wide variety of complications. Splenic rupture though a rare complication of P. Vivax malaria, can be a life threatening event. Splenectomy has been the treatment of choice in case of spontaneous rupture of spleen, but due to recognition of complications of this practice, new conservative strategies are considered in selected cases.

CASE REPORT

A 35 Year lady presented to emergency department with the history of fever with chills, abdominal pain. She was diagnosed with P. Vivax malaria.

Gradually on third day of admission she complained of severe abdominal pain and breathlessness.

On admission her Hb was 7.50g/dL, but on third day Hb declined to 5.30g/dL. ESR was 40. Platelet count was normal.

Then Imaging studies were performed :

The chest Xray showed a left sided pleural effusion

Abdominal ultrasonography suggestive of spleen appears enlarged in size and shows (42 x 30)mm sized liquefied splenic haematoma at upper pole which appears to communicate with thin strip of perisplenic fluid noted. (Figure 1)

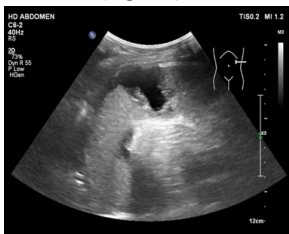


Figure 1(a)



Figure 1(b)

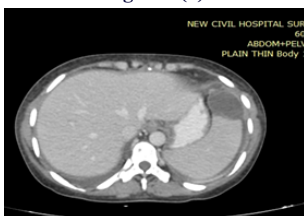


Figure 2(a)



Figure 2(b)

On investigating further CT scan of abdomen shows splenomegaly with nonenhancing hypodense lesion at upper pole which communicate with perisplenic hematoma and mild left sided pleural effusion. (Figure 2)

Because of stable haemodynamics, no surgical procedure was carried out and she was admitted in ICU and received blood and platelet transfusions and liquid replacement.

DISCUSSION

Malaria is the most frequent tropical infectious cause of spontaneous splenic rupture. It is a rare complication of P. falciparum malaria, most frequently associated with P. vivax malaria.

Spleen enlargement is one of the characteristic clinical signs of malaria. Within 3 to 4 days of the onset of symptoms, a palpable asymptomatic enlargement of spleen can be found in up to 50% to 90% of malaria patients. Other splenic complications due to malaria changes in spleen include torsion, cyst and haematoma formation, infarction, hypersplenism, ectopic spleen and hyperactive malarial syndrome. [1] Rupture is more frequent in non-immune persons than in those living in endemic areas in which multiple attacks result in gradual splenic enlargement, making rupture less likely.

Spontaneous splenic rupture (nontraumatic rupture) is most commonly associated with acute malaria and formation and breakage of contained hematoma are believed to be the underlying cause [2]. During the primary attack, hematoma formation and rupture occur practically at the same time. Vomiting or chills both frequent during active phase or other minor abdominal pressures like vigorous abdominal palpation have also been suggested to play a role in pathogenesis of splenic rupture during malaria. [3]

Other factors like thrombocytopenia, treatment with aspirin, rapid hyperplasia of lymphoid tissue with small infarctions and haemorrhages and loss of capsule elasticity have been considered to contribute to haematoma formation and breakage. In chronic splenomegaly secondary to malaria or other parasites or virus, rupture of the spleen usually follows an obvious trauma. In these cases, haematoma formation precedes rupture in several days or weeks.

A high index of suspicion is needed for any early diagnosis, as sometimes rupture –preexisting symptoms do not differ from acute-phase symptoms or from other non-splenic surgical emergencies. Presence of hypotension, abdominal pain or signs of intra-abdominal bleeding should alert one to the possibility of splenic rupture, even if thick and thin blood films are already negative. Abdominal ultrasonography, CT scan and arteriography help in diagnosis of haemodynamically stable patient. [4]

Treatment options include splenectomy, which has been the treatment of choice of splenic ruptures of different origins. This procedure can lead to severe complications such as infections due to wide spread bacterial like streptococcus pneumoniae, Neisseria meningitides and Haemophilus influenza and other encapsulated bacteria.

Conservative management includes non operative management or splenic repair and vascular tamponade. This is the prevailing approach in splenic trauma with stable hemodynamics. Non operative management consists of bed rest in the hospital under strict monitoring, during 1 to 2 weeks with fluid and blood replacement as necessary, which was the choice in the case presented. Delayed rupture is rare. However, when there is uncontrolled bleeding and hypotension, surgery is required but most cases can be managed with splenic repair and tamponade.[5]

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