Spontaneous Hemoperitoneum in a case of Plasmodium vivax Malaria without Splenic Rupture

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Abstract

Vivax malaria is usually a benign infection but now trends are changing. We, here present an unusual case of P. vivax malaria presenting with spontaneous hemoperitoneum with thrombocytopenia. Spontaneous hemoperitoneum in P. vivax malaria has been reported earlier but with splenic rupture. However, our case though had hemoperitoneum but no splenic rupture. In our case, thrombocytopenia was found to be the cause of hemoperitoneum which has not been reported earlier in Indian literature.

Introduction

Malaria is amongst the common infectious diseases in India. Plasmodium vivax is the most common of human malaria species followed by P. falciparum. Vivax malaria is usually mild and severe manifestations are seen with falciparum malaria. However, in past few years, cases have been reported where vivax malaria presented with complications like thrombocytopenia, acute respiratory distress syndrome (ARDS), shock and even splenic rupture causing hemoperitoneum.¹⁻² We present an unusual case of a 17 year old boy with P. vivax malaria who had spontaneous hemoperitoneum without any evidence of splenic rupture.

Case

A 17 year old boy presented to our emergency department with complaints of fever and abdominal pain since 2 days. Fever was high grade and intermittent with chills. Abdominal pain was diffuse, severe and associated with vomiting but there was no constipation or obstipation. There were no urinary, musculoskeletal or neurological complaints. On examination, he was conscious, oriented, febrile but hemodynamically stable. Systemic examination revealed distended, tender abdomen with hepatosplenomegaly, sluggish bowel sounds and presence of shifting dullness.

Investigations revealed anemia, thrombocytopenia (Hb 10.8 gm%, platelets 58000 /cumm), normal renal and liver profile. Rapid test for malaria was positive for P. vivax. Ultrasound abdomen was suggestive of hemoperitoneum. Immediate contrast enhanced computed tomography (CT) of the abdomen was done which revealed moderate amount of free fluid (Hounsfield Unit= 51) in perihepatic, perisplenic space, bilateral paracolic gutters and pelvis (Figures 1 and 2). An urgent surgery consultation was taken and conservative management was advised. Patient was kept nil per oral and managed with intravenous fluids, artesunate, antipyretics, blood transfusion and platelet concentrate transfusions. His clinical and hematological parameters improved (platelets = 156,000/cumm). Patient was discharged after 7 days in stable condition and was doing well on follow-up.

Discussion

Spontaneous Hemoperitoneum is an uncommon cause of acute abdominal pain and may be catastrophic. The causes are broadly divided into traumatic and non-traumatic. Traumatic causes include blunt and penetrating abdominal trauma causing visceral tears or rupture. Non traumatic causes include spontaneous rupture of neoplasms, vascular aneurysms, anatomical or structural abnormalities and other rare causes like disseminated intravascular coagulopathy (DIC) related or even iatrogenic hemoperitoneum.³ Rarely, infections like Malaria, Brucellosis, Bartonellosis, Epstein-Barr virus infection, Cytomegalovirus infection and Tuberculosis have been associated with hemoperitoneum due to splenic rupture. A recent publication in 2010 from a tertiary care centre of North India reported a case of vivax malaria with splenic rupture and resulting hemoperitoneum.³ On the contrary, our case though had...
similar clinical profile with *P. vivax* antigen positive and hemoperitoneum but had no radiological evidence of splenic rupture. Non-splenic rupture related hemoperitoneum in a case of malaria has not been reported before in Indian literature. In our case, possibility of thrombocytopenia induced hemoperitoneum was considered. An earlier case that reported thrombocytopenia as the cause of hemoperitoneum was in a female patient with systemic lupus erythematosus.5

Diagnosis is usually by either diagnostic peritoneal lavage (DPL) or radiologically. For unstable or marginally hemodynamically stable patients, DPL is the favored modality but is invasive and overly sensitive. Abdominal ultrasound in emergency settings is a non-invasive, rapid and low cost method and is emerging as the investigation of choice. Abdominal CT helps in visualization of the quantity of intra-abdominal hemorrhage and the extent of visceral injury.

Treatment includes resuscitation and treating the cause. Classically, hemoperitoneum used to be an indication for emergency surgery. Splenic rupture most often requires splenectomy.3,4 With modern diagnostic aids such as CT scans, low-grade lacerations of the spleen may be diagnosed early and observed, with surgical options deferred unless clinical deterioration obligates them. In our case, patient was managed conservatively as CT scan did not reveal any splenic rupture. Our patient improved clinically without any surgical intervention.

References