



ISSN: 0975-833X

CASE STUDY

SPONTANEOUS RUPTURE OF SPLEEN SECONDARY TO PLASMODIUM VIVAX MALARIA: A CASE REPORT

*Dr. Ravi Ichalakaranji, Dr. Vijaya Patil, Dr. L. S. Patil, Dr. Satish Patil and Dr. Kruthi, S. R.

Department of General Surgery, Bldeu's Shri B M Patil Medical College Bijapur, Karnataka India

ARTICLE INFO

Article History:

Received 16th September, 2014

Received in revised form

20th October, 2014

Accepted 25th November, 2014

Published online 27th December, 2014

Key words:

Splenic rupture, Plasmodium vivax.

ABSTRACT

Splenic complications during the acute attack of malaria ranges from benign Splenomegaly to more serious complication includes splenic infarct, haematoma, abscess, rupture (spontaneous). Rupture of Spleen is a rare life threatening complication that occurs during the acute attack of malaria that imposes diagnostic challenge to clinicians particularly in endemic area. So our aim is to make aware of clinicians about this fatal complication which requires high index of suspicion and timely intervention which can save the life of a patient. Here we report case of spontaneous rupture of Spleen in an adult male patient.

Copyright © 2014 Dr. Ravi Ichalakaranji et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Globally, malaria is endemic in over 106 countries according to World Health Organization (WHO) World Malaria Report 2011 (Lt Col Umesh Kapoor 2013). Spontaneous rupture of spleen in malaria is uncommon even in highly endemic areas of malaria and are life threatening. However the true incidence of such condition is not known because of undiagnosis.

Case report

A 40 year old male patient presented with history of fever with chills, sweating since 3 days peripheral smear revealed positive for plasmodium vivax and he was on antimalarial drugs. On 5th day, suddenly he presented to us with severe pain abdomen, sweating. On examination patient was having severe pallor, extremities were cold, tachycardic and hypotension. On per abdomen examination, abdomen was distended, severe tenderness and guarding present in left hypochondriac region. Patient was on antimalarial drugs and intravenous fluids. Ultrasonography revealed the splenic rupture with surrounding haematoma and collection. Blood examination revealed Hb- 7gm%. CT abdomen contrast was done on the same day showed non-enhancing hypodense lesion in lower pole suggestive of splenic injury of grade IV (Fig 1). He was posted for emergency surgery on the same day, exploratory laparotomy with Splenectomy with intraoperative and postoperative blood transfusion was done and intraoperatively splenic injury was noted (Fig 2).

Surgery was followed by complete treatment of antimalarial drugs and he recovered completely.

DISCUSSION

Malaria is a major health problem in India contributing 80% of 2.5 millions cases reported in South East Asia (Sarika Jain and Chugh, 2011). Plasmodium vivax constitutes 55% of cases, considered to be more benign, but splenic complication in malaria are more common with P. vivax infection (Nikhil Gupta et al., 2010). Splenic complication in malaria varies from benign splenomegaly to more serious splenic infarction, sub capsular haematoma, rupture, splenic abscess which are potentially fatal if not recognized and treated early. (Kumar and Shetty, 2008) Splenic enlargement is found in 50-70% cases of malaria in 3rd or 4th day of onset of symptoms. The first case of spontaneous rupture of spleen was reported by Atkinson, an English Surgeon in 1874 (Vidyashankar et al., 2003). Exact incidence of splenic rupture in malaria is not known because of undiagnosis and underreporting. However some studies suggest spontaneous rupture of spleen occurs in 20% cases of acute malaria and thrombocytopenia is one of the predisposing factors for spontaneous rupture. Exact mechanism of spontaneous rupture is not known, usually splenic rupture follows subcapsular haematoma, splenic congestion, infarction, focal necrosis that occur during acute attack of malaria leading to distension of capsule and rupture following forceful vomiting, coughing (Nikhil Gupta et al., 2010). A few diagnostic criteria for labeling a case as spontaneous rupture have been recommended

*Corresponding author: Dr. Ravi Ichalakaranji

Department of General Surgery, Bldeu's Shri B M Patil Medical College
Bijapur, Karnataka India.



Fig. 1. CT scan abdomen showing splenic injury with perisplenic collection

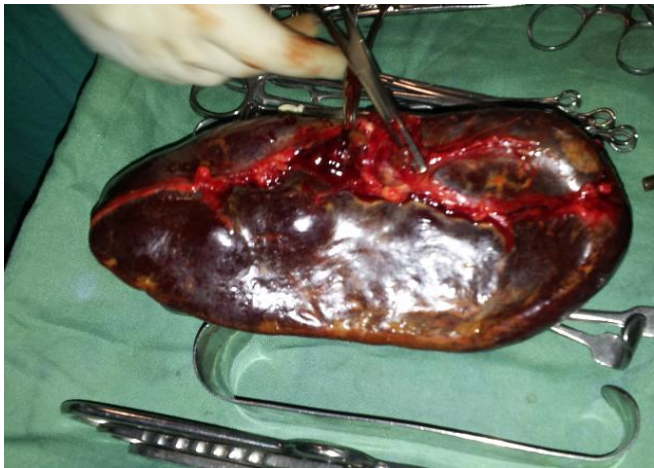


Fig. 2. Splenic injury

by Orloff and Peskin (Orloff and Peskin, 1990): (i) absence of any history of trauma; (ii) absence of any pre-existing splenic disease; (iii) absence of adhesions or scarring in the spleen; and (iv) presence of grossly normal spleen. Hence clinicians must keep in mind the possibility of spontaneous splenic rupture while treating patient with malaria who suddenly manifest acute abdomen pain, distension, unexplained shock as it has occurred in our case. Other causes of spontaneous rupture of spleen with haemoperitoneum are infectious mononucleosis, angiosarcomas, neoplasms, haematological malignancies (John *et al.*, 2004).

Ultrasound and CT scan abdomen are diagnostic modalities used to grade the injuries. Depending on grade and clinical presentation, Spontaneous rupture of spleen can be managed conservatively (Hamel *et al.*, 2002; John *et al.*, 2004) as well as surgically with splenectomy along with antimalarial drug.

Conclusion

Spontaneous rupture of malarial spleen is a rare life threatening complication that occurs during the attack of malaria that imposes diagnostic challenge to clinicians particularly in endemic area. So our aim is to make aware of clinicians about this fatal complication and the need for the timely intervention which can save the life of the patient.

REFERENCES

- Hamel, C.T., Blum, J., Harder, F., Kocher, J. 2002. Nonoperative treatment of splenic rupture in malaria tropica, Review of literature and case report. *Acta. Trop.*, 82:1-5.
- John, B. V., Ganesh, A., Aggarwal, S., Clement E. Persistent hypotension and splenic rupture in patients with plasmodium vivax and falciparum co- infection. *J. Postgrad. Med.*, 2004; 50:80-1
- Kumar, B.G. Shetty, M.A. 2008. Splenic complications in malaria- a case series: *south east Asian. J. Trop. Med. Public Health*, 2008 Sep 3915:791-4.
- Lt Col Umesh Kapoor, Lt Col A. Chandra, Lt Col Kamal Kishore, Spontaneous rupture of spleen with complicated falciparum malaria in a United Nations Peacekeeper. *Medical Journal Armed Forces India*, 69 2013, 288 -290.
- Nikhil Gupta, *et al.* 2010. Spontaneous rupture of malarial spleen presenting as Hemoperitoneum *J. vector Borne Dis.*, 47, June 2010, 119-120.
- Orloff, M.J. and Peskin, G.W. 1990. Spontaneous rupture of the normal spleen, a surgical enigma. *Surg. Gynaecol. Obstet.*, 31:171e173.
- Sarika Jain, T. D. Chugh, 2011. An Overview of malaria burden in India and road-blocks in its control. *Journal of Clinical and Diagnostic Research*, 5:915-916.
- Vidyashankar, C., Basu, A., Kulkarni, A.R., Choudhury, R.K. 2003. Spontaneous rupture of spleen in falciparum malaria, *Indian J. Gastroenterol.*, 22:101e102.
