

Atypical Presentation of Thrombocytopenia in Malaria- A Case Report

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Abstract

Malaria is a common infection in India caused by plasmodium, it is transmitted by female anopheles mosquito. In some percentage of patients there is a decrease in platelet counts in acute malaria. There has been reports of some minor bleeding manifestations in people with malaria. Here we present a case of severe thrombocytopenia in Vivax malaria.

1. Introduction

The plasmodium has 5 species namely vivax, malariae, ovale, falciparum and knowlesi that cause one of the most common protozoal infection known to man called malaria. This is one the common endemics seen in india. The variation in clinical features depends on the pathogenicity of organism and immunity of patient. Thrombocytopenia is one the complication seen in malaria. This can be because of alterations in bone marrow or splenomegaly. Here we present one such case where severe thrombocytopenia is noted

2. Case Report

History

A 22 year old male presented to the emergency with complaints of intermittent fever for 5 days, rash all over the body and bleeding gums. Chills and rigor was present. There was no history of vomitings or loose stools and no seizures.no abdominal pain. No head ache and neck pain. No history of any blood transfusion or drug intake.

Examination

On examination the patient was conscious, oriented to time and place and febrile.PR – 98/min, BP – 120/70 mmhg, Saturation – 98% on room air. All over the body petechial spots were noted, they were found to be more on the legs. Chest sounds were normal and lung fields were found to be clear. On palpation liver and spleen were found to be palpable. No focal neurological defects were found.

Course

All the routine investigations including fever serology were sent. HB-7.2gm/dl,WBC-9,300,differential count – neutrophils-42,lymphocytes-51,monocytes-1,eosinophils-6.The patient had a platelet count of 4,90,000. plasmodium vivax was detected on blood film examination. Serology for dengue came out negative. Oral chloroquine one dose has been given. After the admission for about 17 hours the patient had profuse bleeding from the gums. There was one episode of hematemesis. Immediately 5 units of platelet transfusion was done which was followed by one unit of packed red cell transfusion. The patient has been shifted to ICU and started on intravenous quinine for 3 days. Oral quinine was given from the

third day. The patients platelet counts were were 55,000 following the transfusion, but on sixth day the platelets came down to 28,000. The patient was afebrile. Bone marrow aspiration has been conducted to evaluate further. It was the pathologists opinion that it was immune thrombocytopenia as there was increased megakaryocytes with small hypolobated forms. Multiple stages of vivax were seen. On eight day petechiae were seen and the platelet count came down to 13,000. Oral methyl prednisolone was given at 2mg/kg/day, the count improved to 1,20,000 after one week and it was tapered for the next week. The patient was discharged with advice of primaquine for 5 days and quinine was given for a period of 10 days. The patient was discharged in stable condition. At 15 days follow up his platelet counts were in normal range.

3. Discussion

In cases of vivax thrombocytopenia is generally mild ⁽¹⁾. Low platelet counts have been reported in very cases. Serology for other organisms has to be done and other possibilities like dengue have to be ruled out.

There is no proper explanation as of now as to why there is a decrease platelet count in malaria, it is thought that it is immune mediated as demonstrated in a previous study ^(2,3,4). platelets and red blood cells are destroyed peripherally by immune complexes, as malaria antigen binds to specific IgG⁽⁴⁾. Increase in immunoglobulin E and presence of eosinopenia can point out to vivax malaria. In this type of condition there has been an observation of increased serum level pro inflammatory and anti inflammatory cytokines ⁽⁵⁾.

A few other studies have said that there is a decrease of life span of platelets in patients of malaria in peripheral blood. Structural changes of platelets has also been an another possible explanation.

Corticosteroids have improved the prognosis of this patient by decreasing the immune mediated response

and platelet count improved to 1.5 lakhs; and patient improved symptomatically.

4. Conclusion

Extensive research has to be conducted to elucidate the exact mechanism for decrease of platelet counts in this condition and also enumerate appropriate treatment protocols to decrease the mortality. In countries like india where malaria is endemic, a fever case presenting with decrease in platelet counts has to be evaluated thoroughly

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