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Subconjunctival Haemorrhage: An Unusual Presentation of Immune Thrombocytopenia

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Abstract: Primary immune thrombocytopenia (IT) is one of the common causes of thrombocytopenia in otherwise asymptomatic adults. Though most of the patients with IT are asymptomatic the presentation can be varied from mild petechiae to severe hemorrhage such as intracranial haemorrhage. Subconjunctival haemorrhage is an extremely rare presentation of IT. We report a 15 year old previously healthy boy presented with bilateral subconjunctival haemorrhage which was ultimately diagnosed as immune thrombocytopenia which was resistant to Steroid as well as IV Immunoglobulin therapy and managed with Rituximab successfully.
Keywords: immune thrombocytopenia, subconjunctival haemorrhage, thrombocytopenia.

INTRODUCTION

Primary immune thrombocytopenia (IT) is an acquired thrombocytopenia caused by auto antibodies against platelet antigens [1]. Most of the patients with IT are asymptomatic, but those who have symptoms, are primarily related to thrombocytopenia and bleeding. Patients may experience fatigue and a reduced quality of life [2]. In contrast to the common findings of petechiae and purpura, severe forms of hemorrhage such as intracranial hemorrhage, overt gastrointestinal bleeding, severe menstrual bleeding and hematuria are uncommon. Whereas subconjunctival haemorrhage as an initial clinical presentation is extremely uncommon.

CASE PRESENTATION

A 15 year old previously healthy boy presented with fever of 4 days duration associated with constitutional symptoms. He also had developed bilateral painless red eyes on 2nd day of fever and fever settled on 2nd day of admission. There was no history of trauma to eyes. He did not take any drugs and he was a teetotaler. Systemic inquiry was unremarkable. On examination he was conscious, alert and haemodynamically stable. Detailed general and systemic examinations were unremarkable except bilateral subconjunctival haemorrhage.

His full blood count on admission showed white blood cell count of 13890/mm^3 with neutrophil leukocytosis and thrombocytopenia with the platelet count of 38,000/mm^3. Platelet count remained low even after fever settled and it reached the minimum count of 1000/mm^3. Inflammatory markers such as ESR and CRP were normal. His liver function tests, coagulation profile, renal function tests, serum electrolytes and random blood sugar level were normal. Blood cultures & dengue IgM antibody on 6th day of fever were negative. Anti-nuclear antibody and retroviral screening were negative. Blood picture excluded the overt morphological evidence of disseminated intravascular coagulation. Chest x-ray and electrocardiogram were normal. Ultrasonography of abdomen showed no abnormalities. He had undergone bone marrow biopsy and it revealed normocellular marrow with active megakaryopoeisis in the absence of other abnormalities and confirmed the immune mediated peripheral destruction of platelets as a cause for his thrombocytopenia. He also had been reviewed by Ophthalmologist and local causes of subconjunctival haemorrhage were excluded.

He had been treated with intravenous Immunoglobulin 1g/kg/day for 2 days followed by oral Prednisolone 1mg/kg/day. As there was no improvement in platelet count observed in 02 weeks, the diagnosis of resistant immune thrombocytopenia to both Steroids and Immunoglobulin was made by Haematologist and he had been treated with Rituximab 375 mg/m^2 once weekly for 04 weeks. Patient had good clinical improvement following the treatment.

DISCUSSION

IT is a clinical syndrome in which a decrease number of circulating platelets manifest as a bleeding tendency, purpura or extravasations of blood from capillaries into skin and mucous membranes. Although

most cases of acute IT are mild and self limiting, fatal bleeding occurs in 0.9% upon initial presentation. The pathogenesis of IT is not completely understood. Reduced platelet lifespan due to antibody mediated destruction is the predominant hypothesis, results in a decreased platelet count leads to bleeding [3]. Predictors of severe bleeding in individual studies include the degree of thrombocytopenia (<20,000/mm^3), previous minor bleeding, and chronic IT [4]. The frequency of severe bleeding may also increase with age and co morbidities.

CONCLUSION

The primary cause for long term mortality in patients with IT is haemorrhage [5]. For patients with presumed IT who have severe bleeding, urgent hospitalization with early involvement of the Haematologist is appropriate. Early recognition and prompt treatment is essential in order to reduce the mortality. We recommend isolated subconjunctival haemorrhage needs thorough evaluation to identify evidence of platelet related disorder rather attribute to local eye disease.

List of abbreviations

IT – Immune Thrombocytopenia
ESR – Erythrocyte Sedimentation Report
CRP – C - Reactive Protein

Competing interests

The authors declare that they have no competing interests.

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