Asian Hematology Research Journal

3(4): 31-33, 2020; Article no.AHRJ.62533

Immune Thrombocytopenia in a Case of Severe Congenital Hemophilia A: A Rare Clinical Scenario

Malini Garg[1], Prakas Kumar Mandal[1*] and Debasis Gantait[1]

[1]Department of Haematology, NRS Medical College, Kolkata- 700014, India.

Authors' contributions

This work was carried out in collaboration among all authors. Authors MG and PKM was involved in the clinical study. Authors MG, PKM and DG designed the concept, managed the literature searches and wrote the first draft of the manuscript. Author PKM edited and revised the manuscript. All authors read and approved the final manuscript.

Article Information

Editor(s):
(1) Dr. Dharmesh Chandra Sharma, G. R. Medical College & J. A. Hospital, India.
Reviewers:
(1) Han-Mou Tsai, Downstate Medical Centre, USA.
(2) Clara Letícia Justino, FPM - Patos de Minas College, Brazil.
Complete Peer review History: http://www.sdiarticle4.com/review-history/62533

Case Study

Received 26 August 2020
Accepted 01 November 2020
Published 20 November 2020

ABSTRACT

The presence of a dual haemostatic defect is extremely rare. Here, we describe a very rare case of newly diagnosed immune thrombocytopenia in a case of severe hemophilia A.

Keywords: Congenital hemophilia a; immune thrombocytopenia; dual haemostatic defect.

1. INTRODUCTION

Immune thrombocytopenic purpura (ITP) is an autoimmune disorder characterized by persistent thrombocytopenia. The incidence of ITP is estimated to be 2 to 5 per 100,000 persons in the general population [1]. A typical case of ITP presents with a petechial rash and a history of increased bruising following knocks or falls. Hemophilia A is an X linked recessive disease due to deficiency of coagulation factor VIII. It has an estimated frequency of approximately one in 10,000 births [2]. Severe hemophiliacs with factor VIII levels of <1% have spontaneous bleeding into joints and soft tissues; muco-cutaneous bleeding is less common. The presence of a double haemostatic defect is extremely rare. Here, we have described a very rare case of newly diagnosed immune thrombocytopenia in a case of severe hemophilia A.

2. PRESENTATION OF THE CASE

A 23 year old, non diabetic, normotensive, euthyroid male presented with sudden onset

**Corresponding author: E-mail: pkm.hem@gmail.com;*

echhymotic patchesover all the four limbs and trunk since three daysbefore attending this hospital. It was not associated with any history of fever, joint pains or any active bleeding from any other site of the body. At the age of one year, he was diagnosed to be suffering from severe hemophilia A (fVIII levels<1%). As per his medical records, he was on secondary prophylaxis of factor VIII concentratetwice weekly since childhood with no previous history of inhibitor development. He had past history of recurrent hemarthrosis in right knee joint and also had ahistory of right psoas bleed one year back. However, this time, his echhymotic patches were not associated with any new joint bleed. Physicalexamination revealed multiple echhymotic patches on all four limbs and trunk (Fig. 1). Musculoskeletal examination revealed mild fixed flexion deformity in right knee joint. Findings of other systemic examination were within normal limits.

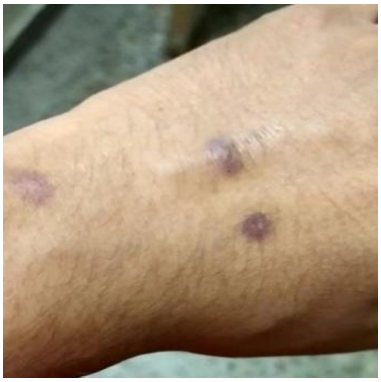

Fig. 1. Echhymotic patches on dorsum of left hand

He was thoroughly investigated. Hemoglobin was 14.9 g/dl, normal total leukocyte count (5500 cells/cum m) with 45% neutrophils, 45% lymphocytes, 6% monocytes and 4% eosinophils, red blood cells were normocytic normochromic and there was severe thrombocytopenia (<10,000/ cumm) on peripheral smear.Based on complete blood count and peripheral smear examinations, it was a case of isolated thrombocytopenia. Liver function tests and renal function tests were within normal limits.Ultrasonography of abdomen revealed no abnormality including normal spleen size. FVIII inhibitor assay revealed inhibitor level of <0.5 Bethesda unit. Viral serology for HBsAg, anti-HCV and HIV were non reactive and serum anti nuclear antibody levels were within normal limits. Ultrasonography of abdomen revealed no abnormality including normal spleen size. FVIII inhibitor assay revealed inhibitor level of <0.5 Bethesda unit. Viral serology for HBsAg, anti-HCV and HIV were non reactive and serum anti nuclear antibody levels were within normal limits. Thus a diagnosis of immune thrombocytopenic purpura (newly diagnosed) was made and treated with intravenous methylprednisolone injection (1000 mg/dose/day) for three days followed by oral prednisolone @ 1mg/kg/day. He was regularly followed up, thrombocytopenia improved remarkably and there was complete response (platelet count >100,000/ cumm) by two weeks. With clinical improvement and response assessment, steroids were gradually tapered and he is now off steroid for 6 wks and last platelet count is 120,000/cumm done 7 days back. He is also continuing hemophilia prophylaxis as before. Considering the high rate of relapse in ITP in adults, the patient was advised to follow up regularly in the outpatient department every 4 wks or earlier with any new symptoms of muco-cutaneous bleeding and doing well till now.

3. DISCUSSION

Severe thrombocytopenia developing in a pre-existing case of severe hemophilia is a vexing problem and very few case reports are available in the literature describing the coexistence of these two hemostatic defects together. Cases of ITP in acquired hemophilia have been described before [3]. This could be explained by role of immune mechanism in the pathogenesis of both the hemostatic defect. This could also explain the pathogenesis of immune thrombocytopenia in a patient of hemophilia with inhibitor.

Riodorn et al. [4] have described two cases of bleeding from idiopathic thrombocytopenia with low factor VIII levels. In their first case they have reported the unmasking of a previously asymptomatic haemophilia A by an episode of ITP. In their second case, idiopathic thrombocytopenia was complicated by partial FVIII: C deficiency.

HIV related thrombocytopenia has been described in patients with severe hemophilia [5]. Ragni et al. [6] have described Hemorrhagic sequelae of ITP in nine HIV infected Hemophiliac patients. They have concluded that ITP and thrombocytopenia in HIV positive hemophiliacs may result in potentially severe morbidity and mortality, including CNS hemorrhage. Thrombocytopenia has also been described in HIV negative hemophiliacs who have received multiple transfusions of blood products and has

been strongly associated with liver diseases [7]. In the present case, viral serology was non reactive, liver function tests were within normal limits. And he responded well with steroids.

Reen et al. [8] have described a case of steroid resistant ITP with severe hemophilia A, treated with splenectomy. They have opined that patients with hemophilia must have their platelet counts monitored closely and any unusual pattern of bleeding must be reported.

4. CONCLUSION

Immune thrombocytopenia developing in a case of severe congenital hemophilia Ais a very rare entity. However, as described in the present case, the dual hemostatic defects can coexist together.

CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Marieke Schoonen W, Kucera G, Coalson J, Li L, Rutstein M, Mowat F, et al. Epidemiology of immune thrombocytopenic purpura in the general practice research database. Br J Haematol. 2009;145(2): 235–44.
2. Srivastava A, Brewer AK, Mauser-Bunschoten EP, Key NS, Kitchen S, Llinas A, et al. Guidelines for the management of hemophilia, Haemophilia. 2013;19(1):e1–47.
3. Wei F. Successful treatment of acquired hemophilia a associated with immune thrombocytopenia and joint hemarthrosis: A case report and literature review. Medicine (Baltimore). 2018;97(38):e12044. doi:10.1097/MD.0000000000012044
4. Riordan M, Hill F. Atypical bleeding due to idiopathic thrombocytopenia in association with low factor VIII levels. Arch Dis Child. 2002;87(3):227–8.
5. Sloand EM, Klein HG, Banks SM, Vareldzis B, Merritt S, Pierce P. Epidemiology of thrombocytopenia in HIV infection. Eur J Haematol. 1992;48(3):168-72. doi: 10.1111/j.1600-0609.1992.tb00591.x.
6. Ragni MV, Bontempo FA, Myers DJ, Kiss JE, Oral A. Hemorrhagic sequelae of immune thrombocytopenic purpura in human immunodeficiency virus-infected hemophiliacs. Blood. 1990; 75(6):1267-72.
7. Eyster ME, Whitehurst DA, Catalano PM, McMillan CW, Goodnight SH, Kasper CK, et al. Long-term follow-up of hemophiliacs with lymphocytopenia or thrombocytopenia. Blood. 1985;66(6):1317-20.
8. Reen BS, Card RT, McSheffrey JB, Skinnider LF. Chronic immune thrombocytopenic purpura in hemophilia A. Can Med Assoc J. 1983;129(9):990-991.

© 2020 Garg et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/62533