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Case Report

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Acquired Hemophilia in the Setting of Bullous Pemphigoid: A Case Report

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Abstract

Acquired hemophilia is a rare bleeding disorder with one in a million incidence. Association with bullous skin diseases is very rarely reported in literature. We report one such rare case of an acquired factor VIII inhibition in a patient with bullous pemphigoid, which showed an excellent response to single agent rituximab and prednisone therapy.

Keywords: Acquired hemophilia; Bullous pemphigoid; Factor VIII

Introduction

Acquired hemophilia is an extremely uncommon and potentially fatal bleeding disorder with one in a million incidence. Association with autoimmune bullous skin diseases is very rarely reported in literature. We report one such rare case of an acquired factor VIII inhibition in a patient with bullous pemphigoid, which showed an excellent response to single agent rituximab and prednisone therapy.

Case Report

In July 2011, a 69-year-old Caucasian male presented to our emergency department with dizziness for two days. A month ago, patient presented to his prime care provider with "skin rash" and swelling of both hands. He was found to have multiple erythematous skin blisters on bilateral upper extremities involving elbows, forearms and dorsal surface of hands. Laboratory work up was normal. He was diagnosed with 'dermatitis' and was prescribed a tapering course of prednisone with good response. Two days prior to his current visit to ER, he started to feel dizzy and visited prime care clinic. He also reported worsening swelling of his bilateral wrists associated with purplish discoloration. Laboratory findings at that time revealed hemoglobin of 12.5 g/dL, hematocrit of 37.5% and creatinine of 1.6 mg/dL. The day of his visit to ER, patient felt extremely dizzy and was brought to the hospital. He was found to be hypotensive with a blood pressure of 70/50 mmHg.

Physical examination was significant for diffuse non tender, non-pruritic ecchymoses interspersed with healing skin blisters all over the upper extremities, with edema. There was no overt external bleeding and stool guaic was negative. Initial laboratory work up revealed that hemoglobin of 7.2 g/dL and hematocrit 21.9%, with creatinine of 1.9 mg/dL and BUN of 65. Despite receiving multiple units of blood transfusion, his hematocrit failed to improve. Coagulation studies revealed an elevated partial thromboplastin time (aPTT) of 49.6 seconds (normal range 22.2 - 33.4 s) with normal values of prothrombin time (10.6 s), platelet count (296×10^3 cells/μL) and fibrinogen (443 mg/dL). Factor VIII activity was 1% with normal von Willebrand Factor activity and normal Factor IX, XI and XII activity. Mixing studies did not correct aPTT at 2 hour incubation of patient's plasma, revealing the presence of an inhibitor to a clotting factor. He was found to have a high titer Factor VIII inhibitor of 34 Bethesda Units (BU). A punch biopsy of skin lesion with immunofluorescence studies revealed bullous pemphigoid.

Treatment with Factor VII complex was initiated which controlled the bleeding. He was also started on oral prednisone for immunosuppression. There was remarkable improvement in his symptoms as well as his blood counts. Upon discharge, he followed up with our hematology clinic and was treated with four cycles of single-agent rituximab at a dose of 375 mg/m^2 each week. Patient showed an excellent response to treatment, with repeat tests showing undetect-

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able Factor VIII inhibitor and normal Factor VIII activity.

Discussion

Acquired hemophilia due to Factor VIII inhibitor is a very rare disease with one in a million incidence [1, 2]. It is commonly observed in elderly population with a fatal outcome in 15-20% of the cases [1]. Association with autoimmune diseases, lymphoproliferative syndromes, solid tumors, postpartum period and certain drugs is described in the literature. Acquired Factor VIII inhibition in the setting of autoimmune bullous skin diseases is very rarely reported [1-3]. Treatment of acquired hemophilia involves a two step strategy namely achieving hemostasis and eradicating the inhibitor [4]. To achieve hemostasis, options are factor VIII infusions, recombinant factor VII complex or factor VIII inhibitor bypassing activity (FEIBA) based on antibody titers. First choice for immunosuppression is corticosteroids. In the recent years, single agent rituximab, a monoclonal anti-CD20 antibody has become the recommended therapy in this disease, in addition to prednisone [4, 5].

Given the severity of hemorrhagic complications and high mortality rates, early identification of this potentially fatal bleeding disorder is extremely important. In our patient, early detection and aggressive treatment saved his life.

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Conflicts of Interest

All authors have no financial or other conflicts of interest.

Author Contributions

All authors had access to the data and a role in writing the manuscript.

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