Acquired Hemophilia A Revealing a Pemphigus: A Case Report

Abstract

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- 3 Background: Acquired hemophilia A (AHA) is a rare bleeding disorder that affects one to two cases
- 4 per million people annually and results from the development of autoantibodies directed against
- 5 coagulation factor VIII.
- 6 Case presentation: We report the case of a 63-year-old woman admitted for surgical management of
- 7 a knee fracture associated with a large hematoma. Laboratory investigations revealed an isolated
- 8 prolongation of activated partial thromboplastin time (aPTT) not corrected by normal plasma, with a
- 9 factor VIII activity of 1% and an inhibitor titer of 12.8 BU/mL. One month later, the patient developed
- 10 cutaneous and mucosal hemorrhagic bullous lesions, and skin biopsy confirmed the diagnosis of
- 11 pemphigus. She received recombinant factor VIII and high-dose corticosteroids, followed by
- 12 cyclophosphamide and rituximab.
- 13 Conclusion: This case highlights an exceptional association between acquired hemophilia A and
- 14 pemphigus, emphasizing the importance of early diagnosis and coordinated multidisciplinary
- management to prevent severe hemorrhagic complications.

16 Introduction

- 17 Acquired hemophilia A (AHA) is a rare autoimmune bleeding disorder characterized by the
- development of neutralizing antibodies against coagulation factor VIII (1). Its incidence is estimated
- at 1–2 cases per million people per year. Unlike congenital hemophilia, which is hereditary, AHA
- 20 occurs later in life and affects both men and women equally.
- 21 The clinical presentation varies from mild spontaneous bruising to life-threatening bleeding, often
- 22 involving muscles or internal organs. Because of its rarity, diagnosis is frequently delayed or mistaken
- 23 for other conditions (2). The patient care pathway remains complex, often requiring hospitalization,
- 24 although outpatient management strategies are emerging.
- 25 The objective of this work is to describe a case of acquired hemophilia A revealing pemphigus in a
- 26 63-year-old woman, and to review the relevant literature.

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- 29 **Keywords:** Acquired hemophilia A, anti-FVIII antibodies, autoimmune disease, knee hematoma,
- 30 pemphigus

31 Case Report

- 32 A 63-year-old woman, with no notable medical history, was admitted for surgical management of a
- 33 right knee fracture accompanied by an extensive hematoma. She reported the recent onset of
- cutaneomucosal papules and spontaneous ecchymotic lesions prior to the trauma.

Laboratory investigations:

- Preoperative blood work showed hemoglobin 10.3 g/dL, leukocytes 9.8×10^9 /L, and platelets 256×10^9
- 37 10⁹/L. Prothrombin time (PT) was 82%, while activated partial thromboplastin time (aPTT) was
- prolonged (ratio = 2.9). The mixing test (Rosner index = 75%) confirmed the presence of an inhibitor.
- 39 Lupus anticoagulant testing was negative. Coagulation factor assays revealed factor VIII = 1%, factor
- 40 IX = 113%, factor XI = 74%, and factor XII = 71%. Anti-FVIII antibodies were detected by the Nijmegen
- 41 method (inhibition = 98%, titer = 12.8 BU/mL), confirming the diagnosis of AHA.

42 Management:

- 43 The patient received recombinant factor VIII and high-dose corticosteroids to control the bleeding
- 44 and immune response.

45 **Further investigations:**

- 46 Autoimmune screening was initially negative. One month later, she developed hemorrhagic bullous
- 47 lesions on the skin and mucosa. Skin biopsy and direct immunofluorescence showed intraepidermal
- 48 cleavage with intercellular IgG deposition, confirming pemphigus vulgaris.

49 Outcome

- 50 She was treated with a combination of cyclophosphamide and rituximab, resulting in complete
- 51 resolution of the hematoma, normalization of the coagulation profile, and improvement of the skin
- 52 lesions. A relapse occurred during corticosteroid tapering, requiring adjustment of
- 53 immunosuppressive therapy. The patient was discharged on oral corticosteroids with close follow-up.

54 **Discussion**

- 55 Hemophilia refers to a bleeding disorder caused by an isolated deficiency of a coagulation factor—
- 56 factor VIII in hemophilia A and factor IX in hemophilia B. These plasma glycoproteins are essential for
- 57 thrombin generation and fibrin clot formation. Their deficiency leads to delayed and reduced clot
- 58 formation, resulting in hemorrhagic manifestations.
- 59 Acquired hemophilia develops later in life and affects both sexes equally. It is caused by neutralizing
- 60 autoantibodies directed against coagulation factors, particularly FVIII or FIX. Most patients present
- with spontaneous or post-traumatic bleeding of varying severity (1).
- 62 Because of its rarity, AHA is often underdiagnosed. Patient management is complex due to diverse
- 63 hemorrhagic presentations and frequent comorbidities (2). AHA is the most common acquired
- 64 coagulation disorder, with an incidence of about 1.5 per million per year (3). Although rare, acquired
- 65 FVIII deficiency is more frequent than acquired FIX deficiency (4,5). Two incidence peaks are
- described: one between 20 and 30 years (often postpartum) and another after 60 years. Rare
- 67 pediatric cases have been reported, sometimes linked to transplacental transfer of maternal
- 68 antibodies (6–8).
- 69 Approximately 50% of AHA cases are idiopathic, while the rest are associated with autoimmune
- 70 diseases, malignancies, pregnancy, or drug exposure (7,9,1). Among autoimmune causes, pemphigus
- 71 is exceptional. It is characterized by autoantibodies targeting epithelial adhesion proteins
- 72 (desmosomes), leading to blistering of the skin and mucosa.
- 73 The coexistence of pemphigus and AHA likely reflects shared autoimmune mechanisms involving loss
- of immune tolerance and concurrent antibody production against FVIII and epithelial adhesion
- 75 proteins (1,7).
- 76 Treatment requires an individualized and multidisciplinary approach combining hemostatic therapy
- 77 (rFVIIa, FEIBA®, or FVIII concentrates) and immunosuppression (corticosteroids, cyclophosphamide,
- 78 or rituximab) to eradicate inhibitors and control autoimmunity.

Conclusion

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- 80 The association between acquired hemophilia A and pemphigus highlights the interplay between
- 81 autoimmune disorders and coagulation defects. Early recognition and multidisciplinary management
- 82 are essential to prevent life-threatening hemorrhagic complications. Further studies are needed to
- 83 elucidate the immunopathological links between these rare entities and to optimize therapeutic
- 84 strategies.

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

- 88 All authors contributed to patient management, manuscript preparation, and literature review. All
- 89 have approved the final version of this article.

90 References

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