

## Case Report

# Acquired Hemophilia A (AHA): A Rare Bleeding Disorder In a Tertiary Care Hospital In Dhaka, Bangladesh

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### Abstract:

Acquired Hemophilia A (AHA) is a rare bleeding disorder. This results from autoantibodies to factor VIII (FVIII) that neutralizes the ability of factor VIII. This causes potentially severe bleeding episodes that carries a high risk of morbidity and mortality. Acquired Hemophilia usually occurs over 60 years of age or in postpartum period and associated with other autoimmune conditions. The diagnosis should be suspected when patients with new onset of bleeding without prior personal or family history of bleeding. The hallmark of this condition is mucocutaneous bleeding leading to ecchymosis, malena, hematoma, hematuria and spontaneous oozing from wounds. Management should uphold both hemostatic therapies to minimize bleeding and immune modulation strategies to re-establish immune tolerance to factor VIII. Here we present an older male case of such Acquired Hemophilia A without history of previous anticoagulant therapy as well as family history or personal history of bleeding episodes. The patient has got hemiarthroplasty with prosthesis with bone cementing due to fracture neck of femur. After 10th post-operative day he was diagnosed with clot retention in catheter in-situ and oozing from wound site after 12th post-operative day. His laboratory reports showed prolongation of Prothrombin Time (PT) and Activated Partial Prothrombin Time (APTT). His factor VIII was very low level and factor VIII inhibitor showed the time depended inhibitor presence. Thus diagnosed as Acquired Hemophilia A (AHA), the rare case in Bangladesh. He was managed with medications that resulted in normalization of factor VIII level.

**Key words:** Acquired Hemophilia A, factor VIII, autoantibodies, factor VIII

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### Introduction:

Acquired Hemophilia A (AHA) is a rare disease that has an incidence report of 1 per million/year<sup>1</sup>. As the condition remains largely undiagnosed, especially in older people, the epidemiological data may be underestimated. It can be associate with underlying autoimmune condition, or malignancy, but 50% of cases showed idiopathic cause<sup>2</sup>.

Severe congenital hemophilia A (HA) develops alloantibodies in 30% of patients, while acquired hemophilia

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A (AHA) is a rare disease that arises from autoantibodies to coagulation factor VIII (FVIII)<sup>3</sup>. The vast majority of patients are adults with a median age of 64-78 years but pediatric cases has been reported<sup>4</sup>.

Formation of factor VIII inhibitory antibodies that inhibit the clotting function of factor VIII is the main cause of bleeding diathesis. The bleeding associated with AHA tends to be in mucocutaneous sites or soft tissues and can lead to recurrent gastrointestinal, intramuscular or intra cranial bleeding in elderly as well as from wound site of post-surgical cases<sup>5</sup>.

Subcutaneous bleeding (80%) is the most common presentation followed by bleeding in muscles (45%), gastrointestinal (21%), genitourinary (9%) and retroperitoneal (9%) spaces<sup>3,6</sup>. In postpartum cases, most common presentations are soft tissue, muscular and vaginal bleeding. Trans placental transfer of Ig G antibodies can result in neonatal bleeding<sup>7,8</sup>. The residual factor VIII

activity does not always predict the risks of bleeding but bleeding episodes are serious and the overall mortality approaches 20%<sup>9</sup>.

Clinicians must maintain a high index of suspicion for this diagnosis in adult patients with new onset of bruising or bleeding with prolonged Prothrombin Time (PT) and Activated Partial Thrombin Time (APTT). Lack of awareness due to the rarity of Acquired Hemophilia A (AHA) may delay the diagnosis. All the time the laboratory workup will be sent to a reference laboratory. In suspected cases initial tests should include an Activated Partial Thromboplastin Time (APTT) and Prothrombin Time (PT). Acquired Hemophilia A (AHA) patients will have an isolated prolonged APTT. Factor VIII activity is <1% in approximately 50% of cases and less than 5% in 75% of cases<sup>10</sup>.

#### Case summary:

Mr. X, 72 years old male was admitted in Popular Medical College Hospital with the complaints of fracture neck of femur due to fall. He was a known case of diabetes mellitus and hypertension. He was done Hip Prosthesis with hemiarthroplasty with bone cementing. His post-operative period was uneventful but on 10th POD (Post-Operative Day) he noticed acute retention of urine with blood clot in catheter in-situ. The clot was removed spontaneously and on 12th POD he developed oozing from the wound site. Though meticulous drainage and dressing was done, the wound bleeding was not stopped. All coagulation profile was done and it showed that his prothrombin time (PT) and activated partial thromboplastin time (APTT) was raised. Though his serial APTT was raised but his hemoglobin and platelet count was normal. D-dimer and fibrinogen levels were also normal. In the meantime he was transfused with five units of AB positive whole blood. Then his factor IX and factor VIII level was done which showed extremely diminished level factor VIII level. Inhibitor study of factor VIII showed presence of inhibitor of factor VIII which prompted us to be a case of Acquired Hemophilia A (AHA). He was then treated with recombinant factor VIII and antifibrinolytic medication as a conservative measure. After clinical improvement he was discharged with advice to consult with hematologists for further management.

#### Discussion:

Acquired Hemophilia A (AHA) carries a high rates of morbidity and mortality especially in elderly patients with other comorbidities. Studies showed that maximum cases of AHA patients are with a median age of 64-78 years<sup>11</sup>. The present case study is also 76 years old male with comorbidities like diabetes mellitus and hypertension.

Acquired Hemophilia A (AHA) is an autoimmune condition where there occurs sudden autoantibody inhibitor production against factor VIII though there is no previous history of bleeding episodes. The bleeding of Acquired Hemophilia A (AHA) can occur spontaneously or can be precipitated by events such as surgery<sup>5,12</sup>. The bleeding presentation of AHA is more severe than Hemophilia A (HA). Our study case is an old patient with comorbidities and has a surgical procedure which noticed suspicion of AHA.

A high degree of suspicion of bleeding without any previous bleeding will be counter act for AHA. Diagnosis of AHA should be suspected by its clinical presentation and confirmed by laboratory tests. Laboratory finding will show increase in PT and APTT with normal platelet count, fibrinogen and thrombin time. This indicates to either an intrinsic pathway problem (deficient factor VIII) or presence of factor inhibitor<sup>13-15</sup>. In this study case, factor VIII showed much diminished level and inhibitor studies also showed time dependent factor inhibitor.

Acute bleeding episodes can be managed by blood transfusion and supplementation by recombinant factor VIII institution. Long term management of the condition can be done by controlling the inhibitor activity<sup>16</sup>. In this case, the patient received recombinant factor VIII concentrate and steroid. Immunosuppressive agents like rituximab, cyclophosphamide and IV Ig cannot be provided because of cost constraints.

AHA though rare and a serious condition in which severe bleeding can occur in significant number (70%) cases and fatal in 5-10 percent cases. Delayed diagnosis, treatment inadequacies and hemorrhagic complications during invasive procedures may increase the death rate over 40 percent<sup>17,18</sup>. So high degree of suspicion regarding AHA should be the corner stone of earlier diagnosis and management.

#### Conclusion:

Acquired hemophilia A is a rare disorder of autoimmune nature which carries a high risk of mortality and require prompt treatment. Autoantibodies forms against factor VIII and prompt attention to control bleeding should be done to reestablish factor VIII immune tolerance. Management of bleeding episodes and use of immunosuppression medications may result in good prognosis.

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