A Bleeding Maze: Acquired Hemophilia A Manifested As a Spontaneous Intramuscular Hematoma

Li-tan Yang, M.D. [1], Chia-ming Chang, M.D.[1,2]

[1]Department of Internal Medicine, National Cheng Kung University Hospital, Tainan, Taiwan

[2] Institute of Gerontology, College of Medicine, National Cheng Kung University, Tainan, Taiwan

Abstract

Acquired inhibitors against factor VIII (FVIII), also termed acquired hemophilia A (AHA), is a rare autoimmune disease which may pose a high risk of bleeding in the elderly leading to mortality or morbidity. We presented a case of AHA that was diagnosed promptly and treated successfully.

Case description

A 94 year-old woman presented with a 2-day history of acute progressive right thigh swelling and pain leading to disability in carrying daily activities of living. On admission, her blood pressure was 137/85 mmHg, the pulse 90 beats per minute, the temperature 36.2 ºC, and respiration rate 20 breaths per minute. The physical examination revealed pale conjunctiva and a localized ecchymosis over the lateral aspect of her right thigh extending to upper portion of her right lower leg with mild erythematous change. In palpation, a firm induration with tenderness and local heat were noted except a normal capillary refilling time in her right foot. The soft tissue sonography confirmed a hematoma (13 cmx 5 cm) in her right thigh. Tracing back her histories, she had uncomplicated course while giving birth to 6 children and uneventful orthopedic surgery for her right femoral neck fracture 5 years ago. Except having easy bruising over bilateral hands and dorsal feet in recent one year, she declared no trauma events, no regular medications use nor family history of bleeding diathesis. Elderly abuse was less likely after thorough evaluation and history taking. The hemoglobin was 11.4 g/dl (normal range, 11.6 to 14.8), with a mean corpuscular volume of 97 fl (normal range, 82.7 to 95.5). The platelet count was 184,000 per cubic millimeter, the prothrombin time 11.1 seconds (normal range, 9.4 to 12.5), and the activated partial-thromboplastin time 94 seconds (normal range, 26 to 38). Electrolytes, liver and renal function tests were within the normal range. Fecal occult-blood test was negative . Further surveys yielded an uncorrected APTT on a plasma mixing test and a negative lupus anticoagulant test. Factor VIII activity was 7% (normal range, 58 to 118), factor IX activity 119% (normal range, 58 to 130), and the von Willebrand factor antigen level 253% (normal range, 50 to 150). The factor XIII inhibitor titer was 11 Bethesda unit (BU) (normal range, 0-0.5) via the Bethesda assay. On the second day of hospitalization, the right thigh hematoma enlarged with a hemoglobin level dropped to 7.5 g/dl despite

transfusion with fresh frozen plasma and packed red blood cells. She underwent urgent treatment with recombinant activated factor VII (rFVIIa) at a dosage of 90 μg/kg for 3 times in total with a 2 hour dosing-interval with concomitant prednisolone use (1mg per kg per day). The clinical response was good. The patient was discharged 13 days later with gradually normalized hemoglobin, APTT, factor VIII activity and factor VIII inhibitor titer at follow-up in the clinic.

Discussion

AHA carries high mortality due to bleeding and has an incidence estimated to be 0.045 per million/year in children aged below 16 compared to14.7 per million/year in adults aged more than 85 years. [2] Half of affected cases are previously healthy and the rest may be associated with conditions such as postpartum period, autoimmune diseases, hematologic malignancies or solid cancers. [1] Initial detection of a prolonged APTT with failures of correction by a mixing test in a patient lacking of previous histories of bleeding alerts and reminds a physician such a disease. Diagnosis is confirmed by a reduced FVIII level along with a high titer of FVIII inhibitor via the Bethesda assay. Treatment includes control of bleeding and eradication of the inhibitors, which differs individually in regard to the severity of bleeding and the titers of FVIII inhibitors. Early recognition and rapid diagnosis are crucial to minimize bleeding complications while confronting this uncommon disorder.

References

1. Franchini M, Lippi G. Acquired factor VIII inhibitors. Blood. 2008; 112: 250- 255.
2. Collins PW, Hirsch S, Baglin TP, Dolan G, Hanley J, Makris M, Keeling DM, Liesner R, Brown SA, Hay CRM. Acquired haemophilia A in the UK: a two year national surveillance study by UK Haemophilia Centre Doctors' Organisation. Blood. 2007; 109: 1870- 1877.

Figure