Case Report

Acquired factor VIII inhibitor syndrome: A rare cause of hematuria

Muthuvel Seral Kannan, Thallur Ramakrishnan Raj Kumar, Srinivasan Subramanian

Department of Urology, SRM Medical College, Kattankulathur, Tamil Nadu, India

ABSTRACT

A 50-year-old woman presented with gross hematuria for 1 month. Clinical examinations, laboratory investigations, ultrasound and contrast computed tomography were normal, except anemia. Cystoscopy revealed bloody efflux from the right side. Retrograde pyelogram showed filling defect in the renal pelvis and biopsy was inconclusive. Renal angiogram was normal. She developed ecchymosis on the right thigh and arm with elevated activated partial thromboplastin time. The partial thromboplastin time correction study and Bethesda study confirmed the presence of acquired factor VIII inhibitor (acquired hemophilia). With flexible ureterorenoscopy, the mass in the renal pelvis was removed and its histopathology revealed clotted blood. The patient was subsequently managed with steroids and Factor eight inhibitor bypass activity.

Key words: Acquired factor VIII inhibitor, acquired hemophilia, hematuria

INTRODUCTION

Hematuria is one of the most common presentations in the Urology clinic. Visible hematuria is an indication for detailed evaluation. Most cases of hematuria can be diagnosed by urinalysis, urine culture, urinary cytology, computed tomography, and rigid and flexible cysto-ureteroscopy. However, some cases are challenging and, rarely, can go undiagnosed. We present a rare cause of hematuria that was challenging both to diagnose and to treat.

CASE REPORT

A 50-year-old woman presented with a 1-month history of painless gross hematuria without clots. She had no history of loss of weight or appetite. She was a known diabetic, hypertensive and ischemic heart disease patient and on regular treatment but not on any anticoagulants. On examination, she was hemodynamically stable. Abdominal examination was unremarkable. Full blood count showed hemoglobin to be 10.6 g/dL. Urinalysis revealed significant hematuria. Bleeding time, clotting time, liver function tests, urine culture and urine cytology were unremarkable. Ultrasound and contrast CT KUB showed no calculus or mass lesions. Cystoscopy with retrograde pyelogram revealed efflux of blood from the right ureteric orifice and a filling defect in the renal pelvis [Figure 1]. Biopsy of the floating brownish lesion with attachment to the renal pelvis using a semi-rigid ureteroscope was reported as fibrocollagenous material with no evidence of malignancy. However, the semi-rigid ureterorenoscope was unable to definitively rule out malignancy and flexible ureteroscope was planned. The patient continued to have hematuria and received eight units of packed red blood cells and eight units of fresh frozen plasma. She underwent super selective renal angiogram that was normal. However, she developed swelling and ecchymosis at the right thigh (puncture site), which was confirmed to be a pseudoaneurysm in the duplex scan. She also started developing ecchymotic patches around the intravenous puncture sites. During anamnesis, it was revealed that the patient had bruises 2 weeks ago following insulin injection.

At this juncture, her activated partial thromboplastin time (APTT) was raised but D dimer, fibrinogen and fibrin degradation product were normal. A PTT correction study revealed coagulation inhibitor syndrome. The most common

For correspondence: Dr. Muthuvel Seral Kannan, A15, Sonex Supriya, 26 Panneer Nagar, Mogapair, Chennai - 600 037, Tamil Nadu, India.
E-mail: seralkannanm@yahoo.co.in

Access this article online

Quick Response Code:

Website: www.indianjurol.com

DOI: 10.4103/0970-1591.139551

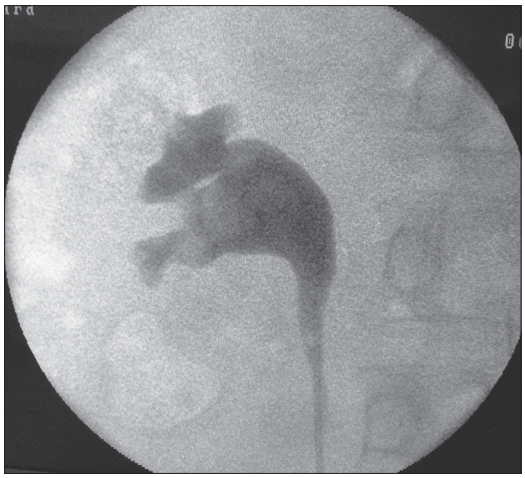

Figure 1: Filling defect RGP retrograde pyelogram

inhibitor lupus anticoagulant was negative. The Bethesda test confirmed acquired factor VIII inhibitor syndrome with a value of 1.6 Bethesda Unit. Flexible ureteroscopy showed hyperemic patches and brownish floating material in the right renal pelvis that was completely removed using a Dormia basket. This was confirmed to be blood clots on histology. The patient was subsequently managed jointly with a hematologist and treated with prednisolone and Factor VIII inhibitor bypass activity (FEIBA), and hematuria settled.

DISCUSSION

Hematuria is the initial presentation of many common urological diseases. Hematological conditions can present as hematuria, although their incidence is rare. Isolated presentation of hematuria is even rarer as these bleeding disorders are accompanied by bleeding at other sites. Acquired factor VIII inhibitor syndrome is one such condition with an incidence of about one case per million per year.[1] In this condition, autoantibodies are formed against factor VIII. The median age of presentation is between 60 and 67 years. Acquired hemophilia is different from the congenital type as it has no genetic inheritance pattern and hemarthroses are seldom present. It could cause significant morbidity with bleeding tendencies, and the mortality rate is 8-22%.[2,3]

Acquired hemophilia is associated with autoimmune disorders, malignancy (solid, lymphoproliferative), skin diseases (pemphigus, epidermolysisbullosa), infections, drugs and post-partum state, but these are mostly idiopathic.[2,3] The diagnosis is based on isolated prolongation of activated partial thromboplastin time not corrected by PTT correction study and confirmation by Nijmegen modification of the Bethesda assay showing reduced factor VIII levels with evidence of factor VIII inhibitor activity.

Treatment is aimed at (1) controlling bleeding and its complications and (2) eradication of the inhibitor. Fresh frozen plasma and cryoprecipitate will not control bleeding as they do not contain sufficient factor VIII to overcome the inhibitor. If the plasma levels of factor VIII are raised to 30-50% in an acquired hemophilic patient, hemostasis could be generally achieved if the inhibitor assay is less than 5 BU (Bethesda Unit). 1-deamino-8-D-arginine vasopressin (DDAVP) or infusion of factor VIII (either human or porcine) is used to achieve the higher levels. However, if high-titer antibodies are present (more than 5 Bethesda Unit) to obtain hemostasis, bypassing agents like either activated prothrombin complex concentrate (aPCC) (FEIBA) or recombinant activated factor 7(rFVII) (Novaseven) is needed.[4]

Corticosteroids, cytotoxic drugs such as cyclophosamide, azathioprine, vincristine, cyclosporine and rituximab, and high-dose intravenous immunoglobulins are used alone or in combination to eradicate the autoantibodies.[5]

CONCLUSION

The possibility of acquired hemophilia should be considered if elderly individuals present with severe hematuria, isolated APTT elevation, and when all other urological investigations were not contributory. This case is presented in view of the rarity of acquired factor VIII inhibitor syndrome, with only hematuria as the main symptom mimicking urological malignancy.

REFERENCES

1. Hay CR. Acquired haemophilia. BailliersClinHaematol 1998;11:287-303.
2. Green D, Lechner K. A survey of 215 non-hemophilic patients with inhibitors to Factor VIII. ThrombHaemost1981;45:200-3.
3. MorrisonAE, Ludlam CA, Kessler C. Use of porcine factor VIII in the treatment of patients with acquired hemophilia. Blood1993;81:1513-20.
4. Sallah S. Treatment of acquired haemophilia with factor eight inhibitor bypassing activity. Haemophilia2004;10:169-73.
5. Collins PW. Treatment of acquired hemophilia A. J ThrombHaemost 2007;5:893-900.

How to cite this article: Kannan MS, Raj Kumar TR, Subramanian S. Acquired factor VIII inhibitor syndrome: A rare cause of hematuria. Indian J Urol 2015;31:73-4.

Source of Support: Nil, **Conflict of Interest:** None declared.