Autoimmune Hemolytic Anemia in the Old Man: A Case Report

Wattana Insiripong *,
Somchai Insiripong, M.D.**

Abstract: Autoimmune hemolytic anemia (AIHA) is considered one of the rare causes of the hemolytic disease. And it can be found as the primary disease or as the complication of various abnormalities including syphilis. Herein we report a case of AIHA in the old man presumably due to latent syphilis. He is a 79-year-old Thai man presenting with gradual fatigue for three weeks without fever and nothing was detected on the physical examination, except for the moderate pallor. His blood tests were found positive for the direct antiglobulin test, VDRL as well as FTA-Abs and HBsAg but normal liver function test. The cerebrospinal fluid showed negative for VDRL. He was diagnosed as having AIHA with the underlying latent syphilis and hepatitis B carrier. After the 3-week treatment with parenteral benzathine penicillin and prednisolone 60 mg. a day was accomplished, his hemoglobin concentration was not increased so azathioprine and danazol were added. Within 10 weeks, Hb level was raised from 5.0 g% to 7.0 g% without blood transfusion. Our case seems to have poor response to any immunosuppressant possibly because of the long term syphilis or hepatitis B virus carrier. Therefore, the investigation of syphilis and hepatitis B virus should not be ignored when the elderly male with AIHA of unobvious causes is encountered.

Key words: Autoimmune hemolytic anemia, Syphilis, Hepatitis B Virus Carrier

บทคัดย่อ: **Autoimmune Hemolytic Anemia ในชายสูงวัย: รายงานผู้ป่วย 1 ราย**

วัฒนะ อินทรศิริพงษ์*, สมชาย อินทรศิริพงษ์, พ.บ.**
*นักศึกษาแพทย์, มหาวิทยาลัยแพทยศาสตร์จีน, เสิ่นหยาง, สาธารณรัฐประชาชนจีน
**หน่วยโลหิตวิทยา, กลุ่มงานอายุรกรรม โรงพยาบาลมหาราชนครราชสีมา จ.นครราชสีมา 30000
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*Medical Student, China Medical University, Shenyang, People's Republic of China,
**Hematology Unit, Department of Medicine, Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima 30000

Autoimmune hemolytic anemia (AIHA) ถือว่าเป็นโรคเม็ดเลือดแดงแตกง่ายที่ยังพบได้น้อยโรคหนึ่ง อาจจะเกิดเป็นขึ้นมาเอง หรือเป็นจากสาเหตุต่าง ๆ รวมทั้งซิฟิลิสก็ได้ ในการศึกษานี้เป็นรายงานผู้ป่วยโรค AIHA ที่พบในชายสูงวัย ที่คิดว่าเกิดจากซิฟิลิสในระยะแฝงตัว ผู้ป่วยเป็นชายไทย อายุ 79 ปี มีอาการเหนื่อยง่ายแบบค่อยเป็นค่อยไปเป็นเวลา 3 สัปดาห์ โดยไม่มีไข้ ตรวจร่างกายพบเพียงซีดขนาดปานกลางอย่างเดียว ตรวจเลือดพบว่า direct antiglobulin test, VDRL รวมทั้ง FTA-Abs และ HBsAg ให้ผลบวก แต่ตรวจการทำงานของตับปกติ ตรวจ VDRL ในน้ำหล่อสมอง และไขสันหลังให้ผลลบ ให้การวินิจฉัยว่าเป็น AIHA ร่วมกับซิฟิลิสระยะแฝงตัว และเป็นพาหะของไวรัสตับอักเสบ บี หลังจากให้การรักษาด้วยการฉีด benzathine penicillin และ prednisolone 60 มก. ต่อวันจนครบ 3 สัปดาห์แล้ว ความเข้มข้น hemoglobin ก็ไม่เพิ่ม จึงเพิ่มยา azathioprine และ danazol ภายในทั้งหมด 10 สัปดาห์ Hb เพิ่มขึ้นเล็กน้อยจาก 5.0 g% เป็น 7.0 g% โดยไม่ได้ให้การเติมเลือด โดยความเป็นจริงไม่ว่าจะเป็นโรคซิฟิลิส หรือการเป็นพาหะของไวรัสตับอักเสบ บี เป็นเวลานาน ๆ ก็อาจจะส่งเสริมให้ผู้ป่วยเกิด AIHA จนปรากฏอาการได้ ดังที่พบในผู้ป่วยรายนี้ และทั้งสองอย่างคงเป็นปัจจัยที่สำคัญทำให้ผู้ป่วย AIHA รายนี้ไม่ตอบสนองต่อยากดภูมิต้านทานต่าง ๆ ดังนั้นถ้าพบผู้ป่วย AIHA ที่ไม่มีสาเหตุชัดเจนในผู้ชายสูงวัย การส่งตรวจเลือดเพื่อหาหลักฐานการติดเชื้อซิฟิลิส และไวรัสตับอักเสบ บี ไม่ควรจะถูกละเลย

คำสำคัญ: Autoimmune hemolytic anemia, ซิฟิลิส, พาหะไวรัสตับอักเสบบี

Introduction

Autoimmune hemolytic anemia (AIHA) is the acquired hemolytic disease due to the specific antibody against its own red blood cell and it is considered one of the uncommon causes of the hemolytic anemia. Its severity can range from asymptomatic to life threatening and the onset may be acute or gradual, and it may run short or chronic course. Majority of AIHA patients do not have the causes, socalled primary (idiopathic), around 63%[1] and minority are found associated with various groups of diseases such as lymphoproliferative disorders[2] infections, other autoimmune disorders[3] especially SLE-the most common[1], other malignancies[4] and many drugs[5] .Various infections including HIV[6], type A influenza[7], varicella[8], Mycoplasma pneumoniae[9] and Treponemapallidum infections[4,10], have been occasionally recognized associated with AIHA. The diagnosis of AIHA depends on the clinical manifestations with the demonstration of the specific antibody against self RBC antigen or positive antiglobulin test or direct Coombs'test. And its first-line therapy in clinical practice is corticosteroid which is effective in 70-85 % of the patients[11]. And herein, we report a case of AIHA with the underlying latent syphilis and hepatitis B carrier.

Case Report

A 79-year old man presented with gradual fatigue for 3 weeks, no fever, no cough, no orthopnea, and no hepatosplenomegaly on the physical examination, except for the moderate pallor.

Blood test: Hb 5.0 g%, Hct 16.0 %, WBC 23,000/mm^3, platelet 293,000/mm^3, creatinine 0.93 mg%

Hb electrophoresis: AE, Hb E 27.4 %, Hb F 0.3 %

VDRL-positive 1:2, FTA-Abs positive 22.91, direct antiglobulin test-positive, 1+, indirect antiglobulin test-positive 3+, reticulocyte 1.2 %, serum cryo-globulin-weakly positive, cryocrit<1 %,ANA-positive 1:80 (anti-midbody pattern), HBsAg-positive, HBeAg-negative, anti-HCV-negative, anti-HIV-negative, *Mycoplasma pneumonia* antibody-negative, alpha fetoprotein 4.47 IU/mL (0-15), CEA 1.60 ng/mL (0-5), PSA 1.54 ng/mL (0-6.5), CA 19-9 6.70 U/mL (0-37) FBS 102 mg%

CFS fluid: mononuclear cell 1/mm^3, sugar 91 mg%, protein 34 mg%, VDRL non-reactive

The bone marrow biopsy: normocellularity 40%, myeloid: eythroid 1:1, adequate megakaryocyte

The chest film was unremarkable study and the ultrasonography of the upper abdomen: parenchymal liver disease, distended GB and sludge bile, thickened GB wall suggesting cholecystitis.

He was definitely diagnosed as AIHA with the underlying late latent syphilis and hepatitis B virus carrier and treated with weekly parenteral benzathine penicillin 2.4 mU for 3 weeks and prednisolone 60 mg a day. The Hb concentration was not improved in one month, so azathioprine 50 mg and danazol 150 mg a day were added. Two and a half months follow-up, the blood tests were: Hb 7.0 g%, WBC 10,600/mm^3, platelet 764,000/mm^3.

Discussion

Our case was definitely diagnosed as late latent syphilis based on the positive blood test of FTA-Abs, 22.91[12] whereas the diagnosis of AIHA based on the anemia with positive direct antiglobulin test. When he was treated with the parenteral injection of benzathine penicillin for 3 weeks and prednisolone 60 mg a day, his Hb was not raised. Rattarittamrong et al found 96% of Thai AIHA patients responded well to steroids and it was not different between primary and secondary AIHA[1]. So the second-line therapy was needed.

Other possible causes of AIHA are demonstrated to be negative such as SLE, hematologic malignancies especially chronic lymphocytic leukemia and lymphoma, therefore AIHA in this case should be presumably associated with latent syphilis[4,10] as well as hepatitis B virus[13].

VDRL can be falsely positive in cases of AIHA or ITP as well as SLE because it tends to occur in persons who have a long-standing occult immunologic defect that often has a genetic basis[14] however FTA-Abs is more specific for treponemal infections such as syphilis, yaws and pinta[15].

AIHA used to be found in the case of long term asymptomatic hepatitis B virus carrier with[16] or without autoimmune hepatitis[13]. Our case is found to be hepatitis B carrier without clinical hepatitis therefore it cannot be definitely concluded whether hepatitis B or syphilis plays major role to underlie AIHA. However, after the treatment of latent syphilis is accomplished, the Hb concentration is not raised, so AIHA may be associated with hepatitis B virus more than syphilis.

Of 101 Thai patients with AIHA, 77% were female with a median age of 43 years, 61% were primary AIHA. The secondary causes were systemic lupus erythematosus (SLE) (64%). Most patients (96%) responded to steroids, which were not different between primary and secondary AIHA. The response rate for second-line treatments was 93%[1]. All these were opposite to our patient, so AIHA in the old man

needs to be investigated for the underlying diseases particularly the infections.

Conclusion

A 79-year-old Thai man was diagnosed as AIHA for 3 weeks with the underlying latent syphilis and hepatitis B virus carrier. After treatment for latent syphilis and prednisolone, the Hb level is not raised. Therefore, hepatitis B virus may be responsible for AIHA more than syphilis.

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