AUTOIMMUNE HAEMOLYTIC ANAEMIA IN PREGNANCY: A CASE REPORT WITH LITERATURE REVIEW

Razaul Karim[1*] Amir Hossain[2] Mehrunnissa Khanom[3] Mohammad Kamrul Islam[1]

Abstract

Autoimmune Haemolytic Anaemia (AIHA) results from increased red cell destruction due to red cell autoantibodies. Pregnancy associated AIHA is a very rare condition with unexplained entity, but can be dangerous for both fetus and mother. A case of multipara lady who developed haemolyticanamia during pregnancy, with a wide range of differential diagnosis. She was responded well to moderate dose of steroid with good feto-maternal outcome. Autoimmune haemolytic anaemia in pregnancy has rarely been reported in literature, which deserve its presentation.

Key words

Autoimmune haemolytic anaemia; Pregnancy; Steroid

Introduction

The incidence of Autoimmune Haemolyti Canaemia (AIHA) is considered-uncommon with prior estimates of 1 to 3 in 100000 population annually and a mortality rate of 11%. This results from increased destruction due to red cell autoantibodies. When such an autoantibody belongs to the IgG class, the condition is potentially dangerous to both the mother and the fetus, since IgG crosses the placenta readily[1]. We report a case of multipara lady who developed idiopathic haemolyticanaemia in the third trimester of pregnancy. The diagnosis and management of AIHA in pregnancy continue to be challenging in current practice.

Case Report

Mrs. 'S' 25 -year, with 26 weeks of pregnancy, admitted in Chattogram International Medical College Hospital (CIMCH) on 8th December 2018 with the complaints of severe weakness, palpitation and blurring of vision for 2 months associated with easy fatigability, body ache and exertional breathlessness. She had no history of chest pain, orthopnea, altered bowel habit, joint pain, oral ulcer, cough, melaena and any bleeding from other sites. She consulted local physician and got 11 unit fresh blood transfusion. She had history of 1 medical abortion and 2 normal pregnancy and delivery at term. She also got 2 unit fresh blood during her previous delivery and treated with Iron, Folic acid.She also complain dark colour urine for 2-3 days just after transfusion.She is nonsmoker, nonalcoholic and none of her family member is suffering from same illness. She was immunized according to EPI schedule.

Physical examination revealed marked pallor, tachycardia, tachypnea and mild jaundice. There was no lymphadenopathy.Abdominal examination revealed the uterine height corresponded to her gestation, her fetal heart sound was normal and liver, spleen were not palpable. Her other systems were unremarkable.

Her haematological investigations showed severe anaemia with high reticulocyte count. Peripheral blood smear showed microcytes with polychromatic macrocytes, pencil cell, spur cell and neucleated RBC. The Direct Coombs Test (DAT) was positive. Haemoglobin electrophoresis was normal. Biochemical analysis showed hyperbilirubinaemia with normal ALT, AST and high LDH level. Serum iron, vit-B_{12}, folate level were normal. VDRL was nonreactive, ANA, Anti-CCP were negative. An abdominal ultrasound did not show any fetal abnormalities and organomegaly. The patient's blood group was "O" positive.

Patient was managed with a multidisciplinary team. A working diagnosis of idiopathic autoimmune haemolytic anaemia in pregnancy was made. Prednisolone 40 mg daily started with coadministration of iron, folic acid, calcium, proton pump inhibitor and blood transfusion. The fetal status was observed daily and maternal blood tests were checked regularly.The haemoglobin level be

1. Assistant Professor of Medicine
Chattogram International Medical College, Chattogram.
2. Professor of Medicine
Chattogram International Medical College, Chattogram.
3. Associate Professor of Medicine
Chattogram International Medical College, Chattogram.

***Correspondence:** **Dr. Razaul Karim**
E-mail: razaulkarimsomc02@gmail.com
Cell: 01816 15 27 97

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gan to rise after administration of steroids and these treatment improved the patient's condition. After 4 weeks, her hemoglobin level reached 10.5 gm/dl. The prednisolone dosage was decreased to 0.5 mg/kg per day. At term she delivered a healthy baby by vaginal delivery without any complication. The mother was followed up after delivery and medical management was continued.

Discussion

Autoimmune Hemolytic Anemia (AIHA) is a clinical condition caused by IgG, IgM, or IgA antibodies to red blood cell. This condition affects 1-3 per 100,000 individuals per year[2]. AIHA in pregnancy provoked life-threatening anaemia in 40-50% of the mothers, and stillbirths or severe postpartum haemolyticanaemia in 35-40% of their infants[3]. Literature search revealed few case reports with different pathogenesis and variation in the clinical manifestation. Case reports showed the patient positive for IgG (Warm antibodies, immune mediated) responded well to glucocorticoids[1,4-5]. When a pregnant patient presents with warm autoimmune hemolytic anaemia (WAIHA) it is important to rule out the presence of an underlying disease and treat the condition. The anaemia is usually severe, even life- threatening to the mother and fetus[6]. Symptoms and physical findings reflect the premature destruction of RBCs with inadequate compensation of bone marrow and the secondary effect of hemolysis[7]. Diagnosis of AIHA is based on evidence of anaemia, jaundice ,splenomegaly, reticulocytosis, raised serum bilirubin and a positive Direct Antiglobulin Test (DAT). A Doppler assessment of the fetal Middle Cerebral Artery (MCA) Peak Systolic Velocity (PSV) is the best non- invasive tool for predicting fetal anaemia in at- risk pregnancies[8]. Invasive techniques such as amniocentesis or cordocentesis are more hazardous to the mother and fetus and should be reserved for patients with increased MCA-PSV[9]. Corticosteroid is the usual first- line treatment for patients with warm antibody AIHA. Immunosuppression may be attempted after other measures have failed. However, this treatment should be considered teratogenic and contraindicated during pregnancy unless absolutely required to treat maternal life- threatening conditions. Rituximab administration during pregnancy appears to be safe for the child[10]. In studies with>3 years of follow-up, the relapse rate was ~ 5o%. However, most patients responded to rituximab treatment[11,15]. In recent guideline, high-dose immunoglobulin was not recommended for use in AIAH, except under certain life-threatening circumstances[12]. Blood transfusion therapy in AIHA is challenging, and the most compatible red blood cells (i.e those with the least cross-reacting antibodies) should be given[13]. RBC transfusion may be necessary particularly for patients with coronary artery disease with increased risk of cardiac or cerebral events, and life-threatening situations related to the anaemia[14,16-20]. Transfusion may worsen the anaemia and is best avoided[21].

Conclusion

AIHA in pregnancy has been one of the rare medical cases in the world. The diagnosis, prognosis, management of autoimmune haemolytic anaemia continue to be challenging in current practice. Therefore, Extensive knowledge of and experiment with AIHA has not been found with enough medical literatures. As a result, this case has to be taken into account with individual perspective. The case that this report is made of is an example of rarely found medical issue for practitioners that can be given a certain form of practical focus to deal with the patients that might come to them with the similar presentation of the patient we discussed.

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Contribution of authors

Equal.

Disclosure

All the authors declared no competing interest.

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