



EVANS SYNDROME IN PREGNANCY: A CASE REPORT

Obstetrics & Gynecology

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ABSTRACT

Evans syndrome (ES) in pregnancy is a rare condition as the presence of autoimmune cytopenia leads to a combination of Autoimmune Hemolytic Anemia (AIHA) and Immune Thrombocytopenia (ITP). Evans syndrome in pregnancy could cause thrombocytopenia and intracranial hemorrhage which resulted in neurological disorders with a frequency of 1-3%. We reported a 28 years old woman in her third trimester pregnancy with ES in Sanglah General Hospital, Denpasar. The direct Coombs test result was positive. During observation, fetal distress was found and an emergency caesarean section was performed. A baby boy was born weighed 1700 gram and no congenital anomalies were found. The mother was in a good condition and active bleeding was not found. She was allowed to go home with analgetic, iron supplementation, folic acid, and steroid. A proper diagnosis and monitoring, as well as multidisciplinary management, played an important role in improving maternal and neonatal outcomes in patients.

KEYWORDS

Evans Syndrome, Hemolytic Anemia, Thrombocytopenia

INTRODUCTION

Evans syndrome (ES) was defined as the presence of autoimmune cytopenia that affects two or more blood cells that occur simultaneously or sequentially. Evans syndrome usually refers to a combination of Autoimmune Hemolytic Anemia (AIHA) and Immune Thrombocytopenia (ITP) but can also be accompanied by Autoimmune Neutropenia (AIN).^[1] Being a rare condition, the annual incidence of ES is only 0.8-3 cases per 100,000. In most cases of ES in pregnancy, anemia and thrombocytopenia occurred at the same onset or sometime after delivery. Evans syndrome in pregnancy could cause thrombocytopenia in the fetus and neonate which can cause intracranial hemorrhage which resulted in neurological disorders with a frequency of 1-3%.^[2] In this case, we report a case of pregnancy with ES in Sanglah General Hospital, Denpasar in which the lack of literatures and references was one of the reason this case was chosen.

CASE REPORT

A 28 years old woman in her second pregnancy, diagnosed with Anemia. She was tested with Coombs test in her 36-37 weeks of pregnancy at Udayana Regional Hospital, Bali with positive result. The first pregnancy went smoothly without any complications. She then had epistaxis one week before admission without any history of trauma. It is known that the patient had a history of low hemoglobin level since 2017 and was said to suffer from hemolytic anemia, she was then given PRC transfusion and oral methylprednisolone in the past. Initially methylprednisolone was given twice daily, but she discontinued her medication on her own. From her family history, her mother died due to leukemia. The patient was then referred to Sanglah General Hospital for further treatment.

No abnormalities were found on physical examination. Further examinations found decreased hemoglobin levels of 5.05 mg/dL and decreased platelet levels of 107,000/ μ L, while leukocyte levels were found to be increased to 18,110 / mm³. Peripheral blood smear examinations showed normochromic normocytic erythrocyte, leukocytosis, and thrombocytopenia. The direct Coombs test result was positive. Patients was diagnosed with suspect Evans Syndrome and hemolytic anemia, she was transfused with 1 bag of PRC each day. Injection of methylprednisolone 250 mg over 12 hours, and folic acid tablets of 2 mg twice daily was given. A fetal scan showed that the fetus was in good condition.

On second day of treatment, the patient had another epistaxis and manual hemostasis was performed to stop it. After getting a transfusion for 2 days her hemoglobin level increased to 8.38 mg/dL. Ruptured membranes accompanied by a dull ache at the pelvic area was complained by the patient, fetal movement was good. We decided to observe patient's progress of labor. Ripening agent, misoprostol 25

mcg every 6 hours was given. After five hours of observation, a decrease in fetal heart rate was found. Therefore, we decided to perform an emergency caesarean section along with Pomeroy Bilateral Tubectomy. Informed consent was taken from the patient and her husband. A baby boy was born weighed 1700 gram and no congenital anomalies were found.

Two days post operative, the patient was in good condition and active bleeding was not found. She was allowed to go home with analgetic and iron supplementation, meanwhile methylprednisolone 48 mg once daily in the morning and folic acid 2 mg twice daily was prescribed by the Hematology division. Her recovery post-operative went without any difficulties.

DISCUSSION

Evans syndrome caused by immune dysregulation involving cellular and humoral immunity, which is characterized by antibodies to erythrocytes, platelets, granulocytes, and a decrease in the ratio of CD4: CD8. Previous research by Teachey et al. shows that ES cases are only found in 25 pregnant women per 1,000,000 populations. Evans Syndrome is relatively rare, especially in pregnant women so the diagnosis requires a thorough investigation to prevent overdiagnosis. In most cases of ES in pregnancy, anemia and thrombocytopenia occur at the same onset or sometime after delivery.

A systematic literature review conducted by Lefkou et al. of 13 publications on Evans syndrome in pregnancy showing that the median age being diagnosed is 21 years and the average gestational age when diagnosed is 14-38 weeks.^{[1],[3]} In this case report, the patient was diagnosed with suspect Evans syndrome in her second pregnancy when she was 28 years old. From her obstetric history we can see that she was known to have low hemoglobin level since 2017 in which we can assume that she had already had Evans syndrome since 2017.

The pathogenesis of Evans syndrome in pregnancy was not understood clearly until now. Several studies have shown that AIHA can appear or get worse during pregnancy. Cytokine activity during pregnancy often changes so that it can induce antibody reactions.^[3] Research by Wikman et al. shows that cytokines such as IL-8 play a role in the activation of autoantibodies.^[4]

The diagnosis of ES in pregnancy is made by excluding other causes of acquired cytopenia. The first simple investigations performed are complete blood tests and blood smears. A peripheral blood smear will confirm the presence of cytopenia and show signs of AIHA (polychromasia, spherocytes) and rule out other diagnoses (malignancy, microangiopathic hemolytic anemia, and congenital hemolysis). Hemoglobin is usually found below 7 mg/dL. Serological evidence is obtained by looking at the immune response to autologous

red blood cell antigens that can be detected by direct antiglobulin test (DAT) or indirect antiglobulin test (IAT).^{[1],[3],[5]} In this case report, we found that the patient had severe normochromic normocytic anemia, leukocytosis and also thrombocytopenia. Increased LDH levels and Positive Coombs test was also found so we can conclude that AIHA (Autoimmune Hemolytic Anemia) was the cause of hemoglobin loss. One of the differences between ES that occurs in pregnant women with children and adults is that in pregnant women no neutropenia is found, whereas in children and adult neutropenia is found in 14-25% of cases. One of the causes is thought to be due to the effects of neutrophilia related to pregnancy. The clinical spectrum found in pregnant women with ES is also lighter when compared to women without pregnancy, this is related to the absence of neutropenia. However, some dangerous complications can be found in ES pregnancies such as preeclampsia, placental abruption, and post-partum hemorrhage. Evans Syndrome in pregnancy will generally improve with good management, it responds to conventional therapy, and spontaneous resolution can be expected after delivery.^{[3],[6]}

The management of ES depends on the autoimmune cytopenia and the symptoms that the patient has. In pregnancy, the first choice therapy is corticosteroid at a dose of 0.4 mg/kg/day for 3-5 days or IVIG. Whereas vinca alkaloids, androgens and other immunosuppressive drugs that are usually used on ES are avoided in pregnancy. Splenectomy with a standard or laparoscopic approach can be performed in patients with refractory ES after the second trimester of pregnancy. Data in various literatures on delivery methods in patients with ES do not support the cesarean section unless obstetric indications are obtained.^{[2],[3],[6]} In this case report, patient was treated with PRC transfusion to treat her anemia, oral methylprednisolone 48 mg once daily and folic acid 2 mg twice daily to treat the Evans Syndrome.

CONCLUSION

The incidence of Evans syndrome in pregnancy was classified as very low and to date the relationship between ES and pregnancy was not understood clearly. Proper diagnosis and monitoring, as well as multidisciplinary management, played an important role in improving maternal and neonatal outcomes in patients. Corticosteroids or IVIG was the first choice of treatment in ES with pregnancy.

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