



Anesthetic Management in a Pregnant Woman with Eclampsia, HELLP Syndrome, and Antiphospholipid Syndrome: A Case Report

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Abstract

Antiphospholipid syndrome (APS) is an autoimmune disorder characterized by recurrent vascular thrombosis and obstetric morbidity. We report the case of a 37-year-old woman, undiagnosed with APS, who presented at 37 weeks of gestation with seizures. Laboratory investigations revealed elevated liver enzymes, thrombocytopenia, and proteinuria. She was diagnosed with eclampsia and HELLP syndrome, complicated by APS. This report highlights the anesthetic challenges and multidisciplinary management required in such complex cases.

Keywords: Antiphospholipid syndrome, HELLP syndrome, Eclampsia, Anesthesia, Pregnancy.

Introduction

Antiphospholipid syndrome (APS) is a systemic autoimmune disorder caused by antiphospholipid antibodies (aPLAs). During pregnancy, APS is associated with severe maternal and fetal complications, including recurrent miscarriage, intrauterine fetal demise, and hypertensive disorders, all of which result from widespread vascular thrombosis.

We present a case of a pregnant woman who developed eclampsia and HELLP syndrome, later diagnosed with primary APS. This case illustrates the anesthetic implications, perioperative challenges, and the importance of multidisciplinary collaboration in managing high-risk obstetric patients.

Case Report

A 37-year-old pregnant woman (G4P1L0A2) at 37 weeks of gestation was referred with abnormal body movements and tongue bite. She had a history of severe headache and nausea for one week, recurrent vomiting for one day, and two episodes of seizures.

Past Obstetric History: Two spontaneous abortions, one premature intrauterine death at 28 weeks, no antenatal consultations in the present pregnancy.

Examination: Pallor, icterus, bilateral pedal edema, petechial rash, gangrenous changes in right fifth toe, absent peripheral pulses, BP 180/100 mmHg, HR 100/min, SpO₂ 94%. Ultrasound revealed absent fetal heart sounds.

Laboratory Investigations: Hemoglobin 9 g/dl, WBC 12,000/mm³, Platelets 75,000/mm³, PTI 75%, SGOT 250 IU/L, SGPT 300 IU/L, LDH 700 IU/L, Creatinine 0.5

mg/dl, Total bilirubin 1.5 mg/dl, D-dimer 2.5 µg/ml, Urine: protein (+). A provisional diagnosis of severe preeclampsia with HELLP syndrome was made.

Management

The patient received intravenous magnesium sulfate and labetalol. An emergency lower segment cesarean section was planned under general anesthesia.

Anesthetic Considerations: Anticipated difficult airway due to edema, risk of hypertensive response, blood products arranged, two IV cannulas secured.

Anesthesia Technique: Preoxygenation with 100% O₂ for 3 minutes; induction with thiopentone and succinylcholine; maintenance with N₂O/O₂ and isoflurane; muscle relaxation with atracurium; labetalol administered to attenuate hypertensive response. Post-operatively, the patient was not extubated due to low GCS. CT revealed an intracerebral bleed with midline shift. ICU management included ICP control, anticonvulsants, antihypertensives, corticosteroids, sedation, and DVT prophylaxis.

Rheumatology consultation and Doppler confirmed vascular occlusion. Serology revealed anticardiolipin and anti-β₂ glycoprotein antibodies, confirming APS. Hydroxychloroquine and LMWH were initiated.

The patient developed ARDS, treated with ventilation, antibiotics, and diuretics. Gradually, she improved and was extubated. On discharge, she was prescribed low-dose aspirin and anticoagulants with advice for antenatal follow-up.

Discussion

APS is characterized by recurrent thrombosis, pregnancy loss, and hematological abnormalities. It may occur as primary APS or secondary to autoimmune disease. In pregnancy, APS targets placental vasculature, leading to miscarriage or intrauterine demise. Our patient developed eclampsia and HELLP syndrome, complicated by

intracerebral hemorrhage and ARDS. The absence of antenatal care contributed to poor outcomes, including fetal loss.

Anesthetic management is challenging due to airway edema, coagulopathy, and hemodynamic instability. Careful planning, blood product availability, and intensive post-operative monitoring are essential.

Conclusion

This case highlights the complex interplay between APS, eclampsia, and HELLP syndrome. Successful management requires multidisciplinary collaboration. Early recognition and prompt treatment are vital to improving maternal outcomes.

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