



ANESTHETIC MANAGEMENT IN A CASE OF ANTIPHOSPHOLIPID ANTIBODY SYNDROME

Anaesthesiology

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ABSTRACT

Antiphospholipid syndrome (APS) is an autoimmune disease associated with increased risk of thrombosis due to the presence of procoagulatory antibodies. Anesthetic management in a patient with APS may pose a challenge, especially during pregnancy and delivery. We hereby present a case of successful management of emergency cesarean delivery in a patient with APS.

KEYWORDS

Antiphospholipid antibody syndrome; Obstetric anesthesia; Thromboembolism; Autoimmune

INTRODUCTION:

Antiphospholipid Syndrome (APS) is an autoimmune thrombophilic condition that is marked by the presence in blood of antibodies that recognize and attack phospholipid-binding proteins, rather than phospholipid itself. The clinical manifestations of APS include vascular thrombosis and pregnancy complications, especially recurrent spontaneous miscarriages and, less frequently, maternal thrombosis. More recently, a catastrophic antiphospholipid variant with a mortality rate of nearly 50% has been described. This catastrophic variant poses a diagnostic and therapeutic dilemma, as it often leads to a rapidly progressive multi-organ failure. Antiphospholipid syndrome may be associated with other autoimmune disorders like hypothyroidism, as was seen in our patient.

CASE REPORT:

A 33 year old female G2P1D1 with 9 months of amenorrhea with previous preterm ISCS came for safe confinement.

She was diagnosed to have APLA syndrome in 2015 for which she was started on inj. Clexane 0.6mg bd, tab. Stilo 100mg bd, tab staton 40mg, tab aspirin 150mg, she was also diagnosed to have right radial artery thrombosis that time. Patient was not compliant to medications and took treatment for only six months. Hence recent antibody titre were not available.

She was also diagnosed as hypothyroid and started on tab Thyronorm 25mcg and was not compliant to medications. Her TSH (2.5 mIU/L) pre operative was normal.

Patient also had three episodes of convulsions in 2015, 2017 and 2018 for which she was given a loading dose of Eptoin and not started on any maintenance medication.

On examination she had ejection systolic murmur, she was advised 2D echo and it was suggestive of Mild TR and interatrial septal dropout with EF 60%.

Her preoperative labs and coagulation profile were normal hence epidural anesthesia was preferred. As per recommendation, low molecular heparin was stopped 12 h before any elective surgical procedure and restarted 6--8 h afterwards. Patient was premedicated with injection ranitidine 50 mg and injection perinorm 5 mg 30 min before the surgery.

16G epidural catheter was inserted at L1-L2 space and activated.

PR.	BP.	Drug
82.	110/70	Inj LA 3cc TD
78.	112/80.	Inj LA+0.5% Bupivacaine 5cc each over 20min
70.	114/68.	Inj Loxicard 3cc
80.	110/70.	Inj Loxicard 2cc
74.	112/60.	Inj Bupivacaine 0.5% 5cc with 25mcg Fentanyl
76.	120/64.	Inj Bupivacaine 0.5% 3cc

Injection Pitocin 20 IU iv in 100 ml normal saline was given after the delivery of the baby administered to facilitate uterine contraction. The

intraoperative period remained uneventful with an average bleeding of 700 ml. Patient delivered a single live child with a good APGAR score. Postoperatively the patient didn't show any signs of excess bleeding or thrombotic episodes. Injection Levetiracetam 1g was given as prophylaxis for seizure disorder as the patient was not on regular medication.

Postoperative physician opinion was sought and Tab Levetiracetam 500 mg BD was started.

DISCUSSION

Antiphospholipid antibody syndrome is a heterogenous autoantibody mediated acquired thrombophilia, which is associated with severe life threatening complications during pregnancy and most important treatable cause of recurrent pregnancy loss. It was described in 1980s by E Nigel Harris and Aziz Gharavi. It is also called Hughes syndrome. Although numerous pathophysiological mechanisms have been put forward, the most acceptable one is that antiphospholipid antibodies promote activation of endothelial cells, monocytes and platelets, causing an overproduction of tissue factor and thromboxane A2. These factors, along with the typical changes in the hemostatic system during normal pregnancy, results in a hypercoagulable state which is responsible for thrombosis that is presumed to provoke many of the pregnancy complications associated with APS.

Parturients with APS require special consideration for perioperative management as a consequence of the disease and anticoagulation therapy. Whether to proceed with a neuraxial technique in such patients is a challenging decision to make. The risk of thrombosis, when the preoperative patient is not effectively anticoagulated, must be weighed against the risk of bleeding during and after surgery, if anticoagulation is continued perioperatively. Use of LMWH is preferable to UH given its limited need for testing, reduced thrombocytopenia and bone demineralisation risk, inability to cross the placenta, and the reported improvement in live birth rates. Manipulation of airway in pregnancy comes with its own set of problems: airway edema, increased tissue friability, consideration of full stomach, thus posing a challenge of its own.

Standard ASRA (American Society for Regional Anesthesia) guidelines have to be followed for such patients on anticoagulants. There have been case reports to suggest the use of regional anesthesia in APS in the absence of coagulation abnormalities.

But Intra-operatively, care must be taken to avoid hypotension and dehydration, as it may decrease fetal blood flow as well as increase the maternal blood viscosity. Monitoring of coagulation parameters is beneficial in deciding the line of management. In the event of a deranged coagulation profile, then regional anesthesia may not be a suitable option and general anesthesia (GA) should be administered for the cesarean delivery. The risks of GA for operative delivery are much greater than regional anesthesia in a pregnant woman. Hence, the coagulation parameters in a patient with APS determine the anesthetic management and the peri operative course.

CONCLUSION

This report focused on the anesthetic implications that arise in parturients with APS, as a consequence of the disease and anticoagulation management. Antiphospholipid antibody syndrome is a serious multisystemic autoimmune disorder requiring multidisciplinary approach to manage the perinatal period and prevent the occurrence of complications. Choosing of the type of anesthesia requires proper weighing of the risk-benefit ratio, monitoring the coagulation profile and keeping blood and blood products readily available.

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