Section: Anaesthesia

Case Report

ANAESTHETIC CONCERNS AND MANAGEMENT OF PREGNANT PATIENT WITH BUDD CHIARI SYNDROME FOR EMERGENCY CAESAREAN SECTION: A CASE REPORT.

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Abstract

Budd Chiari syndrome(BCS) is a thrombotic or non-thrombotic occlusion of hepatic vasculature with multifactorial etiology. Anaesthetic considerations for pregnant patient with BCS are challenging for anaesthesiologist and a proper meticulous approach should be followed to manage such patients. Underlying coagulopathies, ongoing anticoagulants and hepatobiliary derangements affects choice of anaesthesia. We report the management of 31 years old primigravida with 39 weeks of gestation posted for emergency caesarean section in view of fetal distress under general anaesthesia. Perioperative period was uneventful and patient was discharged under stable condition.

INTRODUCTION

Budd Chiari syndrome (BCS) is a disorder characterised by congestive hepatopathy caused by blockage of hepatic veins due to thrombotic or non-thrombotic obstruction leading to hepatic dysfunction because of sinusoidal congestion, ischaemic injury to the liver and portal hypertension. Thrombosis of hepatic veins or terminal portion of the inferior vena cava (IVC) leads to BCS in majority of cases.[1,2] Hepatobiliary disease have impact on anaesthetic care. We describe the anaesthetic management of a pregnant patient and a known case of Budd Chiari syndrome on anticoagulation therapy posted for emergency caesarean section in view of fetal distress. Patient recovered well postoperatively and was discharged on the sixth postoperative day.

CASE REPORT

A 31 years old primigravida with 39 weeks of gestation and a known case of Budd Chiari syndrome was posted for emergency LSCS. Patient was diagnosed as a case of Budd Chiari syndrome five years back for which she had undergone right hepatic vein stenting along with IVC angioplasty and was on oral anticoagulants post hepatic vein stenting. Patient was on tablet dabigatran 150 mg BD and was switched to T. enoxaparin 40 mg BD subcutaneous during pregnancy. Her available investigations showed Hb 11.5gm%, Platelet count 1,80,000/ cu.mm. Liver function showed total bilirubin 1.0 mg %, SGOT 28 IU /L, SGPT 27 IU/L, ALP 136 IU /L.Patient had received anticoagulant six hours prior to surgery and no fresh coagulation profile was available and therefore, emergency LSCS under general anaesthesia was planned. Antiaspiration prophylaxis was given with Inj. Metoclopramide. All regular monitors were attached. Baseline Heart rate, oxygen saturation and blood pressure were recorded. ECG monitoring was done. Preoxygenation was done with 100% oxygen. Patient was induced with inj propofol 100mg iv. Cricoid pressure was applied and inj succynylcholine 75 mg iv was given. Intubation was done with oral endotracheal tube of size 7mm internal diameter. Anaesthesia was maintained with oxygen and nitrous oxide (50% and 50%) and sevoflurane 0.8%. Inj.fentanyl 1mcg/kg was given after delivery of baby. Intraoperative course was uneventful. At the end of surgery patient was extubated, maintaining saturation and remained haemodynamically stable. Enoxaparin was restarted postoperatively after 24 hrs. Patient was discharged on sixth post operative day under stable conditions.

DISCUSSION

Hepatobiliary disease can pose challenge for anaesthesiologist and impact anaesthesia care. Pregnancy-related BCS is well recognized and can present with abdominal pain, ascites and hepatomegaly.[3] A systematic review and meta-analysis of twenty studies demonstrated prevalence of pregnancy related BCS of 6.8%.[4] Pregnancy itself

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is a hypercoagulable state and earlier studies concluded risk of exaggeration of underlying BCS during pregnancy.[5,6] Sometimes despite of ongoing anticoagulation therapy BCS can flare in pregnancy due to several changes inherent to pregnancy including rise in intraabdominal pressure and pressure of gravid uterus on inferior vena cava and blood volume expansion.[7,8] For anticoagulation low molecular weight heparin is preferred over warfarin as warfarin can readily cross placenta leading to congenital anomalies.[9,10] Heparin affects coagulation profile, can affect APTT and can cause heparin induced thrombocytopenia and it should be stopped atleast 24 hrs prior to surgery. There is risk of spinal haematoma in patients receiving anticoagulant therapy so decision of neuaraxial or general anaesthesia should be taken on case to case basis according to coagulation profile and general condition of patient.

Hepatic blood flow and perfusion should be maintained. Drugs with limited hepatic metabolism should be used for general anaesthesia. Propofol is better as induction agent for such cases as it barely affects uterine tonicity and does not affect hepatic blood flow.[11,12] If longer neuromuscular blockade is required, atracurium/cisatracurium can be used safely as there metabolism is not dependent on liver. Nitrous oxide reduces demand of volatile anaesthetic and have no effect on uterine tonicity. Intubation should be done gently to avoid airway bleeding.

As our patient had taken anticoagulant six hours prior to surgery and no fresh coagulation profile was available therefore we planned general anaesthesia to avoid risk of spinal haematoma after neuraxial anaesthesia. Post operatively patient remained stable and was discharged under stable condition.

CONCLUSION

To conclude, pregnancy with BCS may prove challenging to anaesthetist in view of deranged hepatic functions and coagulation profile along with ongoing anticoagulants. Both general anaesthesia and neuraxial anaesthesia have risks and benefits and choice of anaesthesia varies with the patient.

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