CASE REPORT

Anesthetic Management for Emergency Lower Segment Cesarean Section in a Septicemia Patient with Systemic Lupus Erythematosus

Pooja Abbi[1], Keerat K Kullar[2], Deepika Arora[3], Chandna Badhan[4], Ruchi Gupta[5]

Abstract

Aim: The aim of this study is to describe the successful anesthetic management of a diagnosed systemic lupus erythematosus (SLE) parturient with bad obstetric history and septicemia, posted for emergency cesarean section.

Background: Systemic lupus erythematosus is an autoimmune disease which may occur in pregnancy resulting in obstetrical complications. Disease exacerbation, increased fetal loss, neonatal, and an increased incidence of preeclampsia are the major challenges.

Case description: A 33-year-old female patient ($G_7A_6L_0$) with 32 weeks of amenorrhea presented with fetal distress planned for cesarean section, in Sri Guru Ram Das Medical College and Hospital, Amritsar. Patient had a history of multiple abortions and no live issues.

Conclusion: Regional anesthesia is a preferred choice for pregnant patient with SLE who presents for cesarean section.

Keywords: Anesthetic management, Pregnant, Systemic lupus erythematosus.

AMEI's Current Trends in Diagnosis & Treatment (2019): 10.5005/jp-journals-10055-0069

Introduction

Systemic lupus erythematosus (SLE) is an autoimmune disease most frequently found in women of childbearing age. Onset is in third to fourth decade of life. Women with SLE are at higher risk of complications during pregnancy such as spontaneous abortion, intrauterine fetal death, preeclampsia, eclampsia, preterm delivery, and intrauterine growth retardation.[1] Being a multisystem disorder, thorough preanesthetic evaluation is required for safe anesthesia. We describe here the successful management of antiphospholipid antibody (APLA) positive parturient with a bad obstetric history who underwent emergency cesarean section under spinal anesthesia.

Case Description

A 33-year-old woman who was seventh gravid (G_7) with 32 weeks of amenorrhea, diagnosed with SLE, having positive titers for APLA, presented with fetal distress for which emergency cesarean was planned. Her obstetric history revealed that she had six consecutive abortions (A_6) and had no live issues. She had high-grade fever and nonreactive cardiotocography.

Antenatal history revealed that she had weakness and pain all over the body. On examination, she had mild pallor, malar flush, and scratch marks all over the body. Her built was very thin. She had past history of cholecystectomy 15 years back when she was diagnosed to be a case of SLE. She also had history of multiple blood transfusions during that time. She was also found to be antinuclear antibody (ANA) and APLA positive. There was no other history suggestive of systemic involvement. Her complete blood count (CBC), blood sugar, and urine examination were within normal limits. Liver, renal function test, and electrocardiography (ECG) were done to rule out any systemic involvement. Preoperative investigations revealed Hb = 10 g/dL; total leukocyte count (TLC) = 18,000; bleeding time (BT), clotting time (CT) normal, activated partial thromboplastin time (aPTT) = 12 seconds; prothrombin time index = 93%; and international normalized ratio = 1.08. To improve the fetal outcome, she was being given low-molecular-weight heparin (LMWH) 2,500 IU subcutaneous twice daily. She was being monitored by serial BT, CT, and aPTT.

She had received LMWH a day prior to surgery. Since the patient had high-grade fever, looked toxic, tachypneic with maintained saturation, IV paracetamol 1 g, injection augmentin, and injection metrogyl were given preoperatively. Patient had taken a glass of milk with apple in the morning at 8 am. She was given tablets ranitidine and metoclopramide 1 hour prior to the surgery. Regional anesthesia was planned due to normal coagulation profile at the time of surgery. The 18-G IV line was secured. Central venous line was inserted, and guided coloading was done with 500 mL of Ringer's lactate. Heart rate, noninvasive blood pressure (NIBP), ECG, and oxygen saturation (SpO_2) were monitored throughout the surgery. A Foley catheter was placed to measure hourly urine output. Oxygen was supplemented throughout the surgery. Subarachnoid neuraxial block was performed using 2 mL of 0.5% of bupivacaine heavy with 25 µg butorphanol in the lateral position with 25 G of Quincke needle at L3 to L4 space under aseptic precautions. Blockade was achieved at T6 dermatome level.

[1–5]Department of Anesthesia, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, India

Corresponding Author: Pooja Abbi, Department of Anesthesia, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, India, Phone: +91 8968088773, e-mail: nikhil.monga@yahoo.co.in

How to cite this article: Abbi P, Kullar KK, Arora D, *et al.* Anesthetic Management for Emergency Lower Segment Cesarean Section in a Septicemia Patient with Systemic Lupus Erythematosus. AMEI's Curr Trends Diagn Treat 2019;3(2):84–85.

Source of support: Nil

Conflict of interest: None

© The Author(s). 2019 Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (https://creativecommons.org/licenses/by-nc/4.0/), which permits unrestricted use, distribution, and non-commercial reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated.

Patients' vitals remained totally stable. Female baby of 1.8 kg was delivered who cried immediately after birth. Liquor was meconium stained with cord around the neck of the baby. Appearance pulse grimace activity respiration (APGAR) score was 8/10 at 5 and 10 minutes, with no signs of neonatal lupus. Injection oxytocin 20 IU in 500 mL dextrose normal saline (DNS) was started. The surgery was uneventful with minimum blood loss.

After full recovery, patient was shifted to the intensive care unit for further management. Urine output being on lower side so, central venous pressure-guided fluid management was done. Septicemia was treated with supplementation of oxygen, adequate fluid resuscitation, and a good antibiotic coverage. After 24 hours, patient required a top-up of paracetamol. She became afebrile, less tachypneic, with adequate urine output. Her postoperative TLC was 6,000. Low-molecular-weight heparin injection was restarted. Baby was kept in nursery for 12 hours. The mother and baby were followed up for 5 days and then discharged with no remarkable observations.

Discussion

Peak incidence of SLE occurs between the ages of 15 years and 40 years. It is characterized by autoantibody production and a dysfunctional immune system resulting in organ inflammation. A positive ANA is the characteristic laboratory test used to help in the diagnosis of SLE.[2] During pregnancy, SLE may present with neonatal losses, cervicitis, and infertility. The complications such as preeclampsia, hypertension, bleeding, and infections are also increased in these patients.[3] Complete blood count, urine analysis, blood urea and nitrogen, serum creatinine, coagulation profile, electrolytes, and blood sugar should be done. Prophylactic antibiotic is indicated for labor and delivery. Treatment with heparin and low-dose aspirin in patients with APLA-associated recurrent pregnancy has been shown to improve life birth rates. This therapy is stopped at the time of delivery to reduce blood loss and restarted after delivery and continued 6 weeks postpartum.[4]

The anesthetic management of pregnant patients with SLE depends on the multisystem nature of the disease, the severity of the organ involvement, and side effects of drugs used in the treatment. Two units of compatible blood need to be reserved prior to the surgery as cross-matching problems can arise due to irregular antibodies in serum. Patients on long-term corticosteroid therapy require steroid coverage. Low-molecular-weight heparin was withheld 24 hours prior to surgery in this patient and was restarted after delivery.[5] There were no signs of bleeding, petechial hemorrhages, and the coagulation profile was within normal limits. Considering the above facts, we administered regional anesthesia in this case.

Adequate analgesia for early mobilization should be supported.[6] Measures should be taken to keep the patient warm. If general anesthesia is required due to any reason, a rapid sequence induction with cricoid pressure should be done and intubation response should be reduced in patients having pregnancy induced hypertension (PIH).[4]

Conclusion

We conclude that regional anesthesia is a preferred choice for pregnant patient with SLE who presents for cesarean section. Close antenatal and laboratory monitoring of mother and fetus in the neonatal intensive care has improved their longevity.

References

1. Varsha V, Deepika S, Surekha P. Cesarean section in a case of systemic lupus erythematosus. Indian J Anaesth 2014;58(2):193–195. DOI: 10.4103/0019-5049.130827.
2. Jindal P, Kapoor R, Khurana G, et al. Anesthetic implications in systemic lupus erythematosus patients posted for cesarean section: a series of five cases. J Obstet Anaesth Crit Care 2013;3(2):97–100. DOI: 10.4103/2249-4472.123306.
3. Kiran BP, Tapan S, Ananyaruchi SS. Anesthetic management for elective lower segment cesarean section in a patient with systemic lupus erythematosus and thrombocytopenia. Ain Shams J Anaesthesiol 2016;9(1):142–145. DOI: 10.4103/1687-7934.178896.
4. Chauhan G, Gupta K, Kashyap C, et al. Anesthetic management of patient with systemic lupus erythematosus and thrombocytopenia for vaginal hysterectomy. Anesth Essays Res 2013;7(1):136–137. DOI: 10.4103/0259-1162.114022.
5. Stern C, Chamley L, Norris H, et al. A randomized, double-blind, placebo-controlled trial of heparin and aspirin for women with in vitro fertilization implantation failure and antiphospholipid or antinuclear antibodies. Fertil Steril 2003;80(2):376–383. DOI: 10.1016/s0015-0282(03)00610-1.
6. Derksen RH, Khamashta MA, Branch DW. Management of the obstetric antiphospholipid syndrome. Arthritis Rheum 2004;50(4):1028–1039. DOI: 10.1002/art.20105.