Anesthetic Management in Obese Patients with Placenta Accreta Undergoing Cesarean Section: Case Report

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ABSTRACT

Background: Placenta accreta is a condition of abnormal attachment of the placenta that could cause massive bleeding complications and increase mortality in patients. Proper anesthetic management and transfusion protocol are required for the patient. *Case:* A patient with placenta previa total with Placenta accreta Index score is 9 and obesity. The patient is planned to have a cesarean section followed by a total hysterectomy. For anesthetic management, general anesthesia was performed with the insertion of an endotracheal tube as an anticipatory for massive bleeding in this patient. Total bleeding during the operation was 2100 ml, and two bags of Packed Red Cells (PRC) were transfused during the operation. Postoperatively, the patient underwent treatment in the intensive care unit for one day to stabilize his general condition before being transferred to the regular ward. The patient was discharged after 2 days of treatment in the ward. *Conclusion:* that case can be drawn from this case is the importance of early detection of patients with a high risk of Placenta accreta, so that early treatment and comprehensive preparation can be carried out before termination is done.

Keywords: placenta accreta; general anesthesia; transfusion

INTRODUCTION

Placenta accreta refers to the condition of the placenta that has an abnormal attachment to the uterus, which is divided into three based on the histological degree of placental invasion into the myometrium (accreta, increta, and percreta) (1-3). Placenta accreta is one of the two most common causes of peripartum hemorrhage and the most common indication for peripartum hysterectomy, the main mistakes often made in this case are mainly failure to make the right diagnosis and late medical and surgical treatment (4-6). The placenta accreta index (IPA) is a scoring system used to assess the probability of the extent to which the placenta invades the uterine wall (4,5). The choice of anesthesia technique between regional and general is crucial to minimize risks to the mother and fetus who will undergo cesarean section surgery. (2,6-8)Appropriate transfusion protocols are also important in the management of patients with accreted placenta (9-11). The following is a case report of a patient with an accreta placenta with an accreta placenta index score of 9, who will undergo cesarean section.

CASE REPORT

A 29-year-old female patient came to the hospital with a letter from an obstetrician with a diagnosis of G3 P2002, 35 weeks 4 days gestation, placenta previa totalis. Complaints such as abdominal pain and discharge from the birth canal were denied by the patient. Active child movement is still felt by the patient. The patient went to the gynecologist every month, and it was found that the placenta was covering the birth canal since 26-27 weeks of gestation during ultrasonography examination. History of drug allergy was denied. There was no history of systemic disease. Patients with a history of previous cesarean section surgery 2 times in 2016 and 2019. From the physical examination, the patient was 170 cm tall, and weighed 100 kg (BMI 38.4 kg/m^2). Other physical examinations were found to be within normal limits. From the supporting examination, the patient was found with an initial Hb of 12 g/dL, platelets 328,000/mm^3. Hemostasis function examination, and clinical chemistry were found to be within normal limits.

Placenta accreta index assessment was carried out and the patient was found to have a score of 9. The patient was concluded with ASA 3 physical status with placenta accreta and obesity. The patient planned to do cesarean section surgery followed by a hysterectomy. The anesthesia technique used was general anesthesia with endotracheal tube insertion. The patient was prepared with preoperative fasting for 8 hours, installation of two 18G IVs on the left and right hands, and an invasive arterial line monitor for continuous blood pressure monitoring. Dexamethasone 5 mg was administered as premedication. Propofol was given as an induction agent in this patient combined with dexmedetomidine administration, followed by atracurium administration to facilitate intubation. Intubation was performed with a size 7 endotracheal tube. After the baby was born, 150 mcg of fentanyl was administered, maintenance of anesthesia with continuous propofol combined with dexmedetomidine, and administration of oxygen and N_2O gas. The depth of anesthesia and pain stimuli were measured during the operation with a Conox anesthesia monitor to ensure the adequacy of drug administration during the operation.

FIGURE 1: Conox Anesthesia Monitor to Measure Depth of Anesthesia and Pain Stimuli In Patients.

The operation lasted for 3 hours, hemodynamically stable with a systolic blood pressure of 100-120 mmHg and diastolic 50-80 mmHg, pulse 65-84 times/min. Total bleeding during surgery was 2100 ml, and two bags of PRC transfusion were performed during surgery. In the postoperative complete blood test, the patient's Hb level was 9.2 g/dL. The patient was admitted to the intensive care unit to monitor the condition and vital signs for 1 day before moving to the inpatient room.

DISCUSSION

Anesthetic management of cesarean section surgery in patients with placenta accreta complications is a challenge for anesthesiologists, requiring the selection of anesthetic techniques and appropriate transfusion planning. In this patient, the Placenta Accreta Index (IPA) score was assessed by a peer obstetrician, the IPA score is used to assess the probability of the extent to which the placenta invades the uterine wall with the highest score of 9 (4,5).

The patient obtained a very high IPA score of 9, so a hysterectomy was also planned. The selection of general anesthesia in this patient was to avoid changing anesthesia techniques during surgery if neuroaxial anesthesia techniques were selected based on considerations of a high risk of bleeding and the duration of surgery which was expected to be quite long due to hysterectomy. The change of anesthesia technique from neuroaxial to general anesthesia in placenta previa patients undergoing cesarean section surgery is related to the need for more blood as well as the duration of surgery and longer length of treatment (12,13). The patient also had grade 2 obesity, so the dosing of anesthetic drugs should be adjusted to achieve optimal depth of anesthesia. We used a Conox anesthesia monitor to monitor anesthetic depth and nociceptive stimulus during surgery. The use of an anesthesia monitor or bispectral index (BIS) to monitor anesthetic depth is said to reduce desflurane use and length of stay in *morbidly obese* patients undergoing *laparoscopic* surgery (14).

The patient underwent cesarean section and hysterectomy with an operation duration of 3 hours and a total bleeding of 2100 ml during surgery, with the provision of blood transfusion of 2 bags of red blood cells (PRC). In this patient, the diagnosis of placenta accreta was made during pregnancy, so the preparation of blood components could be done properly. Fortunately, the majority of patients with placenta accreta are now recognized during the prenatal period through ultrasound examination. Although the early diagnosis may determine the delivery plan, it may not provide sufficient information on estimated bleeding and blood transfusions (15). Therefore, transfusion planning before delivery or surgery should always be optimized with a multidisciplinary approach in patients with suspected placenta accreta (1,9,15).

CONCLUSION

Anesthesia management in placenta accreta patients with obesity complications is a challenge, both in the choice of anesthesia technique and the dose of drugs to be administered. Changes in anesthesia technique during surgery are associated with greater blood requirements and longer length of stay. The use of an anesthesia depth monitor can assist in delivering the appropriate drug dose to achieve the optimal depth of anesthesia. Optimal blood transfusion planning should always be done in patients with suspected placenta accreta.

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