

Severe Perioperative Bleeding During the Caesarean Section - Case Report

Nenad Mladenovic*

Chief Anaesthesia and Reanimation Servis, Department of Anaesthesia and Reanimation, General Hospital Cuprija, Cuprija, Serbia

***Corresponding Author:** Nenad Mladenovic, Chief Anaesthesia and Reanimation Servis, Department of Anaesthesia and Reanimation, General Hospital Cuprija, Cuprija, Serbia.

Received: November 30, 2017; **Published:** January 03, 2018

Abstract

The device shows the case of severe perioperative bleeding during the caesarean section, in the case of treachery with uterine atony. Massive blood transfusion and other measures of reanimation and intensive treatment were applied, but the general condition of the patient was aggravated, and the patient was transferred to a tertiary health institution. The death outcome occurred three and a half months due to complications.

Keywords: *Severe Perioperative Bleeding; Caesarean Section; Uterine Atony*

Introduction

During surgery, caesarean section can lead to significant bleeding, such as in the case of central e placenta overlaid or uterine atony. In such situations, the skill and speed of the surgeon's work, as well as prompt and adequate blood replacement, are of key importance for the outcome of treatment. The use of the cell-saver is noteworthy, but most of the hospitals in Serbia do not own it. Massive transfusion carries risks from the onset of numerous, severe, complications, which are often associated with fatal outcome. In the case of our patient, there was a severe perioperative bleeding, which, unfortunately, ended with a fatal outcome after three and a half months of intensive treatment [1-5].

Case Study

Patient M.S. 36 years old, a cesarean section is scheduled for surgery. The preoperative patient is conscious, oriented, afebrile, hemodynamically stable, with a regular auscultatory finding on the heart and lungs and without neurological outbreaks. Thigh, 95 kg body weight and body weight index over 35 kg/m², which is classified as ASA II category of operational risk. Of the previous surgical procedures, there was a two-fold cesarean section in general anesthesia without complications, and twice the operation of the umbilical cord was also complicated. Negative allergies. Preoperative laboratory analyzes were in reference values (Er 4.19, Hgb 117 gr/L, PLT 260, Hct 035, urea 3.6 mmol/L, glycemia 5.0 mmol/L, potassium 4.9 mmol/L, sodium 144 mmol/L). At the request of the patient, the anesthetic technique was a general endotracheal, and the previous two times.

At 9 hours and 30 minutes, the patient was introduced in general anesthesia with 250 mg Propofol and relaxed with 150 mg of succinylcholine. It was intubated without complications and was started with caesarean section. The baby was taken at the usual time, not longer than 10 minutes after giving the medication, and immediately cried. After fetal exercise and slaughter of the pups, an opioid analgesic Fentanyl was given at a dose of 0.55 mg and continued with relaxation with 30 mg of Atracurium. At 10 o'clock and 15 minutes the gynecologist concludes that it is a uterine atonia. Since this is a life-threatening complication, because it was accompanied by a lot of bleeding, we immediately needed blood. At that time, the patient was hemodynamically stable (TA 120/90 mmHg, HR about 90/min SpO₂ 99-100%, etCO₂ 3.3 kPa) and had two broad peripheral venous lines, so there was still no need for placement of the central venous catheter. The urinary catheter is routinely placed preoperatively. By about 12 hours, when the hysterectomy was done, the patient lost about 5L of blood, which we estimated on the basis of an aspirator's mantle and the number of abdominal bloodstreams. Because of this, it received 2.5L whole blood, 1L concentrated erythrocytes and 1L fresh frozen plasma, with 8L crystalloidal solutions (sol. Hartman) and

500ml colloidal solutions (sol. Hetasorb 6%). During all the time, the patients did not show haemodynamic instability and the values of vital parameters were within the indicated limits. The hemoglobin value from arterial blood gas analysis is 80 gr/L.

After hysterectomy, bleeding continues to be maintained, and the patient becomes anuric, although the diuretic has been neat (greater than 0.5 ml/kgTT/h) until then. Because of the suspicion of a gynecologist that the ureter lesion had occurred, a urologist and a surgeon was called for consultation. Given that the ureter lesion is intraoperatively confirmed, and that bleeding continues, these consultants engage in surgery. At 13 o'clock, on the basis of an aspirator censor, we register that the patient has lost 6L blood and haemodynamic instability in the sense of tachycardia (HR up to 150/min), hypotension (TA 50/30 mmHg), drops SpO₂ to 92% and falls etCO₂ at 1.7 kPa. Immediately, a central venous catheter is placed (v. jugularis internal l. dex.) And continues to give as much as 1600 ml of whole blood. Due to the real danger of developing disseminated intravascular coagulopathy, the pathway of complications of massive transfusions, cryoprecipitate and ten doses of platelets (calculated on the patient's body weight) are given. In addition, the patient is still haemodynamically unstable, and at some point in the duration of about 5 minutes, the bulla is even without tension, and the process of hemostasis by the surgeon continued, and continued with intensive remission of volume by crystalloids (salt Ringer and Hartmann salt), and adrenaline inotropin at a dose of 10 mcg was fractionated intravenously on several occasions. By about 16 hours, when hemostasis was performed, the patient received 2L whole blood and 1L colloidal solutions (Hetasorb 6%). The hemoglobin value from arterial blood gas analysis was then 75 gr/L.

At 17 o'clock, the operation was completed after 7 hours and 30 minutes of operation. The patient is relatively haemodynamically stable with values of vital parameters TA 100/60 mmHg, HR about 90/min. SpO₂ 98, without stimulation of bolus doses of fluid or inotropic, but anuric. We transferred the patient to the intensive care unit and left it on mechanical ventilation of the lungs (BIPAP ventilation support system with P_{insp}. 25 cmH₂O, PEEP 5 cmH₂O, FiO₂ 50%). The values of the ventilation parameters are correct. It is saturated with continuous use of Midazolam. Continuous non-invasive monitoring showed values of TA values (from 80/50 mmHg to 100/70 mmHg), tachycardia (HR to 110/min) along the ECG sine rhythm. A patient with a diuretic of less than 50 ml/h. In addition to fluid replacement, stimulation of diuresis with furosemide was also performed with 80 mg divided into two doses.

On the first postoperative day, 16 hours after surgery, the patient is detubated, completely awake, tachycardia (HR to 120/min) with a fully-established diuretic of 0.5 ml/kgTT/h. The value of central venous pressure is 7-12 cmH₂O. In laboratory analyzes, the hemoglobin value was very low 50 gr/L and the platelet value of 60. Rtg findings of the heart and lungs was neat. From evening hours, the patient, although still aware, becomes extremely adinal with a further drop in blood count (Hgb is 36 gr/L and platelets 30). On that day she received 2400 ml of whole blood and cryoprecipitate.

On the second postoperative day consultative (gynecologist, surgeon, urologist, anesthesiologist) it was decided that the patient should be transported to a tertiary health care institution in Belgrade due to haemodynamic instability and visible bleeding to the drains, indicating possible reoperation, which would be extremely risky for the patient, considering on conditions not owned by our hospital (absence of cell saver and recombinant factor VII), as well as due to the complexity of the case. The transport started at 10 hours and 20 minutes. At the end of the day, the patients were adrenal, pale, sweat-borne, hypotensive (TA 75/50 mmHg), tachycardia (HR 130/min) with a Hgb value of 36 gr/L, erythrocytes of 1.35 and Hct 010. concentrated erythrocytes, cryoprecipitate and 220 ml of fresh frozen plasma. The transport lasted about 1 hour and 30 minutes, and about 12 hours later the patients were hospitalized at a university clinic in Belgrade.

According to our findings, the patient died three and a half months after receiving the following final diagnoses: St. post cesarean section and hysterectomy. Serious haemorrhagic shock. Insufficient kidney sharp. ARDS. Sepsis. lung Embolism.



Discussion

One of the most common causes of perioperative bleeding during cesarean section is atony uterus. According to Kan and associates (Aga Khan) of the University of Karachi (UK), on a sample of 126 patients, in the elective and emergency surgery of the cesarean section, of which 18% were ASA I, 72% ASA II, 9% ASA III, showed that 13% of the patients were potentially more severe blood complements during the operation. Seven deaths were reported. The ability of a patient to survive a greater bleeding during the operation, according to this study, depended on the preoperative value of hemoglobin, blood volume, volume of lost blood, comorbidity and other complications.

Haemorrhage in asthma increases the maternal mortality by 25 - 30%. In the United Kingdom, 17 out of 132 deaths are perioperatively directly linked to hemorrhage according to the British Anesthesiological Association (BJA) study from Oxford (Maternal haemorrhage M. Walfish, A. Neuman and D. Wlody). It is said that the multidisciplinary approach and cooperation of gynecologists and anesthesiologists, volumetric compensation, blood supplementation, haemodynamic maintenance and stopping of bleeding are of essential importance [6-10].

Conclusion

During the surgery, the cesarean section of our patient experienced severe perioperative bleeding. Despite prompt and adequate blood replacement and other measures of resuscitation and intensive treatment, with the continuous monitoring of vital functions, there have been complications and the need for further treatment at a high-level health care hospital. The death outcome occurred three and a half months after admission to the university clinic due to complications.

Bibliography

1. Esler MD and Douglas MJ. "Planning for hemorrhage. Steps an anesthesiologist can take to limit and treat hemorrhage in the obstetric patient". *Anesthesiology Clinics of North America* 21.1 (2003): 127-144.
2. Clutton-Brock T. "Maternal deaths from anaesthesia. An extract from Why Mothers Die 2000-2002, the Confidential Enquiries into Maternal Deaths in United Kingdom. Trends in Intensive Care". *British Journal of Anaesthesia* 94.4 (2005): 424-429.
3. Beazley JM. "Caesarian section". In *Obstetric* Turnbull A, Chamberlain G., eds. Churchill Livingstone, Edinburgh (1989): 857-865.
4. Clark VA, et al. "Blood ordering practice in obstetric units in the United Kingdom". *Anaesthesia* 48.11 (1993): 998-1001.
5. Patten E and Alperin JB. "Type and screen: a safe and effective preoperative blood ordering policy with emphasis on its use in obstetric and gynaecology". *American Journal of Obstetrics and Gynecology* 142.5 (1982): 563-567.
6. Duthie SJ, et al. "Intra-Operative blood loss during elective lower segment caesarean section". *British Journal of Obstetrics and Gynecology* 99.5 (1992): 364-367.
7. Brant HA. "Blood loss at caesarean section". *Journal of Obstetrics and Gynecology* 73.3 (1966): 456-459.
8. Borgman MA, et al. "The ratio of blood products transfused affects mortality in patients receiving massive transfusions at a combat support hospital". *Journal of Trauma* 63.4 (2007): 805-813.
9. Bose P, et al. "Improving the accuracy of estimated blood loss at obstetric haemorrhage using clinical reconstructions". *British Journal of Obstetrics and Gynecology* 113.8 (2006): 919-924.
10. FW Bouwmeester, et al. "Pharmacologic and surgical therapy for primary postpartum haemorrhage". *Current Pharmaceutical Design* 11.6 (2005): 759-773.

Volume 4 Issue 1 January 2018

©All rights reserved by Nenad Mladenovic.