Postpartum Hemorrhage post Placenta previa Centralis-Conservative Management. A case report

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ABSTRACT

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Placenta previa is an obstetric complication in which the placenta is inserted partially or wholly in the lower uterine segment. It is a leading cause of antepartum haemorrhage. We report a case of 31-year-old woman presented in Obstetric and Gynecological clinic with signs and symptoms of Placenta previa. One day after admission, patient gave birth by caesarean section to a healthy baby. Yet, two hours later, the patient's condition was deteriorated due to postpartum hemorrhage (PPH). The diagnosis of Placenta previa was based on symptoms and sign as continuous bleeding ‘ex utero’, clots in vagina, uterine atony and distended bladder. Blood loss was approximately >1000 ml and was accompanied by clinically apparent shock. Using a conservative treatment such as the application of uterotonic drugs and uterine massage, we managed uterus to be saved.

INTRODUCTION

Placenta previa is the placement of the placenta in the inferior segment of the uterine cavity. This defective implantation of the placenta is, in most cases, due to a defective vascularization of the decidua. Multiparity, advancing maternal age, previous abortions,previous caesarean section,multiple pregnancy, fetal abnormalities, leiomyoma uteri constitute some of the risk factors that favor the development of Placenta previa[1,2]. The degree of coverage of the internal orifice of the uterus from placental tissue divides Placenta previa into: Placenta previa totalis, Placenta previa partialis, Placenta previa marginalia and low-lying placenta. The dominant clinical signs are vaginal bleeding, which varies from a spotting to a profuse bleeding, that could seriously be life threatening. In diagnosing Placenta previa, symptoms and signs of U/S examination are

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used with accuracy up to 95%. Placenta previa complications appear on 0.5% of all pregnancies[3]. Maternal complications of Placenta previa include hemorrhage, higher rates of blood transfusion, preterm delivery, placental abruption, disseminated intravascular coagulopathy and postpartum endometritis[4]. The complications of Placenta previa concerning the fetus and neonate include fetal intrauterine growth retardation (IUGR), fetal anemia and rhesus isoimmunisation, abnormal fetal presentation, low birth weight, neonatal respiratory distress syndrome, sudden infant death syndrome (SIDS), jaundice and increased hospital stay[5]. All the above mentioned complications are associated with an increased maternal, fetal or neonatal morbidity and mortality rate[4,5].

CASE REPORT

We report a case of a 31-year-old woman who admitted in Obstetric and Gynecological clinic with signs and symptoms of Placenta previa and was treated with the use of conservative measures.

The patient had body mass index (BMI) 33.1 kg/m2, she was a smoker (40 cigarettes per day for 5 years) and she had given birth to two children by caesarean section (CS) previously. She also had a spontaneous abortion in the 10th gestation week (gw). Indications for the first cesarean delivery were the incomplete breech presentation, oligohydramnios, and obesity. Indication for the 2nd CS included late decelerations during labor and previous cesarean delivery. Both CSs were performed under spinal anesthesia; both with no complications.

Previous obstetric history included also vaginal spotting of blood since 16th gw, while at 28th g.w. painless and profuse vaginal bleeding was noticed. At that time, she was first diagnosed with Placenta previa and was hospitalized. During her hospitalization, she was treated with Indomethacin 100 mg supp. b.d.s, for two days and then Totema® (Iron (II) gluconate 50 mg/ Manganese gluconate 1,33 mg/ Copper gluconate 0,7 mg) o.d. She was discharged from hospital two weeks later and drug regiment continued with supplements of iron and folic acid (60 mg of elemental iron plus 0.4 mg folic acid, one supplement daily), since 24th gw.

At the time of presentation at our hospital, at 38th gw, the woman was admitted in Obstetric and Gynecological Clinic, with profuse vaginal bleeding. Pulse rate (HR) was 97 beats per minute, blood pressure (BP) 100/70 mmHg, respiratory rate (RR) 19 breaths per minute, pale skin and mucous membranes and Glasgow Coma Scale 15/15 (E4/V5/M6).

On bimanual vaginal examination, uterus was soft and had no sensitivity to pain. Fetal movements were normal. Uterine contractions were uncoordinated, but later became calm. During cardiotocographic monitoring, fetal heart rhythm was 155 beats per minute, intrauterine pressure during contraction was 20 mmHg, that appear each 10 minute and the duration was approximately 30mm/seconds. Ultrasonography revealed that pla-

centa fully covered orificium internum uteri, so the diagnosis Placenta previa was established. There was no fetal anomaly noted. Blood samples were taken from the patient. Hemoglobin level (Hgb) was 9,2 gr/dL, hematocrit (Hct) 32.1%, bleeding time was 4 minutes, platelet number (PLT) 211.000 platelets per microliter of blood, prothrombin time (PT) 13 seconds, partial thromboplastin time (PTT) 32 seconds, International normalized ratio (INR) 1.0, Fibrinogen 3 g/l.

After the diagnosis of Placenta previa was established, 4 units of blood, ISO-group, ISO-rhesus and fresh frozen plasma were ready for use due to the increased possibility of active hemorrhage during and after birth. After stabilizing the patient's condition, caesarean section was scheduled for the next morning, with anesthesiologist and neonatologists being present. The patient was informed and consented in case of an emergent need of hysterectomy.

The operation (CS), was performed under spinal anaesthesia (patient ASA class IIE). Initially, abdominal wall was opened and then opened the uterus wall. Placenta was found on the internal orifice of the uterus and completely shut in it. Amniotic cavity was opened on the upper side of the placenta and delivered to the child, with Apgar scores (1st: 7, 5th: 9) and body weight 3650 grams/ height 53 cm. Placenta was extracted of complete. She presented bleeding from the uterine venous sinuses, which was controlled by ligation and application of Oxytocin 20 IU in civ perfusion with a speed 10-15 UI/min. Due to the presence of hemorrhage, we started blood transfusion with two units of blood (A Rh-D+). Two hours later, the gynecologist diagnosed a postpartum hemorrhage (PPH). The diagnosis was based on symptoms and sign as continuous bleeding 'ex utero', clots in vagina, uterine atony and distended bladder. Blood loss was approximately >1000 ml, and was accompanied by clinically apparent shock. Patient's HR was 122 beats per minute, RR 19 breaths per minute, BP was 75/45 mmHg, and had a considerable amount of blood on the bed. Color of skin and the mucous membranes were considerably pale. So, major PPH was diagnosed. Blood transfusion started immediately combined with massage of the fundus uteri. Also, ergometrine IV 0.5mg and 10UI oxytocin IV in physiological solution 0.9% was administrated with a rate of 30 drops/min. A speculum examination was done, where some of the blood clots removed, and it was observed that the hemorrhage continued. During U/S exam, in the uterine cavity was filled with blood. Due to the large amount of blood loss (more than 2 hours and blood loss >1000 ml), decision was taken for laparotomy. During laparotomy the uterine incision was found intact. Uterus was slightly contracted. Prostaglandins were injected in the uterine muscle (250 μg prostaglandin F2 Alpha into the uterine wall in order to achieve a quick tetanic contraction of the uterine muscle), and direct pressure was exerted, over uterus with both hands for 25 minutes. After that time patient's condition was stabilized (hemorrhage

stopped, the uterine muscle presented normal contraction, HR was 83 beats ,RR 16 breaths per minute, BP was stabilized 110/75mmHg, Hct was 34.2 %) the abdominal wall was closed. Postoperatively, patient was monitored for abnormal bleeding from the genital tract for thirty minutes, with no presence of bleeding. The patient was transferred in intensive care unit care for 24 hours, where her condition remained stable.

DISCUSSION

Placenta previa is an obstetric complication that occurs in 1% to 3.7%, in women with previous caesarean section, and increases with the increase of numbers of births by caesarean section[6]. Placenta previa affects about 1 in 200 pregnant women in the third trimester of pregnancy, but in the 16th week of pregnancy, it can go up to 15 percent[7].

A meta-analysis showed that the rate of Placenta previa increases with a rate of 1% after one cesarean delivery, 2.8% after three cesarean deliveries, and as high as 3.7% after 5 cesarean deliveries[6].

A 7-year study has concluded that a history of previous cesarean section was associated with a significant increase in maternal morbidity, including massive hemorrhage, placenta accreta, and hysterectomy[8].

In our case the patient had had two births previously by CSs and in the third pregnancy she was affected by Placenta previa. In a prospective study, from 41206 consecutive deliveries 1851 had had a previous caesarean section and 222 had placenta praevia [9]. Also, a prospective study shows that the risk of Placenta previa was 0.25% with an unscarred uterus and 1.22% in patients with one or more previous cesarean section[10].

Birth by caesarean section is indicated for all patients who have Placenta previa diagnosed on ultrasound[11,12]. In these births, the gynecologist must be prepared due to inceased possibility of rapid blood loss during birth process. The moment of shared placenta, bleeding is controlled by uterine contractions myometrial fibers around spiral arterioles[13].

Because of the lower uterine segment is often contracted slightly, severe bleeding may occur in the place of implantation of the placenta. Approximately 1.5% - 4.1%, uterine contractions are totally absent, the condition is called atony of the uterus[14].

One in twenty births are complicated with uterine atony[15], one of the reasons is the Placenta previa. Physiological blood losses during childbirth are dependent on the type of delivery. The average blood loss in a birth by caesarean section is 1000 ml[16]. For control of postpartum hemorrhage, uterotonics and uterine massage represent the first line of treatment in most of guidelines for the treatment of PPH[17,18].

Our case report suggests that for postpartum hemorrhage the use of conservative treatment as uterine massage (direct pressure with both hands for

25 minutes) and uterotonics can be quite successful before radical surgical treatment applied

CONCLUSION

It is known that cesarean deliveries predispose to Placenta previa, Placenta accreta and possibility of postpartum complications, in the form of antepartum, intrapartum and postpartum hemorrhage. It is very important that the birth to be done quickly. Maternal mortality is related to slow and uncertain decision-making[4,5]. Using a conservative treatment such as the application of uterotonic drugs and uterine massage, many patients can avoid hysterectomy.

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Author Disclosures:

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