Retained placenta managed surgically by hysterotomy: A case report

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Abstract

Introduction: Despite developing healthcare systems and obstetrics management plans, retained placenta has remained as one of the common causes of maternal mortality especially in developing countries where access to appropriate obstetrical care is limited.

Materials and Methods: Although the cases suffering retained placenta can be successfully controlled by medications, some progressed cases should be managed surgically even by hysterotomy or hysterectomy. Herein, we describe a case with retained placenta after normal vaginal delivery with unsuccessful treatment with drugs and curettage and thus hysterotomy, combined with antibiotic therapy because of the evidences of phlebitis, was inevitably considered as the final treatment approach.

Results: Urinary examination was also normal. Because of some evidences of phlebitis and breast engorgement (localized redness and swelling, pain or burning along the length of the vein, and discovering hard and cord-like vein), infectious consultation was ordered and antibiotics (vancomycin and meropenem) were considered. The fever was controlled. In the final stage, she was discharged with the following order: ferrous sulfate (daily), propranolol (per 12 hours), and cardiovascular consultation one week after discharge.

Conclusion: In the present case, because of unsuccessful curettage and continuing signs of infections, we had to consider hysterotomy along with high dose of antibiotics. It seems that in our case, the optimal treatment approach was a combination of hysterotomy and removing signs of local phlebitis with antibiotics that led to complete recovery.

Key words: hysterotomy, surgically, placenta

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Introduction

Retained placenta is mainly defined as the failure of placental delivery during 30 minutes after delivery and this can lead to serious maternal complications with an overall prevalence of 2% in all births [1,2]. Regarding its related risk factors, history of previous retained placenta, multiparity, preterm delivery, induced labor, and any surgical or iatrogenic injuries can increase the risk for this phenomenon [3]. Pathophysiologically, various mechanisms have been explained for retained placenta including constriction ring-reforming cervix, uterine abnormalities, any factors leading to morbid adherence of the placenta, premature induction of parturition with glucocorticoids and/or prostaglandins, any condition that reduces plasma estrogen concentration, vitamin E and selenium deficiency, and even seasonal hormonal changes [4]. Despite developing healthcare systems and obstetrics management plan, retained placenta has remained as one of the common causes of maternal mortality especially in developing countries where access to appropriate obstetrical care is limited [5]. Furthermore, although the cases suffered retained placenta can be successfully controlled by medications, some progressed cases should be managed surgically even by hysterotomy or hysterectomy. Herein, we describe a case with retained placenta after normal vaginal delivery with unsuccessful treatment with drugs and curettage and thus hysterotomy combined with antibiotic therapy, because of the evidences of phlebitis, was inevitably considered as the final treatment approach.

Case Report

A 25-year old pregnant woman (G3P2D2) with the gestational age of 30w+2d was referred to our center with the complaints of labor pain and spotting. In her past medical history, she expressed history of childhood febrile convulsions with some episodes of rising blood pressure within the last pregnancy, however in the present condition; she had normal systolic and diastolic blood pressure. In the first pregnancy about two years ago, the neonate was born via normal vaginal delivery but died after birth. Similarly, in a second experience one year ago, a similar consequence occurred. The main reason for those events was expressed to be unicornuate uterus. No history of cerclage was reported. In drug history, she was administered progesterone supplements from the sixth week of gestation. She also expressed history of sensitivity to penicillin. In initial assessment, vital signs were normal with systolic/diastolic blood pressure of 80/50 mmHg, pulse rate of 110/min, and fetal heart rate of 140/min. Her contractions were recorded every 6 minutes per 30 seconds duration. In examination by speculum, a dilatation of 2cm was revealed with the evidence of spotting. In obstetric ultrasonography, cephalic presentation was recorded. In her prenatal record, we just found a document of ultrasonography indicating single alive fetus with variable presentation and anterior placental position and without any structural abnormality. The patient was admitted with the following order: 1) reserving two units of packed cell, 2) determining blood group, 3) testing routine laboratory parameters, 4) hydration, 5) fetal heart rate monitoring, 6) administrating clindamycin (600mg, intravenously per 8 hours), and 7) checking urinary input/output. After reacting NST, she was ordered to ultrasonography to discover any abnormalities in placenta or uterus. Betamethasone (12mg, intramuscular) was also ordered. As soon as observing near together contractions, delivery was induced and resulted in a female neonate with Apgar score of 9 and weight of 1300 grams. However, the expulsion of placenta did not occur up to 1.5 hours after delivery. She had stable vital signs and the uterus was global and hard. No vaginal bleeding was also observed. We attempted to actively bring out the uterus followed by sending one unit of cross-match, emptying bladder, using oxytocin, and changing her position to encourage an upright position. About one hour later, the placental expulsion did not occur and thus curettage guided by ultrasonography was administered and the laboratory test was also considered, however curettage was unsuccessful. Inevitably, she was transferred to ICU for close monitoring. She complained only of a mild vertigo and on examination, a mild tachycardia (heart rate of 128/min) was revealed. So, the planning in ICU included close monitoring of vital signs and urine output, cardiology consultation, serial cells blood count, reservation of two units of cross match and four units of packed cell, antibiotic therapy with clindamycin and gentamicin and also administrating oxytocin. Two days after ICU admission and intensive caring, the patient became febrile with lowering blood pressures (systolic/diastolic blood pressures of 90/50 mmHg), tachycardia (heart rate of 140 to 150/min), tachypnea (respiratory rate of 22/min), and fever (body temperature of 40°C). No source of infection was found at physical examination, however in order, hydration and testing blood and urine culture were proposed. In infectious consultation, it was recommended to begin a combination antibiotic therapy with gentamicin, clindamycin, and meropenem. Also, in cardiology consultation, echocardiography parameters were normal with a sinus tachycardia in electrocardiography report. In initial diagnosis, a near to shock status was considered. In her serial blood tests, serum hemoglobin level gradually reduced from 12.8 to 9.2 g/dl and her white blood count adversely increased from 14000 to 22000. In other assessments, renal and liver function tests were normal. Also, coagulation tests were shown to be normal. Moreover, the results of blood and urine cultures were negative. Thus, the patient was transferred to the operation room. We proposed to do curettage, but it was unsuccessful. Therefore, the final decision was based on hysterotomy. In placental pathological assessment, unremarkable villous parenchyma with unremarkable membrane was reported. In the next step, we controlled fever, brought out the placenta by hysterotomy, followed antibiotic combination regimens and hydration. The patient began to breastfeed. The postoperative temperature was recorded as 39°C. The chest X-Ray and echocardiography was normal. Urinary examination was also normal. Because of some evidences of phlebitis and breast engorgement (localized redness and swelling, pain or burning along the length of the vein, and discovering hard and cord-like vein), infectious consultation was ordered and antibiotics (vancomycin and meropenem)

were considered. The fever was controlled. Finally, she was discharged with the following order: ferrous sulfate (daily), propranolol (per 12 hours), and cardiovascular consultation one week after discharge.

Conclusion

Various international guidelines have given applied guidance in management of a retained placenta. According to the guidelines, the monitoring of affected women with retained placenta especially when it is accompanied with hemorrhage is based on Modified Obstetric Early Warning chart (MEOWS) [6]. This chart allows the clinicians to identify early deterioration of disease condition. In other words, this chart must be commenced at the point of diagnosing retained placenta. In management of this clinical condition, considering some points are essential. First, as soon as confirming retained placenta, arranging transfer to the obstetric units is necessary. In the first step and with the probability of massive hemorrhage, blood reservation and cross match should be considered [7]. In parallel, sending blood and urine sample to rule out the positivity to infections is also necessary [8]. In the hospital setting and the third stage has been managed physiologically revert to active management giving 10 IU of oxytocin IM and follow the Active Management of Third Stage [9]. The affected women must not be left unattended whilst the placenta remains in situ. Empty the bladder. In those who are unable to pass urine, urine catheter should be considered [10]. The mother should be helped to breastfeed or recommend her to stimulate nipples [11]. Simultaneous to supportive managements, vital signs should be monitored continuously, followed by any sign of local or generalized infection, along with hydration.

As main rules for management of a retained placenta, are, at first, perform an ultrasound examination to determine whether the placenta is trapped or adherent, is suggested [12]. If the uterus is atonic, administration of intravenous oxytocin can promote uterine contractions to help expel the placenta, but it makes manual removal possibly more difficult [13]. If partial closure of the cervix or a contracted lower uterine segment is inhibiting egress, nitroglycerine can be administered to relax the uterus and facilitate delivery [14]. For extracting placenta adherence, manual removal using local or generalized analgesia is the most successful means [15]. Because this maneuver may lead to endometritis, it should be considered concomitantly with suitable antibiotics [16]. In some trials, intraumbilical prostaglandin injection has been considered for placental expulsion [17].

Despite attempts to remove retained placenta, hysterectomy is considered as the definitive therapy for complete placenta accreta [18]. In cases where the placenta has deeply grown into the uterus, removal is only possible by hysterectomy. In fact, hysterectomy with the placenta left in situ is preferable because attempts at removal of the placenta are associated with significant hemorrhagic morbidity [19]. Occasionally, a subtotal hysterectomy can be safely performed, but persistent bleeding from the cervix may preclude this approach and make total hysterectomy necessary [20].

In the present case, because of unsuccessful curettage and continuing signs of infections, we had to consider hysterotomy along with a high dose of antibiotics. It seems that in our case, the optimal treatment approach was a combination of hysterotomy and removing signs of local phlebitis with antibiotics that led to complete recovery.

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