



Management of Retained Placenta with Postpartum Hemorrhage in Vaginal Delivery: A Case Report

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Article History :

Received date : 2026/05/04
Revised date : 2026/06/19
Accepted date : 2026/07/15
Published date : 2026/08/07



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ABSTRACT

Background: Retained placenta is a condition in which the placenta is not delivered or fails to be expelled from the uterus more than 30 minutes after delivery during the third stage of labor, despite active management. This condition can result from inadequate uterine contractions or abnormal placental attachment to the uterine wall. It is a leading cause of postpartum hemorrhage. Postpartum hemorrhage is defined as a condition in which a patient experiences blood loss exceeding 500 mL following delivery, whether via spontaneous vaginal birth or cesarean section.

Case Report: A 33-year-old pregnant woman (P3A0) presented with heavy bleeding following a vaginal delivery at the Warungpring Community

Health Center (Puskesmas). The patient had undergone a spontaneous delivery at 40 weeks of gestation; the placenta had been delivered, and there appeared to be no retained placental tissue. Three hours after placental delivery, the patient experienced vaginal bleeding amounting to 500 mL, causing weakness and dizziness. Consequently, she was referred to the hospital for further management; dual-line intravenous fluids were initiated at the health center, and urinary catheterization yielded 100 cc of urine. Physical examination revealed vital signs as follows: blood pressure 100/70 mmHg, pulse 80 beats/minute, respiratory rate 21 breaths/minute, and temperature 36°C. Findings included the absence of lacerations, a positive exploration result (suggesting no retained tissue), and anemic conjunctivae. Examinations of the head, nose, ears, mouth, heart, lungs, abdomen, and extremities yielded normal results. Genital examination via inspection of the vulva and vagina revealed fresh red blood flowing from the birth canal. Ancillary testing included a complete blood count, which showed a hemoglobin level of 6.8 g/dL and a leukocyte count of 18,950. The patient received a transfusion of three units of packed red cells (PRC), resulting in post-transfusion hemoglobin and leukocyte levels of 9.6 g/dL and 18,740, respectively. Ultrasonography revealed retained placental tissue within the uterine cavity; consequently, the patient underwent curettage due to retained placenta. A follow-up hemoglobin check after the curettage showed a hemoglobin level of 9.2 g/dL and a leukocyte count of 15,070.

Discussion: Retained placenta can occur due to a failure of uterine contractions or inadequate contractions, or because of abnormal placental attachment to the uterine wall. This condition is a cause of postpartum hemorrhage, requiring prompt and appropriate medical intervention to prevent severe complications. From a pathophysiological perspective, retained placenta results from the myometrium's failure to contract optimally at the placental implantation site. Consequently, the placental detachment process is incomplete, leaving blood vessels at the implantation site exposed and leading to hemorrhage. Additionally, abnormalities in placental attachment such as placenta accreta contribute to the risk of retained placenta in pregnant women.

Physical examination of patients diagnosed with retained placenta typically reveals an enlarged, soft uterus accompanied by persistent bleeding. If the bleeding is not controlled, signs of hypovolemic shock may develop, such as an increased pulse rate, decreased blood pressure, and pale conjunctiva. These physical examination findings are crucial for determining the immediate course of action.

Transabdominal ultrasonography (USG) can be performed to detect any remaining placental tissue within the uterine cavity. Furthermore, ancillary tests including laboratory assessments of hematocrit, hemoglobin, and coagulation parameters are necessary to evaluate blood loss and guide the planning of subsequent management.

Keywords: retained placenta, postpartum hemorrhage, retained placental tissue.

INTRODUCTION

Postpartum hemorrhage is a potential complication following childbirth. It remains a significant cause of maternal morbidity and mortality worldwide. This condition is characterized by blood loss of approximately 500 mL or more after vaginal delivery. Excessive blood loss during postpartum hemorrhage can lead to a significant drop in hemoglobin levels, thereby triggering postpartum anemia.

Postpartum anemia—following either spontaneous delivery or cesarean section—is defined as a hemoglobin level of less than 11 g/dL during the initial weeks after birth. The consequences of postpartum anemia include impaired wound healing, increased susceptibility to infection, reduced breast milk production, and severe fatigue. Consequently, a mother's ability to care for and meet the needs of her newborn may be compromised. One factor associated with postpartum hemorrhage is retained placenta.

Retained placenta is a condition that contributes significantly to maternal morbidity and mortality rates in Indonesia. Prompt and appropriate management is crucial to reducing the risks of infection, hemorrhage, and the need for emergency hysterectomy. Therefore, prevention efforts must be strengthened through antenatal screening, optimal monitoring during the third stage of labor, and ensuring healthcare providers are prepared for early detection and immediate management. These measures are expected to minimize the adverse effects of retained placenta on the health of both mother and infant.

In addition to being a leading cause of postpartum hemorrhage, retained placenta carries the potential for long-term complications if not adequately managed. These complications include endometritis, secondary infertility, and the formation of intrauterine adhesions. Consequently, rapid, accurate, and effective prevention and management strategies must be prioritized in the delivery of obstetric care, particularly in resource-limited healthcare settings.

CASE ILLUSTRATION

Mrs. N, a 33-year-old patient (P3A0), presented with heavy vaginal bleeding accompanied by weakness and dizziness following a spontaneous delivery at the Warungpring Community Health Center. The delivery occurred at 40 weeks of gestation, and the placenta was delivered completely. Post-delivery exploration revealed no retained placental tissue within the uterine cavity. However, approximately three hours after placental delivery, the patient experienced vaginal bleeding estimated at 500 mL, resulting in complaints of weakness and dizziness. Given this condition, the patient was referred to a hospital for further management. During the referral process, two intravenous lines were established, and urinary catheterization was performed, yielding 100 cc of urine.

Physical examination showed the patient's vital signs to be relatively stable: blood pressure 100/70 mmHg, pulse rate 80 beats per minute, respiratory rate 21 breaths per minute, and body temperature 36°C. No birth canal lacerations were found, and uterine exploration suggested the absence of retained placental tissue. However, the conjunctiva appeared pale, a finding suggestive of anemia. Examinations of the head, nose, ears, mouth, heart, lungs, and extremities revealed no abnormalities. Genital examination via inspection of the vulva and vagina showed red vaginal bleeding.

Laboratory results indicated a hemoglobin level of 6.8 g/dL and a leukocyte count of 18,950/ μ L. Subsequently, the patient received a transfusion of three units of packed red cells (PRC). Following the transfusion, the hemoglobin level rose to 9.6 g/dL, while the leukocyte count was recorded at 18,740/ μ L. Subsequent ultrasonography (USG) revealed retained placental tissue in the uterine cavity; consequently, the patient underwent curettage due to retained placenta. Following the procedure, the hemoglobin level was 9.2 g/dL, and the leukocyte count had decreased to 15,070/ μ L.

DISCUSSION

The case of Mrs. N, a 33-year-old woman (obstetric status P3A0), involved retained placenta progressing to postpartum hemorrhage and postpartum anemia. The patient had undergone a vaginal delivery at 40 weeks of gestation at the Warungpring Community Health Center. Although the placenta had been delivered and an initial exploration suggested no retained placental tissue, the patient experienced vaginal bleeding approximately three hours postpartum, with an estimated blood loss of ± 500 mL. Subsequent hospital ultrasonography revealed retained placental tissue within the uterine cavity; a diagnosis of retained placental fragments was established, and a curettage procedure was performed.

Postpartum hemorrhage can result from retained placenta. This condition occurs when part or all of the placental tissue is not completely expelled after delivery. Retained placental fragments within the uterine cavity prevent the uterus from contracting optimally (uterine subinvolution). Consequently, blood vessels remain open, leading to persistent bleeding. This mechanism aligns with Mrs. N's condition, as she experienced bleeding several hours postpartum despite the initial exploration failing to detect retained placenta. The ultrasound findings confirming the presence of retained placental tissue substantiated the cause of the patient's postpartum hemorrhage.

Postpartum hemorrhage is defined as blood loss exceeding 500 mL following vaginal delivery. In this case, the patient lost approximately 500 mL of blood and complained of weakness and dizziness. These clinical manifestations represent the body's response to a decrease in circulating blood volume. Additionally, the patient exhibited conjunctival pallor, a clinical sign of anemia resulting from blood loss. Although her vital signs remained relatively stable upon arrival at the hospital, the condition required immediate management to prevent hypovolemic shock and more severe complications.

Laboratory findings revealed a hemoglobin level of 6.8 g/dL, indicating severe anemia secondary to acute hemorrhage. This drop in hemoglobin aligns with the pathophysiology of postpartum hemorrhage, where significant blood loss leads to a reduction in erythrocyte mass and the

blood's oxygen-carrying capacity. This explains the patient's symptoms of weakness, dizziness, and anemic conjunctiva. Additionally, blood analysis showed leukocytosis, likely a physiological response to labor, hemorrhage, or systemic stress.

The management provided to Mrs. N adhered to established protocols for postpartum hemorrhage caused by retained placenta. Fluid resuscitation was initiated at the primary healthcare facility, involving the placement of two intravenous lines to maintain hemodynamic stability. Given the critically low hemoglobin level, the patient received a transfusion of three units of packed red cells (PRC) to correct the anemia and improve oxygen-carrying capacity. Post-transfusion, hemoglobin levels rose to 9.6 g/dL, indicating a favorable therapeutic response.

Beyond correcting blood loss, the source of the hemorrhage required treatment. Ultrasound findings revealing retained placental tissue prompted a curettage procedure. Evacuating the retained tissue aimed to eliminate the primary cause of bleeding, thereby enabling optimal uterine contraction and facilitating hemostasis. Post-procedure evaluation showed a hemoglobin level of 9.2 g/dL and a decrease in leukocyte count compared to earlier readings, signaling clinical improvement following definitive therapy.

CONCLUSION

The case of Mrs. N demonstrates that retained placental tissue can occur even when an initial exploratory examination reveals no remaining placental tissue. Therefore, patients with persistent postpartum hemorrhage require further evaluation via ultrasonography if there is a suspicion of residual placental tissue within the uterine cavity. Prompt diagnosis, hemodynamic stabilization, blood transfusion as indicated, and evacuation of the retained placenta are crucial steps in preventing severe complications such as hypovolemic shock, infection, organ dysfunction, and maternal death.

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