When the Scar Fails: Uterine Suture Dehiscence as a Rare Cause of Secondary Postpartum Hemorrhage

Mirtha Jimena Vásquez Medina[1], Carlos Jesus Angeles Flores[1], Jose Alberto Rojas Jaimes[1], Roberto Eduardo Avila Matos[1]*

[1]Hospital Nacional Arzobispo Loayza, Lima, Peru

***Corresponding author:**

Mirtha Jimena Vásquez Medina,

Hospital Nacional Arzobispo Loayza, Lima, Peru,
Phone: 950907486,
Email: drajimenavasquezmedina@gmail.com

Received : June 18, 2026
Published **:** June 30, 2026

ABSTRACT

Introduction: Secondary postpartum hemorrhage (SPPH), defined as excessive bleeding occurring between 24 hours and 12 weeks after delivery, has a reported prevalence of 0.5–2%. Common causes include retained placental tissue, endometritis, and, less frequently, poor uterine wound healing. Although rare, uterine suture dehiscence can result in life-threatening complications.

Objective: To report a case of severe SPPH due to complete uterine suture dehiscence 14 days post cesarean delivery, leading to hypovolemic shock, and to discuss the clinical and surgical findings.

Case Report: A 31-year-old woman presented to the emergency department with heavy vaginal bleeding and severe anemia. She had undergone a cesarean section two weeks earlier and had discontinued her prescribed antibiotic treatment upon voluntary discharge. Following fluid resuscitation and transfusion, she underwent urgent surgical intervention due to ongoing hemodynamic instability.

Discussion: Intraoperative findings revealed complete dehiscence of the uterine suture at the lower uterine segment, with purulent discharge and necrotic tissue. A subtotal hysterectomy was performed. Pathological analysis confirmed necrosis and inflammatory infiltrate at the site of the uterine defect.

Conclusion: Uterine suture dehiscence is a rare but potentially fatal cause of SPPH. Diagnosis can be challenging, particularly in the absence of typical signs such as fever or foul-smelling discharge. Clinical history, imaging, and prompt recognition of hemodynamic deterioration are crucial for effective management. Early surgical intervention may be life-saving in such critical cases.

Keywords: Uterine Dehiscence, Secondary Postpartum Hemorrhage, Cesarean Section Complications, Obstetric Emergency

INTRODUCTION

Secondary postpartum hemorrhage (PPH) is defined as bleeding that occurs between 24 hours and 12 weeks postpartum. This condition has a reported prevalence of 0.5–2%. We present the case of a secondary postpartum hemorrhage occurring 14 days after cesarean delivery. The patient presented to the emergency department due to episodes of profuse vaginal bleeding resulting in hypovolemic shock and severe anemia. With no history of fever, the patient underwent emergency intervention, beginning with uterine curettage and subsequently an exploratory laparotomy due to persistent bleeding. Intraoperative findings revealed complete dehiscence of the hysterorrhaphy site, with evidence of a compressed (aplastered) uterine wall [1,2].

CASE REPORT

A 31-year-old female presented to the emergency department with the following vital signs: HR 110 bpm, BP 153/90 mmHg, RR 19, SpO_2 98%. Upon arrival at the gynecology department, she reported three days of vaginal bleeding with three episodes of heavy bleeding associated with clots. Fourteen days prior, she had undergone a cesarean section at our institution due to a category II fetal heart rate pattern and prolonged premature rupture of membranes. She had requested voluntary discharge during the puerperium and did not complete the recommended course of antibiotics. The patient denied any additional symptoms.

Vital signs were reconfirmed. Physical examination revealed: the patient was alert and oriented (AREG, AREH, AREN). Skin: warm, elastic, marked pallor (++/+++). Abdomen: soft, depressible, non-tender. Speculum exam showed a wide, elastic vaginal canal with evidence of bleeding and presence of intrauterine tissue of uncertain origin, without foul odor. The external cervical os was slightly open without active bleeding. Vaginal examination revealed a 10 cm uterus, slightly open cervical os, traces of non-foul-smelling blood. Uterine delimitation was difficult due to abundant adipose tissue.

The patient reported a similar bleeding episode the day prior, with hemoglobin reportedly at 8 g/dL. A transvaginal ultrasound had been performed, though no documentation or results were provided.

Intravenous fluid therapy was initiated for hydration and volume resuscitation, and laboratory tests and a transvaginal ultrasound were ordered. The patient subsequently experienced active vaginal bleeding of approximately 1000 cc, with associated hypotension (BP 60/30 mmHg). She was transferred to the shock trauma unit, where volume resuscitation and transfusion of three units of packed red blood cells were administered [3,4].

Abdominal ultrasound revealed a uterus measuring 118 × 60 × 107 mm, endometrial thickness of 29 mm, with a heterogeneous appearance and no color Doppler uptake. No free fluid was noted at the time of the exam.

The working diagnoses included:

1. Secondary postpartum hemorrhage – rule out retained placental tissue

2. Post-cesarean patient, day 14 postpartum

Given the hemodynamic instability and persistent vaginal bleeding, the patient was taken to the operating room. The surgical plan included uterine curettage with the possibility of subtotal abdominal hysterectomy. The proposed plan was discussed with the patient's family. At that time, lab results were still pending.

A consultation with the general ICU was requested prior to surgery. The ICU accepted the patient for postoperative management.

The patient entered the operating room at 10:15 PM in poor general condition, with a blood pressure of 80/40 mmHg, SpO_2 of 86%, and generalized pallor. Norepinephrine was initiated by the anesthesiology team.

A uterine curettage was performed, revealing abundant clots and intrauterine tissue of undetermined origin. Due to continued bleeding, an exploratory laparotomy was performed, which revealed: purulent discharge from the surgical wound, devitalized subcutaneous tissue and muscle with necrotic areas; multiple vesicouterine, uterine-omental, and parieto-omental adhesions were observed, compressing the hysterorrhaphy site, which was found to be completely dehiscent. General surgery was called for adhesion release, reporting dehiscent uterine suture, active bleeding, and adhesions involving the right fallopian tube, omentum, and peritoneum.

DOI : https://doi.org/10.35702/cases.10029

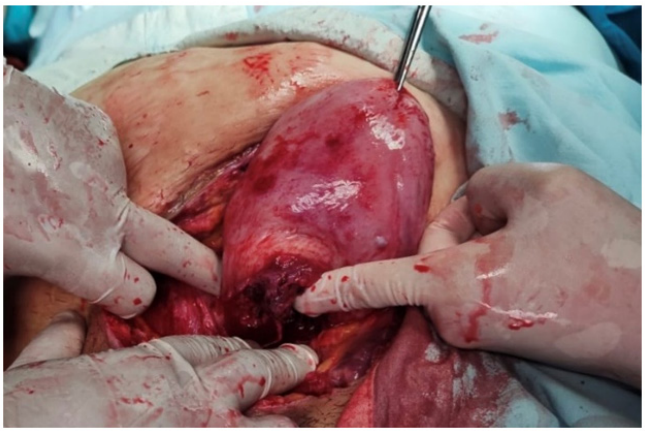

Figure 1: Intraoperative finding of Dehiscence of uterine suture

Adhesiolysis and subtotal abdominal hysterectomy were performed. Pathology reported secretory endometrial fragments with necrohemorrhagic decidual remnants. A 7 × 1.2 cm full-thickness defect in the lower uterine segment wall was identified, with hemorrhagic and inflammatory changes. The myometrium showed marked edema and hemorrhagic and inflammatory infiltration centered around the dehiscent area [5].

DISCUSSION

In 2017, the American College of Obstetricians and Gynecologists (ACOG) defined secondary postpartum hemorrhage as bleeding occurring between 24 hours and 12 weeks postpartum. Other literature narrows this to 24 hours through 6 weeks, with most cases presenting within the first two weeks.

In comparison with the present case, this patient experienced secondary PPH at 14 days postpartum.

The main causes of secondary PPH include retained placental tissue and endometritis, which may or may not be associated with uterine subinvolution. Other etiologies include poor wound healing, coagulopathies, and uterine artery pseudoaneurysms.

Identifying the underlying cause is essential, as it determines definitive management. The severity of bleeding is also a critical factor in choosing the appropriate intervention.

Among the most common causes of secondary PPH is poor healing of the uterine incision. Contributing factors include anatomical issues, poorly positioned incisions, suture technique, and infection. A thorough clinical history, including any history of fever, is key to diagnosis. As seen in this case, the natural history of the disease is not always followed, complicating diagnosis.

Anatomically, low segment uterine incisions may compromise branches of the uterine artery. This area has limited vascular supply, increasing the risk of necrosis and poor healing.

Regarding suturing, placing sutures during active bleeding without optimal visualization can inadvertently ligate key vessels, reducing perfusion. Zhang suggests that inadequate suture tension may result in hematoma formation and delayed wound healing.

Multiple vaginal exams during labor may also contribute to postoperative infection and poor incision healing.

Diagnostic tools such as transvaginal ultrasound are useful. The presence of a heterogeneous mass at the surgical site without Doppler uptake suggests defective healing.

Other diagnostic tools include CT scan, angiography, or diagnostic hysteroscopy, although their use depends on the patient's hemodynamic stability.

Initial management may be conservative, including uterotonics and antibiotics. However, persistent bleeding despite conservative therapy warrants surgical intervention such as uterine curettage (bearing in mind the risk of uterine perforation) or exploratory laparotomy. If hysterorrhaphy dehiscence is confirmed, hysterectomy is often the definitive treatment. Some literature describes successful resuturing of the defect.

As illustrated in this case, although rare, some patients may present with hemodynamic instability and hypovolemic shock, complicating both diagnosis and management. In such scenarios, conservative management is contraindicated.

CONCLUSIONS

In summary, secondary postpartum hemorrhage is an uncommon condition, especially beyond two weeks postpartum. Determining the etiology is crucial for appropriate treatment. However, in cases like the one presented, hemodynamic instability necessitates urgent intervention. Immediate surgical management may be required to reduce the risk of morbidity and mortality.

REFERENCES

1. Xie X, Wu X, Zou, Y, Zhang J, Wang W, Zhang J. (2020). Misoprostol for the prevention of postpartum hemorrhage. World Journal of Clinical Cases. 8(12):2392–2403.

2. American College of Obstetricians and Gynecologists. (2017). Practice Bulletin No. 183: Postpartum hemorrhage.

3. Weeks AD. (2015). The prevention and treatment of postpartum haemorrhage: What do we know, and where do we go to next? International Journal of Gynecology & Obstetrics. 128(2):137–139.

4. Du YL, Yang MZ, Li Q. (2001). The application of ultrasonography in diseases of vaginal bleeding of obstetrics and gynecology. Zhonghua Yixue Yingxiang Jishu. 17:1093–1094.

5. Hendriks HJC, Mol BWJ, Bancsi LFJMM, de Bruin JP, Hogerzeil HV, Hemrika DJ, et al. (2005). Broth cultures in the diagnosis of pelvic inflammatory disease. Archives of Gynecology and Obstetrics. 271(1):26-30.