



Uterine Scar Dehiscence: A Rare Cause of Life-Threatening Delayed Secondary Postpartum Hemorrhage—A Case Report and Literature Review

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Introduction

Delayed postpartum hemorrhage (PPH) is defined as any abnormal or excessive bleeding that occurs 24 h after delivery and up to 12 weeks postpartum [1]. The exact prevalence of secondary PPH is difficult to estimate as only severe cases of secondary PPH who require blood transfusion or surgical intervention get reported, rest are managed on an outpatient basis. According to the largest historical cohort, the frequency of secondary PPH ranges between 0.2 and 3% of deliveries [2]. Retained placenta is the commonest cause for secondary PPH followed by subinvolution, endometritis, and pseudoaneurysm. Scar dehiscence is one of the rarest causes of secondary PPH. We are describing a case of scar dehiscence who reported on day 44 with life-threatening severe hemorrhage.

Case Report

We are discussing a para 2 living 2 patient. In her present pregnancy, she was booked in our institute since early gestation. Her pregnancy was uncomplicated except for the development of gestational diabetes mellitus at 26 weeks of gestation which was controlled on oral hypoglycemic agents and insulin. She was planned for induction for the same at

37+4 weeks. The patient refused induction of labor as she had a repaired complete perineal tear in her first delivery. The patient underwent an Elective LSCS with bilateral tubal ligation. Her postoperative period was uneventful, the patient had no fever and she was discharged 48 h after LSCS. Suture removal was done on day 8 and sutures were healthy. She had her postpartum visit at 6 weeks. Two days after that, i.e., 44 days postpartum, she presented to the emergency with severe bleeding per vaginam with the passage of a big clot and soakage of one complete pad in half an hour. There was no history of local trauma, fever, foul-smelling vaginal discharge, per vaginal or per speculum examination, intercourse, or antiplatelet/anticoagulant intake.

On examination, she was anxious, although, well-oriented. She had tachycardia of 120 beats per minute, BP was 100/70 mm of Hg and the patient was pale. Her uterus was well retracted. On per speculum examination, 500 cc clots were removed from her vagina, cervix was irregular and pulled up, os was closed and minimal active bleeding was seen. Hemogram, coagulogram, LFT, RFT were within normal limits. On transvaginal USG with color Doppler, no evidence of residual placental tissue was found in the uterine cavity. Although a 2*2 cm hypoechoic lesion was found in the isthmic region with no color flow. I/V antibiotics, I/V Tranexamic acid was started and patient was planned for Digital subtraction angiography (DSA). While she was being shifted for DSA, she had the second bout of torrential bleeding per vaginam. She was shifted for exploratory laparotomy. Intraoperatively, it was found that the cesarean scar was necrosed and the scar site was bleeding profusely. Total abdominal hysterectomy was done. The patient received 5 packed red blood cells (PRBC), (1) fresh frozen plasma (FFP), (2) platelet concentrate, and (3) cryoprecipitates intraoperatively. The patient was stable postoperatively (no fever or malaise) except for the fact that she had a urinary tract infection on day 2 which was managed according to culture sensitivity. She was discharged in stable condition

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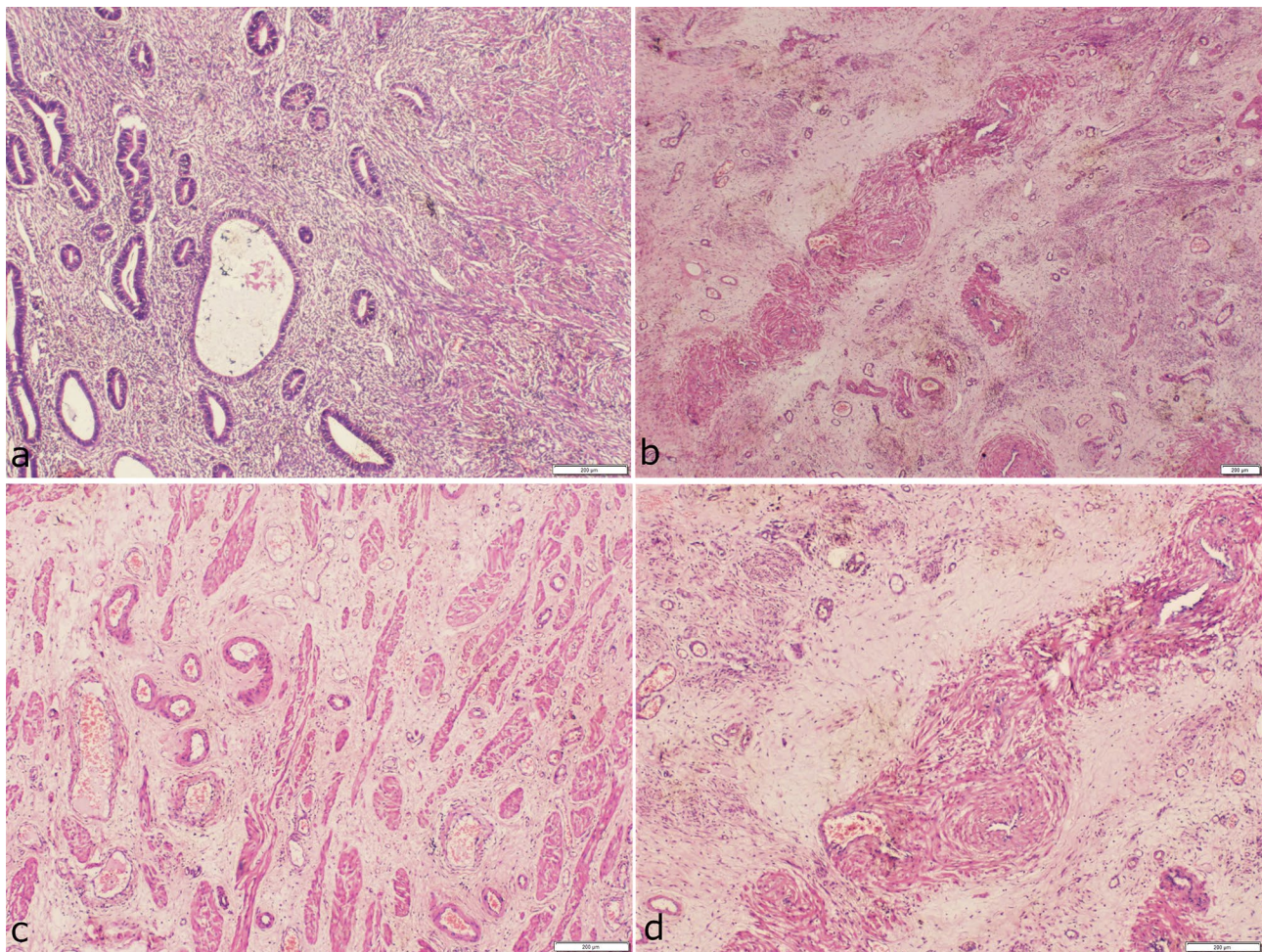


Fig. 1 Histopathology of uterus was suggestive of benign proliferative endometrial glands with the myometrium showing extensive loss of myometrial fibres and replacement by fibrosis

on her 10th postoperative day. Suture removal was done on day 10 and sutures were healthy. The histopathology of the uterus was suggestive of benign proliferative endometrial glands with the myometrium showing extensive loss of myometrial fibers and replacement by fibrosis as shown in Fig. 1.

Discussion

Delayed postpartum hemorrhage is not a well-studied condition as the incidence is very less. Amongst the patients who develop delayed PPH, the proportion of cases being reported is further less as most of the cases are managed on an outpatient basis. Even the ones who reach emergency pose a diagnostic dilemma as there is no specific definition to quantify delayed PPH into mild, moderate, or severe. Severe secondary PPH due to scar dehiscence is very rare and the bleeding occurs commonly due to the shearing of vessels on the margins of the uterine scar. The risk factors reported for

scar dehiscence are multiparity, diabetes, emergency surgery, infection, and incision placed too low in the uterine segment [2]. Two out of these, i.e., multiparity and diabetes were present in our patient. Uterine scar dehiscence with infection requires a high index of suspicion as a rare cause for postpartum localized/generalized peritonitis with sepsis. Severe abdominal wound infection after cesarean section may be associated with uterine wound dehiscence, which poses a grave risk to the mother in her future pregnancy.

Most commonly the patients present between 1 and 4 weeks postoperatively [3]. Sometimes the patient has an irregular bleeding pattern and the patient may have several bleeding episodes separated by days [3]. This was, however, not the case in our patient as she had a postpartum check just 2 days back and she was asymptomatic at that time. One case was found where the bleeding was as late as 10 weeks post-operatively.

While evaluating a case of secondary PPH a pelvic ultrasound with Doppler is very important as it can help exclude

Table 1 Compares the recent case reports with scar dehiscence as a cause of secondary PPH

Author	Sengupta Dhar et al. [5]	El-Agwany [6]	Aggarwal et al. [3]	2020 (Index report)
Indication of LSCS	Previous 1 LSCS with thin scar on routine USG	PTPROM with triplet gestation	Previous 1 LSCS	Patient unwilling for trial of labor
Day of presentation	10 weeks	5 days	42 days	44 days
Presenting complaint	Heavy bleeding with passage of clots	Vaginal bleeding followed by purulent discharge P/V	Bleeding per vaginum and pain abdomen since 1 day	Heavy vaginal bleeding P/V
Obstetric history	P2L2	PL3	P2L2A1	P2L2
Risk factors	Previous LSCS	Infection	Previous LSCS, infection	Previous LSCS
USG with doppler	ET = 13 mm and an anechoic lesion of 33 * 28 * 33 mm in LUS with high velocity of blood flow on Doppler in surrounding myometrium	Subinvoluted uterus with fluid intrauterine and pelvic collection	Hyperechoic area of size 2 * 2 cm in the fundal region, likely retained placental bits	No evidence of residual placental tissue was found. A 2 * 2 cm hypoechoic lesion was found in the isthmic region with no color flow
CT angiography	Planned but could not be done	Not done	Not done	Planned but could not be done
Blood and product transfusion	6 Units PRBC 4 Units FFP	2 Units PRBC 2 Units FFP	3 Units PRBC 3 Units FFP	5 Units PRBC 1 Unit FFP 2 Units platelet concentrate 2 Units cryoprecipitates
Management	Total abdominal hysterectomy	Subtotal hysterectomy	Suction evacuation followed by total abdominal hysterectomy	Total abdominal hysterectomy
Postoperative period	Uneventful	Uneventful	Uneventful	Uneventful

common causes like retained placental fragments, endometritis, and subinvolution of the placental bed [3]. Pelvic angiography helps in identifying pseudoaneurysms as a cause of severe secondary PPH [3]. In our case the patient was planned for DSA; however, the procedure could not be carried out as the patient had torrential bleeding warranting immediate exploratory laparotomy. On laparotomy, the cesarean scar tissue was necrotic.

Once the diagnosis of dehiscence of cesarean scar is made, the approach to management can be conservative or surgical. Conservative modalities were not an option for our patient as the patient was bleeding profusely from an eroded uterine artery. Surgical management includes refreshing the edges of the scar, ligation of internal iliac arteries, and hysterectomy [4]. The decision in our patient was hysterectomy as her bleeding was life-threatening which required multiple blood units and product transfusions intraoperatively (Table 1).

Conclusion

Secondary PPH is a rare occurrence. Its management protocols are not uniform as there is a lack of population-based studies in this field. While dealing with a patient with

complaints of heavy vaginal bleeding after discharge from the hospital following a LSCS, clinicians should keep in mind the possibility that scar dehiscence is one of the possible causes. The management plan should be made accordingly to prevent significant morbidity in the form of massive blood loss and the need for an emergency hysterectomy.

Declarations

Conflict of interest The authors declare that they have no conflict of interest statement.

Ethical Approval Informed consent of the patient has been taken before submitting the case report for publication.

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