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## Case Report

# Secondary postpartum hemorrhage on day 58 of cesarean section due to uterine scar rupture

Yogita B. Gavit\*, Deepika Sharma

Department of Obstetrics and Gynecology, Lokmanaya Tilak Government Medical College, Mumbai, Maharashtra, India

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**\*Correspondence:**

Dr. Yogita B. Gavit,

E-mail: Dryogita1990@gmail.com

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### ABSTRACT

Secondary postpartum hemorrhage is rare and affect 0.23-3% of all pregnancies. It happens between 24 hours to 12 weeks of post-delivery. These postpartum hemorrhages occur more often during normal vaginal delivery only a small subset of postpartum hemorrhages occurs after cesarean section. Delayed postpartum hemorrhage is obstetrics emergencies that occurs following vaginal or cesarean delivery, in later condition may be caused by dehiscence of uterus incision after cesarean section which can lead to severe and fatal bleeding. We herein report a case of secondary postpartum hemorrhage after cesarean section.

**Keywords:** Secondary postpartum hemorrhage, Uterine scar rupture, Dehiscence

### INTRODUCTION

Postpartum is an obstetrics emergency that occurs following vaginal or caesarean delivery major cause of postpartum hysterectomy and maternal mortality. Secondary postpartum hemorrhage is defined as excessive vaginal bleeding in the period from 24 hours after delivery to 12 weeks postpartum.<sup>1,2</sup> According to World Health Organization (WHO), postpartum hemorrhage is responsible for about 25% of all maternal death.<sup>3</sup> Secondary postpartum hemorrhage most common cause is placental regression<sup>4</sup> after cesarean section is rare and occurs in 1/3654.<sup>4</sup> It is characterized by severe bleeding, shock or anemia therefore proper diagnosis and management of bleeding is crucial, depending on severity and extent of bleeding pharmacological, mechanical, surgical intervention may be applicable.<sup>4,5</sup> Secondary postpartum hemorrhage and delayed bleeding can occur after dehiscence of uterus incision after cesarean section.

### CASE REPORT

Mrs. XYZ 25 Year old Para1living1 with day 58 Lower segment cesarean section (LSCS) was referred from Thane

Municipal Hospital in view of secondary postpartum hemorrhage, patient gave history of per vagina bleeding since 5 hours, soakage 7-8 pads with no passage of clots, no history of fever, chills, rigors, discharge from wound site, hypertension, Diabetes mellitus (DM), asthma, tuberculosis, epilepsy, thyroid disorder. Cesarean section done in Thane Municipal Hospital, LSCS done in view of non-progress of labour, post-operative uneventful. Patient went to Thane Municipal Hospital with similar complaint at 38 day of LSCS for which she received 2 pint of pack cell volume and referred to Lokmanaya Tilak medical college, Sion for further management, patient came to Sion hospital in labor room on 38th day of LSCS.

#### On examination

General condition: fair, conscious oriented, pallor present grade 3 afebrile, pulse rate: 96 bpm low volume, blood pressure 110/70 mmHg. Cardiovascular system: S1S2 present, respiratory system: air entry equal on both sides, per abdomen: soft, no guarding/rigidity/tenderness, uterus 12 weeks, well retracted, wound site healthy, per speculum: active bleeding present but cervix and vaginal healthy, per vagina: uterus 12 weeks size, bilateral fornix

clear no tender, OS closed, bleeding present, blood investigation done: hemoglobin 7 gm%, white blood cells (WBC) 28000 cmm, platelet 2,46,000 cmm, liver and kidney function test normal, blood culture no growth detected. High vaginal swab: no growth detected. Urine routine: no pus cells, report normal. Ultrasound abdomen and pelvis: no abnormality detected. Diagnosis: PIL1 with day 38 LSCS with secondary postpartum hemorrhage. Patient treated with intravenous antibiotics- injection piperacillin 4.45 gm 12 hourly, injection metronidazole 400 mg 12 hourly for 7 days rest supportive medication like antacid, intravenous fluids.

Patient recovered on discharge no active bleeding, hemogram within normal limits. Advised oral hematinic.

On day 58 of LSCS patient came with complain of per vagina bleeding, giddiness, breathlessness since 5 hours. No history of fever, chills, rigors.

**On examination**

General condition: moderate, afebrile, conscious oriented, pallor grade 4 present. Pulse rate: 110 bpm low volume, blood pressure 90/70 mmHg, respiratory rate: 28/minute, cardiovascular system : S1S2 present, respiratory system: air entry equal on both sides, per abdomen: soft, no guarding/rigidity/tenderness, uterus 12 weeks, well retracted, wound site healthy, per speculum: active bleeding present, per vagina: uterus 12 weeks size, cervix not palpable.

Blood investigations done: hemoglobin 5 gm%, WBC 9000 cmm, platelet 2,58,000 cmm, Prothrombin time/ International normalized ratio (PT/INR) 16/1.8, total bilirubin 0.6, Serum glutamic-oxaloacetic transaminase/Serum glutamic-pyruvic transaminase, (SGOT/SGPT) 12/17, arterial blood gas with electrolytes: normal. Patient was immediately taken for exploratory laparotomy under general anesthesia with blood and blood products in hand. Intra operative findings: no evidence of hemoperitoneum, uterus size 10x8x9 cm, uterine scar rupture full length; edges of scar healthy; bleeder noted on right uterine angle which was liagated with vicryl number 1. Uterine scar sutured with chromic catgut number 2 in continuous interlocking single layer, bilateral internal iliac artery ligation done prophylactically. Homeostasis was achieved, abdominal drained kept. Intra operatively 2-pint pack cell volume and 4-pint fresh frozen plasma transfused.

Post operatively patient was shifted to surgical intensive care unit for monitoring, intravenous antibiotics started injection piperacillin 4.45 gms 12 hourly, injection metronidazole 400 mg 12 hourly, with antiemetic for 7 days followed by oral antibiotics for 7 days and intravenous fluids for 2 days till patient was nil by mouth. Post-operatively 4-pint pack cell volume transfused, uneventful. On day 5 of laparotomy abdominal drained

removed, on day 12 sutures removed wound healthy, on day 13 patient was discharged.

**Table 1: Investigation table.**

Day of LSCS	38 <sup>th</sup>	46 <sup>th</sup>	59 <sup>th</sup>	60 <sup>th</sup>	62 <sup>th</sup>	67 <sup>th</sup>
Hb %	7.0	9.0	6.0	7.5	8.8	9
WBC	28000	12000	6700	7000	7200	7000
Platelet	246000	248000	250000	252000	249000	248000
BUN/Creatinine	10/0.8	8/0.8	12/0.8	10/0.8	11/0.7	10/0.7
PT/INR	16/1.0	16/1.0	18/2.0	17/1.5	16/1.3	16/1.0
Total bilirubin	0.6	0.6	0.6	0.6	0.7	0.6
SGOT/SGPT	15/8	16/8	22/8	17/8	18/0	20/2
RBS	98	99	90	105	109	110
Na <sup>+</sup> /K	144/3.5	139/4.0	144/4.0	140/4.2	144/4.0	138/3.5



**Figure 1: Intra-operative image (full length uterine scar rupture).**



**Figure 2: Post-operative image (sutured with chromic catgut number 1).**

**DISCUSSION**

Incidence of uterine scar dehiscence irrespective of the cause is around 0.6% worldwide.<sup>4,5</sup> Typical important cause would be previous lower segment cesarean section, classical cesarean section, previous uterine trauma, congenital anomaly, abnormal placentation and

inappropriate oxytocin administration. The timing of spontaneous cesarean uterine wound dehiscence or rupture usually occurs during pregnancy or labor in a scarred uterus. By contrast postpartum cesarean uterine wound dehiscence is very rare.<sup>6,7,8</sup> Although uncommon, postpartum cesarean uterine wound dehiscence is life threatening. According to previous reports, postpartum cesarean uterine wound dehiscence tends to occur in scarred uterus with coincident infection such as chorioamnionitis, endometritis, and abscess formation.<sup>9</sup> In these reports, abdominal pain and fever are common symptoms. However, in our case patient presented with per vagina bleeding and hypovolemic shock only. No obvious abdominal pain or infection signs were noted. Exploratory laparotomy should be considered as the most important tool of diagnosis and treatment for uterine scar rupture and repair. Conservative resuturing and debridement can be chosen, but in presence of marked wound infection, endomyometritis, intra-abdominal abscess hysterectomy should be considered.

## CONCLUSION

Secondary postpartum hemorrhage is important cause of maternal morbidity and mortality. Basic resuscitation followed investigation and treatment of specific cause of hemorrhage are essential. Exploratory laparotomy should be considered as the most important tool for diagnosis and treatment of uterine scar rupture which should be suspected in cases of secondary postpartum hemorrhage and repaired. Conservative resuturing after debridement can be chosen, but in presence of marked wound infection, endomyometritis intra-abdominal abscess hysterectomy should be considered.

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