CASE REPORT

Uterine scar site rupture: A rare cause of secondary PPH-case report

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Abstract

The case of a woman who experienced severe secondary PPH on the fifth day following a lower segment caesarean section (LSCS), which resulted in severe anaemia is presented. The first episode of Secondary PPH was managed successfully with intravenous fluids, blood transfusions and tranexamic acid. However, a few days later she had another episode of massive vaginal bleeding leading to a haemoglobin (Hb) drop of more than 4 Grams. Given a high index of clinical suspicion for scar site rupture, the patient underwent an exploratory laparotomy, and a peripartum hysterectomy was performed. The patient remained stable during the postpartum period and was discharged home after a few days. The report highlights the importance of high index of clinical suspicion, conducting appropriate investigations and initiating early treatment to reduce maternal morbidity.

Keywords: Secondary PPH, scar site rupture, Hysterectomy.

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Introduction

Postpartum haemorrhage {PPH} occurs in approximately 6% of all live births.[1,2] Secondary PPH is very rare, accounting for only 1% of cases, due to which it does not gain much attention. However, with the introduction of better practical governance and audits regarding this condition, obstetric units are increasingly assessing this aspect of maternal care.

As a result, this rare condition significantly contributes to maternal morbidity and mortality. The case with a rare symptom of secondary PPH, due to an uncommon aetiology posing a diagnostic challenge, is presented. However, high clinical suspicion with prompt emergency management, successfully saved the patient's life. The recovery was remarkable during the postoperative period.

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Case Report

In March 2024, a 36 year old female presented to the Mother and child health center (MCH) emergency department of Pakistan Institute of Medical Sciences (PIMS) hospital Islamabad, on her 19th post-operative day (POD) following an emergency lower segment caesarean section (LSCS) performed at another hospital due to grade 3 meconium stained liquor (MSL) in the second stage of labour. She complained of heavy vaginal bleeding. On investigation it was found that the patient had her first episode of vaginal bleed on 5th day of Caesarean which was initially managed at the local hospital. However, she returned to the same hospital on the 10th post operative day with the same complaint. The Patient was managed with IV tranexamic acid, blood transfusion and fluids. Following a third episode of vaginal bleeding, the patient was referred to a tertiary care hospital.

Upon arrival, the patient was hypotensive with clinical pallor of +3, Since the patient had already received treatment prior to arrival, there was minimal vaginal bleeding on examination. Her abdominal wound was healing well, except for a small 1x1 cm gap with scanty ooze, otherwise the abdomen was soft and the uterus was well contracted. Investigations showed a mildly raised total leucocyte count (TLC) and HB (haemoglobin) level of 5 Gm, despite a history of multiple transfusions. The wound culture yielded staphylococcus aureus sensitive to Sulzone.

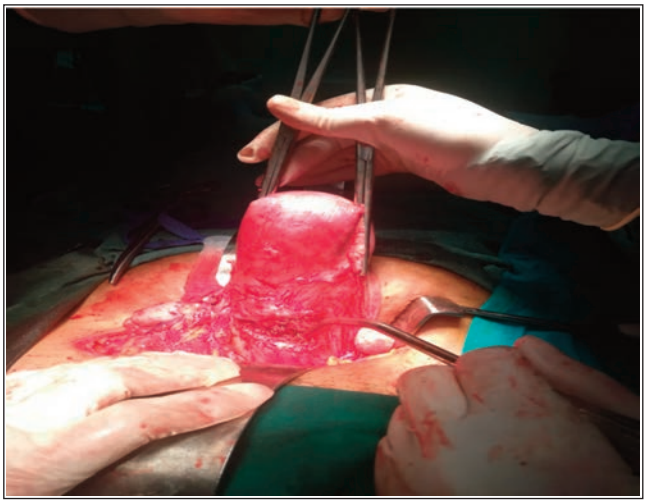

Figure-1: Perioperative picture of uterus with scar rupture after dissection of bladder.

Figure-2: Scar site of patient showing only minimal infection of wound.

Ultrasound imaging showed a heterogeneous area in the lower uterine segment with positive flow on colour Doppler, suggesting either cervical fibroid or arterio-venous malformation. To further investigate, an MRI was planned. The patient remained in the hospital for 10 days for confirming diagnosis, during which she experienced 2 episodes of sudden, massive vaginal bleeding. A unique presentation was that the vaginal bleeding was always followed by urination, which prompted further investigation.

The first episode responded to intravenous (IV) tranexamic acid, fluids and blood transfusion but the second episode was refractory to the treatment. As a result an immediate decision was made to proceed with surgical exploration. Under general anaesthesia, the patient underwent surgery. Perioperatively, pus flakes were found on the fat and cornua of the uterus. The bladder was adherent to the lower uterine segment. Upon careful dissection the scar site was exposed, showing a rupture near the cervix with pus at the edges. A Peripartum hysterectomy was performed, which is the treatment of choice in 6% of patients with postoperative wound necrosis, sepsis and 'Refractory postpartum haemorrhage.[3,4]

The Postoperative period was uneventful. The patient's anaemia improved, and she received IV antibiotics. Her wound healing progressed well, and she was discharged home.

Discussion

Around 6% of live births are complicated by postpartum haemorrhage [PPH] which remains a leading cause of maternal morbidity and mortality in low socioeconomic countries, despite multiple efforts to address the issue.[4] Secondary PPH has received less attention in the past, partly due to its relatively rare occurrence. However, its significant contribution to maternal morbidity and mortality, has led to the introduction of clinical governance, audit and standard setting practices, enabling obstetric units to better evaluate this aspect of maternal care.

The case presented here involved 'refractory" PPH. According to the WHO's secondary analysis of the champion trial data, refractory PPH is defined as a condition requiring second-line treatment with three or more utero-tonics and interventional procedures, such as tear repair, uterine balloon tamponade (UBT), uterine or hypo- gastric artery ligation, bimanual uterine compression sutures, or hysterectomy. Although retained products of conception (RPOCS) and coagulation disorder remains the most common cause of secondary PPH, our case was unique in that scar site rupture becomes the potential life-threatening morbidity. Risk factors for scar dehiscence are diabetes, multiparity, emergency surgery, too low incision on uterine cavity and infection.[5,6] In our case, the patient underwent an emergency Caesarean Section during the second stage of labour, where the whole lower segment is effaced, and the incision appeared near the cervix. Additionally, the risk of endometrial infections is 3-fold higher in second stage Caesareans compared to first stage.[7,8]

The management of such cases requires high index of clinical suspicion for scar site rupture. Although the ultrasonic graphic suspicion of arteriovenous malformations along with the unique presentation of bleeding episodes following urination, delayed the diagnosis, prompt intervention for refractory PPH remained the cornerstone of treatment. The episodic bleeding could partially be explained by the pressure effect of the full bladder covering the scar site. Its sudden pressure release may have caused massive bleeding from the incision site but exact aetiology remains unclear.[9,10]

Conclusion

The case report highlights the importance of maintaining a high index of clinical suspicion when diagnosing a scar site rupture as a rare cause of secondary PPH. The management of such cases should be undertaken at a tertiary care facility, where multidisciplinary support and arrangements for blood products are available. Furthermore, ensuring adequate antibiotic coverage prior to skin incision and during the postpartum period can help facilitate early treatment, minimize complications and reduce morbidity.

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Author Contribution:

SH: Gather the data for the case searched the relevant articles and writing.
MZ: Primary surgeon who decided the procedure and did the surgery.
HH: Who suggested that the patient is having refractory secondary PPH owing some defect in uterus particularly at scar site.