International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Kashi A et al. Int J Reprod Contracept Obstet Gynecol. 2024 Aug;13(8):2175-2178
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20242094

Case Report

A rare case report of uterine rupture in a case of suspected septic abortion

Ashwini Kashi*, Sheela S. R., Harshitha S.

Department of Obstetrics and Gynaecology, Sri Devraj URS Academy of Higher Education and Research, Kolar, Karnataka, India

Received: 29 May 2024
Accepted: 01 July 2024

***Correspondence:**
Dr. Ashwini Kashi,
E-mail: ashukashi26@gmail.com

ABSTRACT

There was a progressive rise in the rate of caesarean sections globally from 17.2% to 21.5% from 2017 to 2021. Caesarean sections have an improved feto-maternal outcome but come with a set of challenges. A second-trimester abortion in a previously scarred uterus is one of them. The incidence of uterine rupture is about 3.8–4.3% in a scarred uterus, which is much higher than in an unscarred uterus. Mifepristone 200 mg orally followed by misoprostol 800 mcg vaginally within 24–48 hours has been proven to be an effective method for medical abortion, but its safety in a previously scarred uterus has not been fully established. A 27-year-old P2L2A1 with two previous caesarean sections at 19 weeks of gestation was referred to our tertiary care center with bleeding per vagina following consumption of medical termination of pregnancy (MTP) pills, followed by dilatation and curettage outside. She was pale, and tachycardia was noted. Septic abortion was suspected due to repeated bouts of fever, raised total counts, and starting on higher antibiotics. Due to persistent tachycardia and computed tomography (CT) findings, she was subjected to exploratory laparotomy, and a uterine rupture was confirmed. She underwent an obstetric hysterectomy as a lifesaving procedure. Second-trimester abortions with misoprostol in a previously scarred uterus require a high index of suspicion and close monitoring. Detecting life-threatening complications early in at-risk patients plays a crucial role in uterine preservation. There is scope for research to incorporate methods like Foley's induction in these cases. The clinical picture of a ruptured uterus can be initially non-specific, delaying the diagnosis. Surgery depends on the extent of the rupture, maternal hemodynamic status, and family completion. It is challenging to rule out uterine rupture when there is a similar presentation as septic abortion, so ultrasound is the first investigation of choice in the diagnosis of uterine rupture, whereas CT abdomen and pelvis are confirmatory.

Keywords: Caesarean section, Septic abortion, Uterine rupture, Obstetric hysterectomy, 3D USG

INTRODUCTION

The progressive rise in the rate of caesarean sections globally from 2000 to 2015 was 3.7%, and from 17.2% to 21.5% from 2017 to 2021. Apart from the improvement in fetomaternal outcomes, there have been several challenges, one of which is the management of second-trimester abortion in women with at least one prior caesarean section. The incidence of uterine rupture is about 0.2% in the unscarred uterus and 3.8-4.3% in the scarred uterus.[1] In women with an unscarred uterus, uterine rupture occurs in 0.05% of cases following misoprostol therapy and in 0.11% following dilatation and curettage.[2] Uterine rupture during medical abortion at or after 13 weeks gestation is irrespective of the presence of a uterine scar.

Mifepristone 200 mg orally followed by misoprostol 800 mcg vaginally 24-48 hours apart has been proven to be an effective method for medical abortion, but its safety in a previously scarred uterus has not been fully established.

CASE REPORT

A 27-year-old P2L2A1 with previous 2 cesarean sections referred to our tertiary care center presented with complaints of bleeding per vagina since 12 hours with passage of clots 10 hours ago, associated with pain in the abdomen. She gave a history of consumption of one tab of mifepristone (200 mg), followed by one tab of misoprostol (400 ug) 24 hours later. She visited a local private hospital at 19 weeks gestation with complaints of bleeding per vagina with the passage of clots for 2 hours, where dilatation and curettage were done at 10 a.m., during which she developed sudden-onset episodes of hypotension and tachycardia, for which intravenous fluids were given. She was referred to RLJH, and she presented to the casualty at 7 p.m. She has two living issues: previous two-term cesarean sections. The first cesarean section was done at term in view of oligohydramnios 6 years ago, and the second cesarean section was done at term in view of the previous cesarean section 4 years ago. On presentation, the patient was conscious and oriented; a tachycardia of 120 bpm with a blood pressure of 100/60 mmHg, a SpO_2 of 97% on room air, a respiratory rate of 20 cpm, and a temperature of 100 °F were documented. Body mass index (BMI) was 24.2 kg/m^2. On examination, grade 3 pallor was present, the abdomen was soft and non-tender, no abdominal distension was noted, and the uterine size could not be made out. She was started on IV fluids at 125 ml/hour, and a paracetamol infusion was given. Ultrasonography (USG) abdomen and pelvis was done to look for uterine contour, which initially was inconclusive. Labs were sent and reported as follows: hemoglobin -5.6 g/dl, white blood cells (WBC) 19^{th}/mm^3, platelet count 203^{th}/mm^3, international normalized ratio (INR) 1.12, liver and renal function tests were within normal limits. A fever profile was sent; dengue, malaria, and typhoid were reported as negative. C-reactive protein (CRP) is positive (12 ug/ml), and procalcitonin is 0.345 ng/ml.

Figure 1: Hemoperitoneum with 100cc of clots noted intraoperatively.

Since she had repeated bouts of fever with persistent tachycardia up to 150 bpm, she was shifted to the intensive care unit (repeat Hb was 4.4 g/dl), and antibiotics were escalated to injection meropenem 1G IV TID, suspecting septic abortion. She received two units of packed red blood cells (PRBCs), following which her pulse rate (PR) was 104 bpm and her blood pressure (BP) was 110/70 mmHg. A review of the USG abdomen and pelvis was done, which was reported as a uterine rupture, which was confirmed on contrast enhanced computed tomography (CECT).

Figure 2: A 5×3 cm rent in the previous scar site along the left anterolateral wall of uterus noted which is extending into the cervix.

Figure 3: Proceeded with obstetric hysterectomy as a lifesaving procedure.

Figure 4: Specimen of uterus with cervix.

She underwent exploratory laparotomy, where intraoperatively, 200 CC hemoperitoneum (Figure 1) with 100 g of clots was present. A 5×3 cm rent is noted in the

anterolateral wall on the left side of the lower segment of the uterus, extending into the cervix inferiorly (Figure 2). Since the lower uterine segment was inaccessible, conserving the uterus was not possible, and as a life-saving procedure, we proceeded with obstetric hysterectomy (Figures 3 and 4) after obtaining informed consent from the husband and relatives. The third pint of PRBC was transfused postoperatively. The patient was counselled, and informed consent was obtained. She was symptomatically better and was discharged on postoperative day 10. The postoperative period was uneventful.

DISCUSSION

The incidence of uterine rupture increases with the increasing number of cesarean sections. According to the International Federation of Gynecology and Obstetrics, the risk of uterine rupture (0.3%) in second-trimester abortion between patients with and without a uterine scar is not very different. Associated risk factors are low socio-economic status, poor obstetric practices, a greater number of unbooked obstetric emergencies, and a lack of access to emergency care facilities. The clinical picture of a ruptured uterus can be initially non-specific, delaying the diagnosis and management.

There have been reports of maternal problems such as hemorrhage, hypovolemic shock, lifelong loss of fertility, and maternal mortality (30.4%).[3] The degree of the rupture, the mother's hemodynamic state, and the completion of her family determine the surgical course of action. The four alternatives include total abdominal hysterectomy, partial abdominal hysterectomy, and uterine repair with or without sterilization. When a patient has controlled hemorrhage, hemodynamic stability, minimal transverse rupture, no cervical extension, and is young, and if the family is not complete, uterine repair may be considered.[4] Only in cases of hemodynamic instability, irreparable rupture and family is complete, hysterectomy is indicated.

In a study by Jamali et al on 678 patients treated with 100-400 µg of vaginal misoprostol for a second-trimester medical abortion, uterine rupture was observed in 0.8% of patients without a history of caesarean sections, compared to 1.4% and 3.3% of patients with a history of one or more caesarean sections, respectively.[5] Uterine rupture was observed in a case report following a single 200 ug dose of misoprostol at 23 weeks of gestation in patients with chorioamnionitis.[6] A silent uterine rupture was found in a case report following 400 ug of oral and 400 ug of vaginal misoprostol, which were identified upon dilatation and evacuation.[7] According to a study by Nayki et al uterine rupture occurred in a patient with a previous caesarean section after getting four doses of 200 ug of misoprostol spaced three hours apart.[8]

In a study by Chandel et al among 3 cases of unsafe abortions, 2 cases had a history of dilatation and curettage by non-medical staff, developed uterine and bowel perforations, and underwent emergency laparotomies with bowel resection and anastomoses.[9] In a similar case reported by Kaur et al, a patient with one previous caesarean section with a history of dilatation and evacuation at 20 weeks was reported to have uterine perforation with right broad ligament hematoma, and she underwent subtotal hysterectomy.[10]

Misoprostol, although accepted in second-trimester abortion induction, is associated with life-threatening complications. Administration of misoprostol between 13 and 26 weeks of gestation in patients with a history of caesarean sections should be strictly monitored due to the probability of a higher uterine rupture risk. In addition, surgical methods like dilatation and evacuation with ultrasound guidance can be used in second-trimester pregnancy termination and should be conducted in facilities with efficient operation theaters. Ultrasound is the first investigation of choice in the diagnosis of uterine rupture, whereas CT abdomen and pelvis are confirmatory. Apt diagnosis and intervention can be delayed or missed in their absence.

This case is unique as she presented with features of septic abortion, namely, repeated bouts of fever, tachycardia, and hypotension associated with severe anemia, which responded to higher antibiotics and blood transfusion, which was the reason for the delay in diagnosis of uterine rupture and operative management. The importance of ruling out uterine rupture in cases of septic abortion in a scarred uterus is emphasized.

Thus, a high index of suspicion should be maintained in a woman after MTP to rule out uterine rupture.

The limitation of this study is the features of sepsis like fever, elevated total counts, repeated bouts of fever, elevated C-reactive protein, and serum procalcitonin, which in this case delayed the suspicion of uterine rupture. Also, as the initial ultrasound was inconclusive, CT was considered.

CONCLUSION

A high index of suspicion and close monitoring is mandated in cases of second-trimester abortion with misoprostol in a previously scarred uterus. Careful examination and early detection of life-threatening complications like uterine rupture in at-risk patients play a pivotal role in uterine preservation. In this case, uterine rupture could have been a consequence of dilatation and curettage. Minimizing the misoprostol dosage in cases with prior caesarean sections and using ultrasound guidance for dilatation and curettage in cases of previous caesarean sections with mid-trimester abortions may reduce uterine rupture. The use of Foley's for mechanical dilatation can be considered. There is scope for research to incorporate alternate methods of second-trimester medical abortion in cases of previously scarred uteri.

Recommendations

The clinical picture of a ruptured uterus can be initially non-specific, delaying the diagnosis and management. The surgical management is dependent on the extent of the rupture, maternal hemodynamic status, and the completion of the family. Ultrasound is the first investigation of choice in the diagnosis of uterine rupture, whereas CT abdomen and pelvis is confirmatory. In cases of septic abortion where there is a similar presentation, it is challenging to rule out uterine rupture and hence can be missed. Hence, while dealing with a suspected septic abortion with a previously scarred uterus, uterine rupture is a possibility.

ACKNOWLEDGEMENTS

The author would like to thank the department, and patient who cooperated throughout the study.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Mariye YF, Weldetensay EK, Dribisa W. Unusual Posterior Wall Uterine Rupture with the Use of Misoprostol for Second Trimester Pregnancy Termination. Ethiop J Health Sci. 2022;32(1):213-6.
2. Boerma T, Ronsmans C, Melesse DY, Barros AJD, Barros FC, Juan L, et al. Global epidemiology of use of and disparities in caesarean sections. Lancet. 2018;392(10155):1341-8.
3. Abrar S, Abrar T, Sayyed E, Naqvi SA. Ruptured uterus: Frequency, risk factors and feto-maternal outcome: Current scenario in a low-resource setup. PLoS One. 2022;17(4):e0266062.
4. Cuellar Torriente M. Silent uterine rupture with the use of misoprostol for second trimester termination of pregnancy: a case report. Obstet Gynecol Int. 2011;584652.
5. Jamali M, Bakhtiyari M, Arab F, Mirzamoradi M. Misoprostol complications in second-trimester termination of pregnancy among women with a history of more than one cesarean section. Obstet Gynecol Sci. 2020;63(3):323-9.
6. Vilchez G, Gill N, Dai J, Chelliah A, Jaramillo H, Sokol RJ. Rupture in the scarred uterus. Am J Obstet Gynecol. 2015;212(1):S94-S5.
7. Berghahn L, Christensen D, Droste S. Uterine rupture during second-trimester abortion associated with misoprostol. Obstet Gynecol. 2021;98(5):976-7.
8. Golshahi F, Yarandi F, Ramhormozian S, Shirali E. Lessons Learnt from Cases of Misoprostol-Based Pregnancy Termination Followed by Uterine Rupture: Report of 3 Cases. J Obstet Gynecol Cancer Res. 2022;7(2):121-5.
9. Chandel M, Bhati I, Balakrishna. Safe Abortions: Are They a Reality Yet? A Case Series. J South Asian Feder Obst Gynae. 2022;14(4):477-80.
10. Kaur M, Pandhar DK, Mehra R, Huria A. A Complication of Surgical Abortion: A Rare Presentation. J South Asian Feder Obst Gynae. 2014;6(1):33-4.

Cite this article as: Kashi A, Sheela SR, Harshitha S. A rare case report of uterine rupture in a case of suspected septic abortion. Int J Reprod Contracept Obstet Gynecol 2024;13:2175-8.