ORIGINAL RESEARCH PAPER Obstetrics & Gynaecology POST CAESAREAN SILENT SPONTANEOUS
UTERINE RUPTURE IN A CASE OF PLACENTA
PREVIA AT 36 WEEKS OF GESTATION: AN
UNUSUAL CASE SCENARIO KEY WORDS: Silent uterine
rupture, caesarean section,
placenta previa, previous LSCS,
caesarean hysterectomy. Dr. Swati M.
Sanap* Department of Obstetrics and Gynecology, B. J. G. M.C. & S. G. H. Pune,
*Corresponding Author

Resident Medical Officer, B.J.G.M.C.&S.G.H.Pune.

Thorve

ABSTRACT

Dr. Rahul V.

Silent spontaneous uterine rupture before term, when the pregnant lady is not in labour, with delivery of a healthy baby, with no maternal or neonatal morbidity or mortality is very unusual scenario. Only a few cases have been reported in literature. We present a case of silent spontaneous uterine rupture, found incidentally during a scheduled repeat caesarean section for central placenta previa at 36 weeks of gestation. Patient had history of prior one lower segment caesarean section (LSCS). She underwent caesarean section (CS), with delivery of a healthy male baby. Placenta was morbidly adherent; total caesarean hysterectomy was performed. She had an uneventful postoperative recovery and was discharged on postoperative day 7. A high index of suspicion and good imaging during pregnancy are important in making this diagnosis. Uterine rupture can occur silently antenatally in post caesarean pregnancy with placenta previa. Anticipation and prompt management has favorable outcome.

INTRODUCTION

Uterine rupture is an uncommon but potentially lifethreatening obstetrical emergency culminating in catastrophic feto-maternal outcome. It occurs during labor in majority of cases of previously scarred uterus. Uterine rupture refers to a complete separation of all uterine layers, including the uterine serosa, and this usually occurs most commonly in the setting of classical CS. The incidence of uterine rupture varies depending on the type and location of the prior uterine incision. According to the American College of Obstetricians & Gynecologists (ACOG) Practice Bulletin the reported risk of a uterine rupture 0.5 to 0.9 percent for women with prior CS undergoing trial of labor¹. However, the overall rate for uterine rupture with previous classical CS ranges from 0.6 to 12 percent as cited in the literature¹⁻⁵. Hemorrhage, blood transfusion, and hysterectomy are the serious maternal complications secondary to uterine rupture. Maternal death is the most severe complication of uterine rupture; though it is rare, it occurs in approximately 1 in 500 uterine ruptures⁶. Asymptomatic uterine dehiscence seldom results in unfavorable fetal outcome while complete uterine rupture with extrusion of placenta or the fetus can be disastrous. According to a population-based cohort study in Netherlands, the risk of perinatal death after uterine rupture was found to be $8.7\%^{7}$, with perinatal mortality reported as ranging from 74% to 92% in less developed countries⁸. Uterine rupture occurs silently antenatally in scarred uterus, mostly after classical CS. It can be difficult to diagnose as vivid features like pain; vaginal bleeding; maternal hypovolemic shock is absent.

CASE REPORT

A 26-year-old women, gravida 2, para 1 with previous fullterm LSCS 9 years back with placenta previa referred to our tertiary care institution at 30 weeks of gestation for vaginal spotting for 2 days. Conservative management was started and metformin added for later revealed gestational diabetes mellitus. Obstetric ultrasound reported single live intrauterine gestation, transverse lie, anterior low-lying placenta completely covering internal cervical os, AFI 26 cm, normal doppler study, scar thickness 3.3mm and no myometrial invasion. Magnetic resonance imaging (MRI) of pelvis reported central placenta previa, thinned out lower uterine segment (LUS) myometrium with no myometrial invasion. Biophysical profile and non-stress test were normal.

Patient was posted for elective repeat CS at 36 weeks of gestation in view of previous LSCS with central placenta previa with thinned out LUS myometrial scar. Preoperatively,

www.worldwidejournals.com

fetal heart rate abnormalities and uterine contractions were absent. Maternal tachycardia (Pulse rate-116/min) was noted just prior to anesthesia. Her blood pressure was 110/70 mmHg. After opening the abdominal cavity, hemoperitoneum of 50-100 ml was noted. Uterine wall had given way at the prior LSCS scar site with some placenta protruding. The fetus was found in oblique presentation. A live male baby weighing 2.3 kg delivered with APGAR 8,9 at 1,5 minutes, respectively with no evidence of gross congenital anomaly. Placenta was morbidly adherent. Total caesarean hysterectomy was performed. Intraoperative 1-pint PCV was transfused. Her postoperative recovery was uneventful. Patient and baby were discharged in good condition on postoperative day 7.



Fig. 1 – Silent uterine rupture, with protruded placenta.



Fig. 2 – specimen of ruptured uterus with morbidly adherent placenta

DISCUSSION

The uterine rupture is labelled as 'silent' when the patient is asymptomatic and rupture or rent in uterus is discovered incidentally on ultrasound or at surgery. Silent ruptures can occur in previous scars as well as in unscarred uterus.¹¹⁻ ¹²Uterine rupture is a dreadful complication of pregnancy and can cause significant feto-maternal morbidity and mortality,

25

PARIPEX - INDIAN JOURNAL OF RESEARCH | Volume-9 | Issue-5 | May - 2020 | PRINT ISSN No. 2250 - 1991 | DOI : 10.36106/paripex

associated mostly with classical CS. Clinical features of uterine rupture may include abdominal pain, vaginal bleeding, maternal hypovolemic shock, or hemorrhage. Trial of labor after caesarean (TOLAC) has been associated with higher incidence of uterine rupture⁸; however, in our case, patient was not having any signs of labour and she was asymptomatic with absence of vaginal bleeding and abdominal pains prior to delivery. She had tachycardia just prior to anaesthesia; the only alarming sign of uterine rupture; anxiety provoking maternal tachycardia upon entering operation theatre cannot be ruled out in this case. Abnormal placentation might be a cause for weakened uterine scar of previous LSCS before term leading to its rupture and can occur without any precipitating signs or symptoms are the lessons we learnt from this case.

There is much unpredictability about the individuals who would rupture their uteruses in pregnancy. Recent studies have attempted to develop predictive models for uterine rupture. Bujold et al¹⁰, developed 2 such indexes using antepartum and intrapartum factors. However, both models were neither sensitive nor specific enough for clinical use (sensitivity of 75% with false positive rate of 40%). Ultrasonography has been studied to predict uterine rupture. Bujold et al,¹⁰ conducted a prospective cohort study of 125 women with previous CS undergoing TOLAC. It concluded that optimal cut off is a LUS thickness of <2.3 mm, with the rate of uterine rupture being 9.1% for this group. The limitation of this study includes the fact that most women with a lower uterine thickness <2.0 mm did not undergo TOLAC. This might suggest an established practice pattern which might limit future studies using ultrasound to predict uterine rupture. In our case, there was evidence anterior low-lying placenta with a LUS thickness of 3.3 mm on ultrasound. MRI pelvis was done to rule out placenta accreta in a previously scarred uterus with anterior low-lying placenta; suggestive of thinned out LUS myometrium. Elective CS was planned based on MRI findings and the rapid recognition of and response to potential uterine rupture led us to the favourable fetomaternal outcome.

CONCLUSION

Uterine rupture can occur silently i.e. without any symptoms antenatally in post caesarean pregnancy with placenta previa. A high index of suspicion is required as in this case report, abnormal placentation might be a cause for weakened uterine scar of previous LSCS before term leading to its rupture. Anticipation and prompt management has favorable outcome.

REFERENCES

- American College of Obstetricians and Gynecologists, "Practice bulletin no. 115: vaginal birth after previous cesarean delivery," Obstetrics & Gynecology,vol.116,no.2, pp. 450–463,2010.
- M. B. Landon and C. D. Lynch, "Optimal timing and mode of delivery after cesarean with previous classical incision or myomectomy: a review of the data," Seminars in Perinatology, vol. 35, no. 5, pp. 257–261, 2011.
 M. G. Rosen, J. C. Dickinson, and C. L. Westhoff, "Vaginal birth after cesarean: a
- M. G. Rosen, J. C. Dickinson, and C. L. Westhoff, "Vaginal birth after cesarean: a meta-analysis of morbidity and mortality," Obstetrics and Gynecology, vol. 77, no. 3, pp. 465–470, 1991.
- S. P. Chauhan, E. F. Magann, C. D. Wiggs, P. S. Barrilleaux, and J. N. Martin Jr., "Pregnancy after classic cesarean delivery," Obstetrics and Gynecology, vol. 100, no. 5, pp. 946–950, 2002.
- M. K. Barger, J. Weiss, A. Nannini, M. Werler, T. Heeren, and P. G. Stubblefield, "Risk factors for uterine rupture among women who attempt a vaginal birth after a previous cesarean: a case control study," Journal of Reproductive Medicine, vol. 56, no. 7-8, pp. 313–320, 2011.
- S. W. Wen, L. Huang, R. Liston et al., "Severe maternal morbidity in Canada, 1991–2001," Canadian Medical Association Journal, vol. 173, no. 7, pp. 759–763,2005.
- J.J.Zwart, J.M.Richters, F.Öry, J.I.P.DeVries, K.W.M.Bloemenkamp, and J.Van Roosmalen, "Uterine rupture in the Netherlands: a nationwide populationbased cohort study," BJOG, vol. 116, no. 8, pp. 1069–1078, 2009.
- G. J. Hofmeyr, L. Say, and A. M. Gülmezoglu, "WHO systematic review of maternal mortality and morbidity: the prevalence of uterine rupture," BJOG, vol. 112, no.9, pp. 1221–1228, 2005.
- G. Vilchez, N. Gill, J. Dai, A. Chelliah, H. Jaramillo, and R. Sokol, "156: rupture in the scarred uterus," American Journal of Obstetrics & Gynecology, vol. 212, no. 1, supplement, pp. S94–S95, 2015.
- E. Bujold, N. Jastrow, J. Simoneau, S. Brunet, and R. J. Gauthier, "Prediction of complete uterine rupture by sonographic evaluation of the lower uterine

segment," American Journal of Obstetrics and Gynecology, vol. 201, no. 3, pp. 320.e1–320.e6, 2009.

- Chuan-Yaw C, Szu-Yuan C, I-Lin c, Chuun-Sen H, Kenny H- H C, Pui-Ki C. Silent uterine rupture in an unscarred uterus. Taiwan J ObstetGynecol 2006; 45(3):280-2.
- Neena M, Charu C. Silent rupture of unscarred uterus: an unusual presentation at second trimester abortion. Arch GynecolObstet 2007;275(4): 283-5.