

University Clinical Hospital Centre Zagreb, School of Medicine, University of Zagreb

SILENT SPONTANEOUS UTERINE RUPTURE AFTER PREVIOUS CESAREAN SECTION AND MYOMECTOMY WITH DELIVERY OF A HEALTHY NEWBORN

Vito Starčević, Mislav Herman, Franjo Grgić, Vesna Sokol Karadjole, Marina Ivanišević

Case report

Keywords: pregnancy, silent uterine rupture, newborn

SUMMARY. *Introduction.* Silent spontaneous rupture of the uterus before labor with delivery of a healthy newborn and with no maternal or neonatal morbidity or mortality is very rare. Very few cases have been reported in literature. *Case report.* We report a case of silent spontaneous uterine rupture. Rupture was found during an elective repeat cesarean section. Patient had history of one prior cesarean myomectomy. At 38 weeks of gestation, before labour has started and before any symptoms, the patient underwent elective caesarean section with delivery of a healthy and eutrophic female infant. Uterine rupture in previous myomectomy scar and intact amniotic sac with fetus inside was found as soon as peritoneum was opened. The patient was discharged on postoperative day 5 with healthy newborn. *Conclusion.* Though silent spontaneous rupture of the uterus before term is very rare condition, all pregnant women with previous hysterotomy should be warned about possibility of spontaneous uterine rupture even before labour has started.

Introduction

Spontaneous uterine rupture is rare, but it is a life-threatening condition for both the mother and her fetus. Rupture occurs principally after onset of labour in women with hysterotomy scar. This occurs most commonly in the setting of classical cesarean section [1]. It is usually asymptomatic and that why it is called silent rupture. Generally, uterine rupture refers to a complete separation of all uterine layers, including the uterine serosa. The frequency of uterine rupture for women undergoing trial of labor is 0.3%. It is well known that rupture almost always occurs in women with uterine scars from previous cesarean deliveries but there are also other uterine surgical procedures that increase the risk of rupture during labour. In recent years, the frequency of uterine rupture after myomectomy has increased. One meta-analysis showed that the risk of uterine rupture during pregnancy after myomectomy was 0.6–0.8% [2,3].

Case report

We report a case of silent spontaneous uterine rupture, found during a scheduled repeat cesarean section at 38 weeks of gestation with delivery of healthy newborn. Patient had history of one first-trimester missed abortion (7 weeks) and one prior cesarean sections performed in year 2012. During caesarean section myomectomy was done and a necrotic fundal myoma measuring about 8 cm was removed. Her pregnancy was without complications. During her antenatal care she had first trimester screening test, regular vaginal examinations and ultrasound scans as well as oral glucose tolerance test in 24 week of gestation. From 37 weeks of gestation fetal wellbeing was monitored with cardiotocography (CTG). Fetal heart rate abnormalities in terms of variable decelerations were seen just before the scheduled cesarean section (Figure 1, 2). Patient had

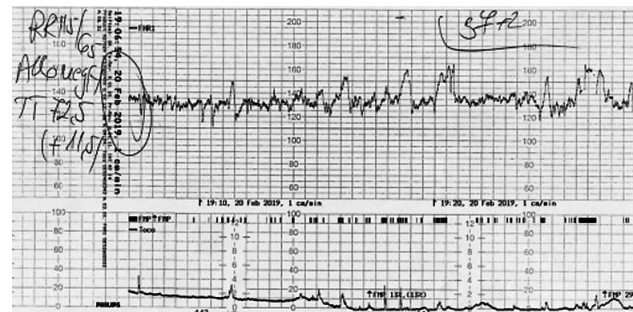


Figure 1. CTG 20th of February

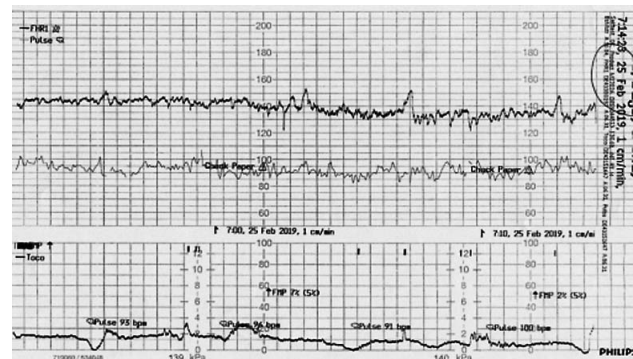


Figure 2. CTG 25th of February

few episodes of abdominal pain and discomfort just before scheduled delivery date. She did not experience any uterine contractions prior to delivery. Upon entering the abdominal cavity via Pfannenstiel incision, a complete uterine rupture was seen at the prior myomectomy scar. The rupture was 6 cm long (Figure 3). Fetal parts were palpable through the protruding membrane. No active bleeding was noted at the edges of the uterine scar. A term female newborn, 3060 grams and 48cm, was delivered through isthmic transverse uterine incision in cephalic presentation. Neonate's APGAR at 1



Figure 3. Rupture of the uterine fundus

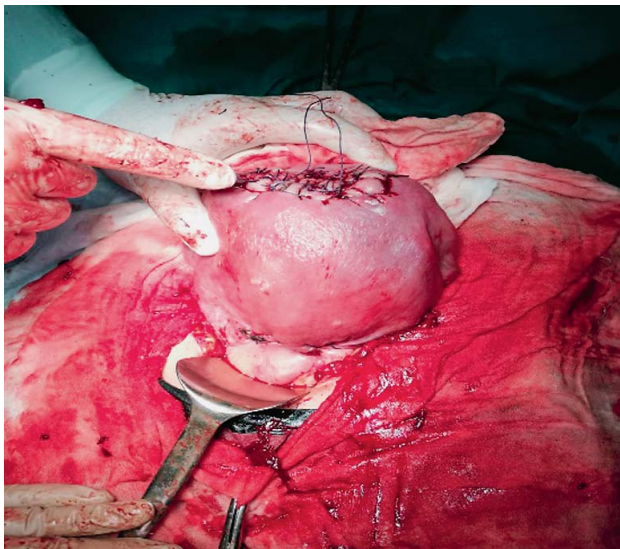


Figure 4. Suture of the uterine rupture

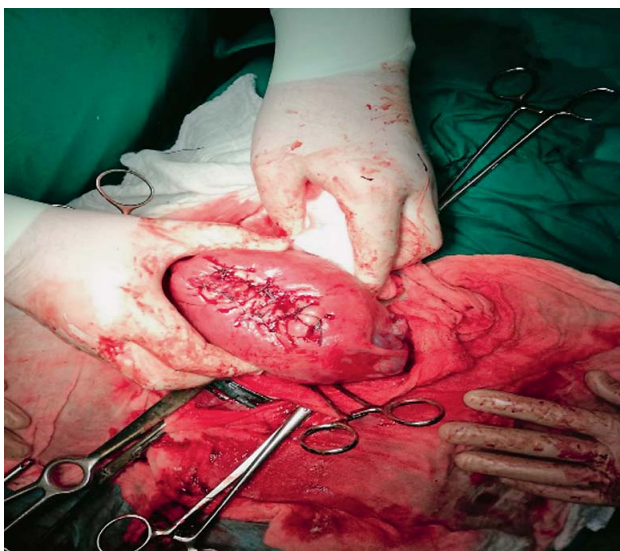


Figure 5. Uterine reconstruction after rupture

and 5 minutes were 10 and 10, respectively. Umbilical artery pH was 7.33. After placental expulsion, isthmic transverse uterine incision was closed with continuous sutures and uterine rupture with simple interrupted sutures (Figure 4, 5). Patient's recovery course was uncomplicated and without need for blood transfusion. Postoperative hemoglobin was 91 g/dL. Patient and healthy newborn were discharged home in good condition on postoperative day 5.

Discussion

Uterine rupture is a serious complication of pregnancy and can cause significant maternal and perinatal morbidity. The initial signs and symptoms of uterine rupture are nonspecific, which makes the diagnosis difficult and sometimes delays definitive therapy. Clinical features of uterine rupture may include: fetal heart rate changes, abdominal pain and sometimes light vaginal bleeding. From this case, it is obvious that uterine rupture may occur without any precipitating signs or symptoms. In the last few years, several authors published a single case reports of uterine rupture in pregnancy after myomectomy [4]. One meta-analysis study reported that risk of uterine rupture after myomectomy is 0.75% and after cesarean section 0.32%, respectively [4,5]. There are two types of myomectomy surgical procedures, laparotomic myomectomy and laparoscopic myomectomy. According to one meta-analysis, the frequency of uterine dehiscence during pregnancy was 0.4% in laparotomic and 1.2% in laparoscopic myomectomy. It is considered that the risk of a uterine rupture following a myomectomy is not related to surgical technique (laparotomy or laparoscopy) or the size of myoma. It appears that uterine rupture occurs more frequently when performing an electrocauterization. In our case, an electrocauterization was performed during myomectomy. The uterine rupture after myomectomy occurs mainly during the pregnancy, although in rare cases it can happen during labour. Silent uterine rupture can be very difficult to diagnose in pregnancy. Clinical features of uterine rupture including abdominal pain, vaginal bleeding, maternal hypovolemic shock, or hemorrhage are usually absent.

Conclusion

This study reports a case of a silent uterine rupture that happened before labour in the context of a previous myomectomy scar. Uterine rupture may occur without any apparent signs or symptoms. Therefore, if there is any suspicion that uterine rupture might occur, intensive antenatal care is needed. Women with previous uterine surgical procedure should be advised of the risk of uterine rupture in subsequent pregnancies.

References

1. Chauhan SP, Martin JN jr., Henrichs CE, Morrison JC, Magann EF. Maternal and perinatal complications with uterine

rupture in 142,075 patients who attempted vaginal birth after cesarean delivery: a review of the literature. 2001; Am J Obstet Gynecol. 189(2):408–17.

2. Kim HS, Oh SY, Choi SJ, Park HS, Cho GJ, Chung JH. Uterine rupture in pregnancies following myomectomy: a multi-center case series. Obstet. Gynecol. Sci. 2016;59:454–62.

3. Claeys J, Hellendoorn I, Hamerlynck T, Bosteels J, Weyers S. The risk of uterine rupture after myomectomy: a systemic review of the literature and meta-analysis. Gynecol. Surg. 2014; 11:197–206.

4. Pistofidis G, Makrakis E, Balinakos P, Dimitriou E, Bardis N and Anaf V. Report of 7 uterine rupture cases after laparoscopic myomectomy: update of the literature. J Minim Invasive Gynecol 2012;19:762–7.

5. Spong CY, Landon MB, Gilbert S, Rouse DJ, Leveno KJ, Varner MW, Moawad AH, Simhan HN, Harper M, Wapner RJ,

Sorokin Y, Miodovnik M, Carpenter M, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM; National Institute of Child Health and Human Development (NICHD) Maternal-Fetal Medicine Units (MFMU) Network. Risk of uterine rupture and adverse perinatal outcome at term after cesarean delivery. Obstet Gynecol 2007;110:801–7.

Correspondence address: Vito Starčević, MD PhD, Department of Obstetrics and Gynecology, University Clinical Hospital Centre Zagreb, Petrova 13, 10000 Zagreb, e-mail: vito.starcevic@gmail.com

Paper received: June, 15th 2018, accepted: November, 10th, 2018.

Klinika za ženske bolesti i porođaje, Klinički bolnički centar Zagreb,
Medicinski fakultet Sveučilišta u Zagrebu

TIHA SPONTANA RUPTURA MATERNICE U TRUDNOĆI S POROĐAJEM ZDRAVOG NOVOROĐENČETA

Vito Starčević, Mislav Herman, Franjo Grgić, Vesna Sokol Karadjole, Marina Ivanišević

Prikaz bolesnice

Ključne riječi: trudnoća, tiha ruptura uterusa, novorođenče

SAŽETAK. Tiha spontana ruptura maternice u trudnoći s porođajem zdravog novorođenčeta, bez majčinskog ili neonatalnog morbiditeta ili smrtnosti, vrlo je rijetka. U literaturi je zabilježeno vrlo malo slučajeva. Prikaz trudnice. Izvještavamo o slučaju tihe spontane rupture maternice. Ruptura je pronađena tijekom izbornog ponovljenog carskog reza. Trudnica je imala prethodnu momektomiju tijekom carskog reza. U 38. tjednu trudnoće, prije nego što je porođaj započeo i prije bilo kakvih simptoma, trudnica je podvrgnuta izbornom carskom rezu i rodila zdravo i eutrofično dijete. Ruptura maternice u ožiljku miomektomije i čitavim plodovima ovojima s plodom nađena je čim se otvorio peritoneum. Babinjača je otpušten iz Klinike petog postoperativnog dana sa zdravim novorođenčetom. Zaključak. Iako je tiha spontana ruptura maternice prije termina vrlo rijetko stanje, sve trudnice s prethodnom hysterotomijom treba upozoriti na mogućnost nastanka spontane rupture maternice i prije početka porođaja.