Silent Rupture of Previous Myomectomy Scar in Pregnancy at 27 Weeks

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Received: June 30, 2020; Published: August 29, 2020

Abstract

Uterine rupture is a serious obstetric emergency, which can be very dramatic in its presentation and have poor outcomes for both the patient and the unborn fetus. The incidence of rupture uterus seems to be on a rise, and among the causes are surgeries like myomectomy, which are on the rise. Endoscopic myomectomy needs skill and expertise, to ensure a secure uterine closure, so that strong uterine walls are in situ to carry safely a future pregnancy.

This case report establishes how uterine rupture can happen silently, with hemodynamic stability of the patient and a healthy fetus in uterine environment. It also proves that after myomectomy, uterine rupture can happen at extreme premature gestation, when it is least expected, gravely affecting prognosis of the fetus. In this case, both mother and baby did well due to excellent management even though, uterine rupture was not overtly evident.

Keywords: Uterine Rupture; Myomectomy Scar; Fetus

Introduction

Uterine rupture is a serious obstetric emergency causing life threatening situation for the pregnant lady and her fetus needing emergency treatment. While in the olden days, these were considered to be due to neglected labour, it has been notices that most are due to giving way of previous surgery scars on the uterus. A retrospective study reviewing singletons with uterine rupture in a Taiwanese tertiary obstetric center over a 15-year period, suggested the overall uterine rupture rate was 3.8 per 10,000 deliveries, with over 59% being them being through a non-cesarean scar (non-CS ruptures) most commonly, previous laparoscopic myomectomy scars [1]. The scars of previous myomectomy have been associated with rupture in third trimester without uterine contractions, particularly between 28 - 36 weeks which is what makes them even more dangerous.

This case aims to bring to light silent rupture of a previous myomectomy scar at around 30 weeks gestation with good outcome.

Citation: Shalini Malhotra and Faiz Zaman. "Silent Rupture of Previous Myomectomy Scar in Pregnancy at 27 Weeks". EC Gynaecology 9.9 (2020): 91-94.
Case Report

Mrs F, a 40 year old lady, pregnant for the second time after a previous spontaneous miscarriage, attended emergency on 5/5/19 at 27+5 weeks gestation with pain abdomen. She was in good condition with safe ongoing pregnancy and thus was discharged from emergency after requesting a urine microscopy check. No infection.

Over 5 years back she had undergone a laparoscopic myomectomy in Egypt with removal of five fibroids, followed by a hysteroscopy, 4 months after which she was advised to get pregnant. She was on daily Injection of enoxaparin.

She again attended emergency on 23/5/19 at about 3 am giving history of pain abdomen, when she was 30 weeks gestation. With stable vitals, she had no significant findings on abdominal examination and the CTG was normal too. She thus refused to get admitted for observation. However, she reattended emergency at around 9 am with increased pain abdomen, with inability to pass urine. She was perceiving normal fetal movements. She has immediate assessment and catheterization with 120 ml urine drained. On abdominal examination, tenderness noted all over abdomen though fundal height made out entirely and CTG was normal. USG obstetric revealed a well grown fetus with normal liquor.

On abdominal ultrasound done by radiologist after an hour, to look for cause for acute abdomen, moderate ascites noted with gravid uterus seen. The surgeons were called in to analyse the possible cause of acute abdomen with ascited (moderate and with suspicion of appendicular rupture/lump, diagnostic laparoscopy was planned.

On laparoscopy, hemoperitoneum seen, approximately 1.2 litres and thus decision for laparotomy taken immediately jointly by Surgeons and Obstetricians as source of bleeding could not be found due to clots filling the pelvis. On midline laparotomy, major hemoperitoneum seen. Spleen, liver visualized with difficulty but normal. Upon evaluation of uterus and adnexa, a vertical rent noted in posterior uterine wall, 5 cm long with bag of membranes seen through it. Both sides tubes and ovaries visualized with difficulty but noted normal. Immediate decision for delivery of the fetus with repair of uterus taken and husband was briefed all through the surgery about course.

Healthy baby delivered by cesarean section and resuscitated by paediatricians and shifted to NICU. Uterus cleaned and rent repaired in three layers. No other defect noted. after thorough abdominal lavage and inserting intra-abdominal drains, abdomen closed in layers and patient shifted to ICU after 2 litres blood loss estimated and 3 units blood and 4 FFP transfused. Post op, she was observed in ICU for 24 hours and recovered well and was discharged well on day 10 after wound healing was good.

She was seen after 4 weeks at postnatal clinic and was found to be recovering well, breast feeding her baby well and was advised to avoid pregnancy for atleast 2 years and ensure early booking in next pregnancy with timed delivery by cesarean section around 34 - 36 weeks.

Figure 1: Post repair rupture site with surgical.
Silent Rupture of Previous Myomectomy Scar in Pregnancy at 27 Weeks

Discussion

The occurrence of myomas is frequent - 20 - 40% in women of reproductive age [2]. This can be attributed to more imaging and delayed child-bearing in women. Apart from delayed age of conception as a single most important factor affecting spontaneous conception. There are many other reasons for infertility too with uterine disorders like myomas playing a significant role. Myomas are present in 27% of infertile women [3,4]. Even with it established that usually submucosal myomas affect fertility maximum with serosal myomas causing minimal effect, most infertile women are subjected to myomectomy. While the effectiveness and safety of the subsequent pregnancy is still uncertain, in women having previous myomectomy, many women are subject to it.

The rate of myomectomy in women of reproductive age group, is increasingly being opted to be done by minimally invasive technique-laparoscopy or robotic. The skill of surgeon is essential to ensure good repair of the myoma bed so as to leave a strong scar for future. Pregnancies in these women after myomectomy thus, becomes challenging for the their obstetricians, specially as various studies have shown myomectomy scars 0.6% are at a greater risk of rupture during pregnancy as compared to cesarean scar rupture which is approximately 0.3% or septoplasty (0.02%) scars. The risk of rupture is present whether done by laparoscopy (1.2%) or laparotomy (0.4%) (meta-analysis) [5].

The main findings of most studies related to scar rupture, concluded as follows:

1) Patients with a history of endoscopic uterine surgery should be aware of uterine rupture during pregnancy;
2) The time interval from surgery to pregnancy was significantly shorter in the non-CS than in CS ruptures;
3) Severe bleeding (blood loss > 1500 mL) requiring transfusions was more frequent in women who experienced non-CS compared with CS ruptures; and
4) When uterine rupture occurred, admissions to the neonatal intensive care unit were significantly more frequent in preterm than in term pregnancies. Neonatal morbidity like perinatal hypoxia cerebral palsy and mortality were upto 33% [6].

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There are some suggestions referring to myomectomy to reduce the risk of uterine rupture in a subsequent pregnancy. It seems that the method of sewing the uterine closure is crucial. For example, multilayer uterine stitches, preservation of the endometrial cavity, and avoidance of using electrosurgery to prevent devascularization (to avoid haematoma formation) should be taken into consideration to prevent weakness of the wall of the uterus. Uterine scars differ histologically and biochemically.

**Conclusion**

The purpose of the myomectomy in a young woman should be well considered. In cases of infertility, removal of the intrauterine lesions is usually necessary to give the patient a chance of pregnancy. At the same time, the risk of uterine rupture is increased. Honest and detailed counseling of women undergoing endoscopic uterine surgery, including the ideal timing of pregnancy after endoscopic uterine interventions and awareness of obstetric complications to optimize subsequent pregnancy outcomes, is important.

**Bibliography**


**Volume 9 Issue 9 September 2020**

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