Early diagnosis of atypical rupture of scarred uterus: A case report from rural Nepal

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ABSTRACT

A 28-year-old female, from rural municipality of Dolakha, mountainous district of Nepal, was referred to our center with the diagnosis of Gravida 2 and Para 1 at 40 weeks of gestation in active stage of labor with history of previous CS. The patient was shifted to Operation Theatre for delay in latent stage of labor, ruptured uterus was identified and confirmed at the operating table and Caesarean Hysterectomy was performed. Her post-operative hospital stay was uneventful and baby was fine.

Spontaneous silent rupture can occur in women without any alarming symptom. Hence, high index of suspicion is the key to early diagnosis of uterine rupture in case of previous scar when they present with vague symptoms. Rapid recognition of potential uterine rupture and immediate laparotomy and/or caesarean hysterectomy lower the rate of perinatal death.

Keywords: caesarean hysterectomy, previous CS, ruptured uterus

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INTRODUCTION

Maternal mortality is one of the major health concerns of Nepal and many low-income countries. Nepal has dramatic improvement in maternal mortality rate from 539 per 100000 live birth in 1996 to 239 per 100000 live birth in 2016.[1] Maternal mortality is still high in developing countries as 99% of maternal deaths occur in developing world. It is included in Millennium Development Goal by WHO. The major cause of maternal mortality is post-partum hemorrhage.

Caesarean Section (CS) is increasing worldwide despite the WHO recommended rate of 10-15%. CS rate is 19% in urban Nepal as compare to 7.1% in rural Nepal.[2] Uterine rupture in pregnancy is a rare and catastrophic complication with a high incidence of fetal and maternal morbidity.

We are reporting a case of uterine rupture in a pregnant woman at labor with history of previous caesarean section in Charikot Hospital in rural district of Nepal.

Case

A 28-year-old female, gravida 2 and para 1 at 40 weeks of gestation (WOG) was referred from rural health post and presented to labor room with labor pain for 14 hours and passing of gush of fluid (membrane rupture). She had completed all four Antenatal Care (ANC) visit in local government institution as recommended by WHO. Patient had a history of previous caesarian section in different health institution 6 years back for non-progress of active stage of labor. On examination, she was well appearing with a temperature of 36.5°C, pulse rate of 90 beats per minute and blood pressure of 130/80 mm Hg. On abdominal examination, the uterine size was equivalent to term gestation. The fetus was in longitudinal lie and engaged, cephalic presentation with fetal heart fate of 148/min, regular. Patient was in the active stage of labor with cervical dilatation 5 cm without bulging of membrane and fetal head at Zero station. After 60 minutes of initial assessment, she had severe abdominal pain and was assessed for possible uterine rupture with just the clue of decreasing fetal heart rate, she was taken to operation theater. Intra-operatively lacerated previous scar with extension of tear to base of urinary bladder and right lateral extension of uterine tear towards fundus was noted.

On opening abdomen at emergency caesarean section via a transverse skin incision, there was mild hemoperitoneum and a complete uterine rupture at lateral part of uterus at middle segment. The uterus was opened through a lower transverse segment incision and a live female baby of 3.2kg was born with APGAR score of 7/10 and 8/10 at 1 and 5 minutes respectively. For uncontrolled bleeding and large tear extension, subtotal hysterectomy was performed. Total of 1500 ml blood loss was estimated and three pints of blood was transfused.

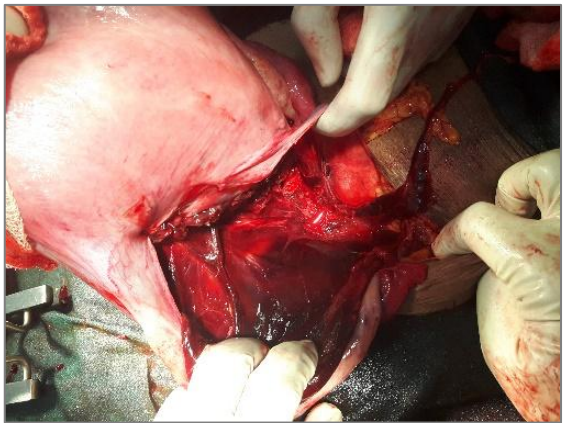

Figure 1. Ruptured uterus (during surgery)

Outcome and follow up

The recovery of the women was uncomplicated. She had normal vaginal bleeding post operatively and post-operative hemoglobin was 12 g/dl. Both the mother and baby were discharged home satisfactorily on post-operative day 4. Follow up was done in a month period and both were fine.

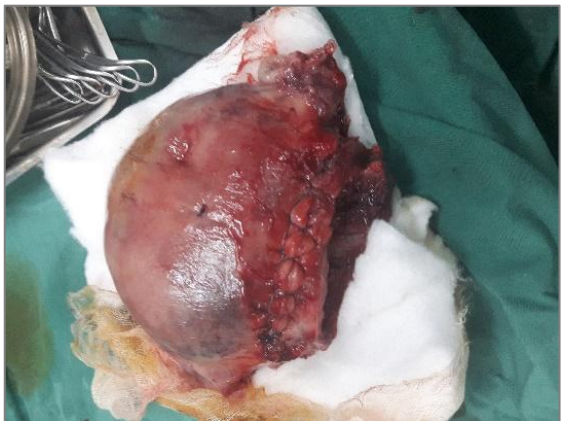

Figure 2. Uterus specimen after C-hysterectomy

DISCUSSION

Uterine rupture is a life-threatening event during childbirth in which there is breach in myometrial wall of uterus[3]. The risk factors for uterine rupture include previous caesarean sections (single low transverse, single low vertical, classic vertical, multiple previous caesarean deliveries), previous other uterine surgeries (abdominal and/or

laparoscopic myomectomy, dilatation and curettage) or induction of labour.[4,5,6]

Very few cases of silent uterine rupture with delivery of a healthy fetus have been reported so far.[7] An unusual case of uterine rupture has been reported in the literature where a woman presented with intestinal obstruction, her general parameters and fetal cardiac activity was normal. The diagnosis of uterine rupture was missed until it led to an intrauterine fetal demise[7,12]. Another case has been reported where in the postnatal period during tubal ligation 5 and 10 cm rent in the uterine wall were discovered incidentally.[8]

Uterine rupture is difficult to diagnose. The use of ultrasound to detect the uterine scar defects after caesarean delivery has been evaluated in several studies. The risk of uterine rupture following caesarean section was directly related to thickness of the lower uterine segment[9] however, further studies are needed to assess its clinical applicability.

Our patient was multiparous with the previous history of CS 6 years ago, should have high likelihood of successful VBAC (Vaginal Birth After CS).[10] She gives history of 14 hours of labor pain but on arrival there were no features consistent of uterine rupture and there was normal fetal heart rate.[11]

CONCLUSION

Spontaneous silent rupture can occur in women without any alarming symptom. Hence, high index of suspicion is the key to early diagnosis of uterine rupture in case of previous scar when they present with vague symptoms. Rapid recognition of potential uterine rupture and immediate laparotomy and or caesarean hysterectomy lowers the rate of perinatal death.

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