



FREQUENCY OF UTERINE RUPTURE IN WOMEN WITH PREVIOUS ONE CESAREAN SECTION

PROF. NAUSHABA RIZWAN

INDUS MEDICAL COLLEGE , TANDO MUHAMMAD KHAN



Abstract

Uterine rupture is serious complication that may occur during child birth in which myometrium of the uterus is torn or breached due to increased rate of cesarean section globally the number of the women presenting with uterine rupture has also gone up.(1) Uterine rupture is relatively rare, it is more frequent in low –income compared to high-income countries. Morbidities resulting from UR include hysterectomy , massive hemorrhage, shock, post-hemorrhagic anemia , Vesicovaginal fistula, infection or sepsis, and increased risk of uterine rupture in subsequent pregnancies.(2) Use of cesarean section deliveries has been steadily increasing from 6.7% in 1990 to 19.1% in 2014, globally the reported incidence of UR among women with prior CS ranged from 0.22 % 0.5% in some developed countries, in similarly in Pakistan.

OBJECTIVE: To determine the frequency of Uterine rupture in women with previous one cesarean section in active labour.

Methodology

It was Cross-sectional study carried out at Liaquat University Hospital Jamshoro for six month from 1st June 2024 – 31st December 2024. It was 117 women (calculated via Cochran’s formula for prevalence studies, assumed 1.5% expected frequency, 95% CI, and 5% margin of error).

Inclusion Criteria :

- All pregnant women with previous one cesarean section presented with clinical symptoms (Pain, fetal distress, acute loss of contraction hemorrhage) or intrauterine fetal death during pregnancy or at the time of cesarean section delivery having a trial of labour.
- All women with age between 20 -45 years.
- Gestational age 28 weeks was confirmed on ultrasound.
- Parity > 1 was included.
- Both booked and un-booked cases.
- Patient who was provided informed consent.

Methodology

Exclusion Criteria:

- Patient with placenta abruption , placenta previa, and congenital uterine abnormality was excluded.
- Patients with planed elective LSCS, Successfully VBAC and non-active labour was excluded & Patients who will not be willing to provide informed consent.

Data Analysis;

The collected data were entered and analyzed using SPSS version 25.0. Descriptive statistics were used to summarize demographic variables (age, parity, gestational age) and frequency of uterine rupture .Categorical variables (e.g., presence or absence of uterine rupture) were presented as frequencies and percentages. Continuous variables (e.g., maternal age, duration of labor) were presented as mean $\pm$ standard deviation (SD).Subgroup analysis may be conducted to observe the relationship between uterine rupture and factors such as parity, duration of labor, and inter-delivery interval, using chi-square test or t-test where applicable. A p-value $\leq$ 0.05 was considered statistically significant. Ethical consideration was applied , ERC approval obtained,patients confidentially data was ensured, written

Results

117 pregnant women with previous **one cesarean section**, presenting with clinical symptoms such as **pain, fetal distress, acute loose contractions, hemorrhage, or intrauterine fetal death** during pregnancy or at the time of cesarean section delivery undergoing a **trial of labor**, were included in this study.

Reference Pictures



Results

Demographic and Clinical Characteristics:The mean age of the patients was 28.47 ± 4.28 years.The mean BMI was 29.32 ± 2.90 kg/m². The mean gestational age was 37.91 ± 1.65 weeks.

Booking Status:Unbooked cases: 34.19%. Booked cases: 65.81% **Residential Status:** Nearly a 1:1 ratio was observed between urban and rural residents.

Education Status: The majority of the women were illiterate.

Mode of Admission: OPD (Outpatient Department): 56%, Emergency: 44%

Socioeconomic Status: Most families belonged to the poor class.

Uterine Rupture Incidence: The frequency of uterine rupture in women with a previous one cesarean section in active labor was 4.27% (5/117).

Conclusion

This article draws attention to the incidence of uterine rupture (4.27%) in women with a previous cesarean delivery who attempt a trial of labor during active labor. The results underscore that even though uterine rupture is a relatively uncommon complication, it is nevertheless a serious threat, especially in resource-constrained areas where emergency obstetric care can be late. The research also emphasizes the need for adequate antenatal care, selection of patients for vaginal birth after cesarean (VBAC), and close intrapartum surveillance to prevent negative outcomes. Additional large-scale research is advocated for the confirmation of these observations and the establishment of evidence-based practices for labor management in women with previous cesarean deliveries for optimization of maternal and fetal well-being.

REFERENCE:

- Landon MB, Hauth JC, Leveno KJ, et al. Maternal and perinatal outcomes associated with a trial of labor after prior cesarean delivery. *N Engl J Med*. 2004;351(25):2581–2589.
- Guise JM, McDonagh MS, Osterweil P, Nygren P, Chan BK, Helfand M. Systematic review of the incidence and consequences of uterine rupture in women with previous cesarean section. *BMJ*. 2004 Jul 3;329(7456):19–25.
- WHO (2021). *Labour Care Guide*.