**ORIGINAL ARTICLE**

# Frequency of Uterine Rupture in Patients Undergoing VBAC

SAIRA AYUB[1], HUMAIRA BASHIR[2], ASMA AKHTAR[3], *FAIZA AAMER[4]*

## ABSTRACT

All cases of ruptured uterus admitted through emergency or got ruptured during their stay in the hospital were included in the study. Age of patient, parity, predisposing factors, type of rupture was noted. Data was entered and analyzed using SPSS. About 8500 deliveries occur during the study period and there were 50 (0.6%) cases of ruptured uterus due to previous scar. Most of the patients i.e. 46% presented between 26-30 years .Majority of rupture occurred in para 1-2. Common cause of uterine rupture was previous uterine scar i.e. in 94% of cases. Anterior uterine wall was involved in 2% of cases. There were 48 (96%) IUDs and there was no maternal death. Uterine repair was done in 44 (88%) cases and Hysterectomy was done in 6(12%) cases. This study shows that uterine rupture occurs frequently in patients with previous one uterine scar.

**Key words:** VBAC, TOS, Uterine rupture

## INTRODUCTION

Uterine rupture is now not an uncommon obstetrical complication which may occur in a previously unscarred uterus[1] or more commonly in previous caesarean section or full thickness gynecologic uterine incision scar. The over all rate varies from 2-8/10,000 deliveries.

A lot of factors increase the risk of uterine rupture most commonly are increasing age and parity, low socioeconomic status, previous uterine surgeries. use of oxytocin drug by non-qualified peoples. Majority of cases of uterine rupture occurring in under develop ed countries, may be preventable due to seeking medical care and induction of labour with previous scar at some local setups[2,3,7].

Vaginal births and trial of elective repeat cesarean section (ERCS) have been reported to increase significantly risks for both mother and newborn [8] and poses a great challenge for the gynecologists to make their decision regarding delivery plan among these patients. The patients with planned trail of scar, appropriate candidates will be the ladies having balanced risks (low as possible) with increased success rate expectation (higher possible) may be required to the patients as well as Surgeons [9]. The objective of the study was to find the most frequent cause of uterine rupture in patients undergoing VBAC.

## METHODOLOGY

This observational study was conducted in Obstetrics & Gynaecology Department of Nishtar Hospital Multan. This study was conducted from October 2015 to September 2016. Total 8500 deliveries were done in this time period, of which 50 patients presented with uterine rupture in this time period most of the cases received in emergency. Women with congenital abnormalities, having malignancies, CRF and not giving consent of participation were excluded from the study.

Diagnosis of ruptured uterus was done on the basis patient's history and examination by a senior gynecologist and was confirmed on laparotomy. Surgical techniques for the management depend on general condition of the patients, parity, type of rupture, desire for future child bearing etc. All the patients were closely monitored until discharge from the hospital. Data analysis was done with help of SPP-20 version.

*[1,2,3]Senior Registrar Gynae/Obs, Nishtar Medical College, Multan.*
*[4]Associate Professor of Biochemistry, Fatima memorial Medical & Dental College, Lahore.*
*Correspondence to Dr. Saira Ayub Email: shz_jml@yahoo.com*

## RESULT

This study was designed to find the changing trend of uterine rupture in patients undergoing VBAC. Total number of deliveries done in study period were 8500, of which 50 (0.6%) patients presented with uterine rupture. Mean age of these patients with uterine rupture was 28.98 ± 4.13 years and most of the patients i.e. 46% presented between 26-30 years and were unbooked. Most of the uterine ruptures occurred in women with para 1-2 and commonest cause in majority of the cases of uterine rupture was previous uterine scar i.e. in 94% of cases. Anterior uterine wall rupture was seen in 2% of our patients. There were 48 (96%) IUDs and there was no maternal death. Among these 50 patients with uterine rupture, 44(88%) underwent uterine repair and hysterectomy was done in 6(12%) patients. (Table 1-4).

Majority was in age group between 26 to 30 years i.e. 46%. Mean 28.9800±4.13788. The most alarming this is that most of the patient was young between 26-30 years of age. Majority of the ruptured uterus cases were reported in patients having their parity 1-2 i.e., 56%. Majority of the patients were having previous one caesarean section i.e. 58%.

Table 1: Age wise distribution (n=50)

| Age group | n | Percentage |
|---|---|---|
| 20-25 | 11 | 22 |
| 26-30 | 23 | 46 |
| 31-35 | 16 | 32 |

Table 2: Parity wise distribution of cases (n=50)

| Gravidity and parity | n | Percentage |
|---|---|---|
| Para 1 | 20 | 40 |
| Para 2 | 8 | 16 |
| Para 3 | 11 | 22 |
| Para 4 | 7 | 14 |
| Para 5 | 4 | 8 |

Table 3: Number of previous caesarean sections (n=50)

| Previous caesarean sections | n | Percentage |
|---|---|---|
| 0 | 5 | 10 |
| 1 | 29 | 58 |
| 2 | 10 | 20 |
| 3 | 4 | 8 |
| 4 | 2 | 4 |
| Total | 50 | 100 |

Table 4: Other outcome variables of studied population (n=50)

| Description | n | Percentage |
|---|---|---|
| Booked cases | 2 | 4 |
| Unbooked cases | 48 | 46 |
| Ruptured through previous scar | 47 | 94 |
| Fundal rupture | 2 | 4 |
| Anterior wall rupture | 1 | 2 |
| Repair of uterus | 44 | 88 |
| Hysterectomy | 6 | 12 |
| Bladder repair | 13 | 26% |
| IUD | 48 | 96 |
| Live babies | 2 | 4 |
| Maternal death | 0 | 0 |

## DISCUSSION

Ruptured uterus remains the most serious complications of pregnancy involves significant amount of risks to the fetus and their mothers. Lack of proper health information system, a poor system of referring patients, poor of antenatal care, late management as well as specifically shortage of well-trained/equipped surgical team are the major factors for its high proportions. In my study frequency of uterine rupture was 0.6 % (50/8500). The results are comparable with other studies[10].

The proportions of disease burden in developed nations is at least ten time lower than those of developing countries i.e., 0.086% in Australia[11] and 0.023% in Ireland[12]. Different studies which have been done in developing world provide us evidence that uterine rupture still remains to be a major health issue in such areas with its prevalence in rural areas[13].

In present study the mean age of the patients with uterine rupture was 28.98±4.13 years and most of the patients i.e., 46% presented between 26-30 years and were unbooked. Most of the uterine ruptures occurred in women with para 1-2 and commonest cause in majority of the cases of uterine rupture was previous uterine scar i.e. in 94% of cases. Anterior uterine wall rupture was seen in 2% of our patients. There were 48 (96%) IUDs and there was no maternal death.these results were compare with another study by Rizwan[14].

In our study the most common site of rupture was lower segment. Similar results were found in other studies[15,16]. There were 48(96%) intra uterine deaths and there was no maternal death in our study. This finding is comparable with other studies[17,18]. In another study conducted by Rizwan et all fetal mortality was 73.3 3% which was similar to the observations of Adnu RM et al[19].

## CONCLUSION

Uterine rupture occurs frequently in inpatients ,So we need good antenatal care, education and counseling of patients, continuous fetal monitoring during labour, prompt recognition and early surgical treatment to avoid such fatal situations

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