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Original Article

Uterine Rupture -- Experience of 30 Cases at Faridpur Medical College Hospital

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Abstract :

Rupture uterus is a rare and often catastrophic condition. It is associated with a high incidence of fetal and maternal mortality and morbidity. Our objective in this study is to determine incidence, etiology, trend, management, maternal and fetal outcome of uterine rupture in Faridpur Medical College Hospital. This is a prospective cross-sectional study of patients with ruptured uterus from the period of January 2011 to December 2011 admitted at Faridpur Medical College Hospital. All the cases of ruptured uterus who were either admitted with uterine rupture or who developed it in hospital were included in the study. Patients having ruptured uterus due to congenital anomaly were excluded from the study. Patients were initially assessed in labour ward, relevant sociodemographic data, previous antenatal and surgical history recorded. Ways of management, maternal and fetal outcome were taken for analysis. There were 30 cases of ruptured uterus out of total 3606 deliveries (including 1809 caesarian sections) over a one year time period, with a prevalence of 0.83%. The most common age group was 21-30 years. A majority of patients 16(53.3%) were cases of unscarred uterus presenting with rupture; the common cause of rupture in scarred uterus was injudicious use of oxytocin (13,43.33%). Proper antenatal care, appropriate counseling of patients with history of previous caesarian section for hospital delivery, training of skilled birth attendant can reduce mortality and morbidity due to rupture uterus.

Key words : ruptured uterus, multiparity, caesarian section.

Introduction :

Uterine rupture is an obstetrical emergency endangering life of both mother and fetus. It is a grave condition which is almost fatal for fetus[1]. Several factors are known to increase the risk of ruptured uterus. These include poor socioeconomic condition, uncontrolled fertility, illiteracy, adolescent marriage and underdeveloped and contracted pelvis[2]. Uterine rupture during pregnancy is a rare occurrence, where as uterine scar dehiscence is a more common event[3]. Due to lack of health education, ignorance or poverty women in our country do not come for regular antenatal checkup, preferring home delivery by traditional birth attendant instead of coming to hospital. They are brought to hospital after prolonged dysfunctional labour when traditional birth attendant fail to deliver them, the result is a chance of rupture uterus and as well as rupture of previous caesarian scar[4]. High maternal mortality and morbidity is a consequence of poor maternal care, inadequate socioeconomic and environmental condition, poor accessibility to health services and poor nutrition[5]. The objective of the study is to determine the incidence, etiology, trend, management and maternal and fetal outcome of ruptured uterus and to identify the preventive measures.

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Materials & Method :

This is a prospective cross-sectional study of patients with ruptured uterus from the period of January 2011 to December 2011 admitted in Faridpur Medical College Hospital. Total number of delivery during the period was 3606. All the cases of ruptured uterus who were either admitted with complain or who developed it in hospital were included in the study. Patients having ruptured uterus due to congenital anomaly were excluded from the study. Patients were initially assessed in labour ward, relevant sociodemographic data, previous antenatal obstetric history, period of gestation, duration of labour pain, history of delivery

attendant were recorded. The site of rupture, type of surgery, unit of blood transfusion and maternal and fetal outcome were recorded.

Results :

A total 30 cases of ruptured uterus were recorded from January 2011 to December 2011. Total deliveries were 3606. Prevalence of ruptured uterus was 0.83%. Age of patients ranged from 15-40 years. Most of the patients were in the age of 21-30years i.e. 9 patients (30%) (Table I)

Table I: Parity and age distribution of patients.

Parity	Age 15-20 years	Age 21-25 years	Age 26-30 years	Age 31-35 years	Age 36-40 years
1	1	4	5	1	1
2	1	2	6	1	0
3	0	0	1	1	0
4	0	2	0	0	1
5 or more	0	0	1	2	0

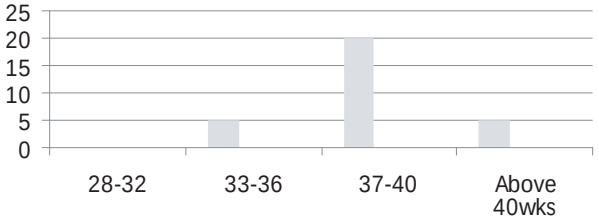

Figure 1: Gestation age of patients

Figure 1 shows most occurrences of ruptured uterus was amongst the gestational age 37-40 weeks, total 20(66.6%) at this age. Majority of the patients were illiterate 18(60%). Primary level of education was found among 12 patients (40%). Only 2 patients had received secondary and higher education. About socioeconomic condition 8 patients (26.6%) were found having income 3000Tk/month. Most of the patients came from remote villages i.e. 23(76.66%) and rest from urban area.

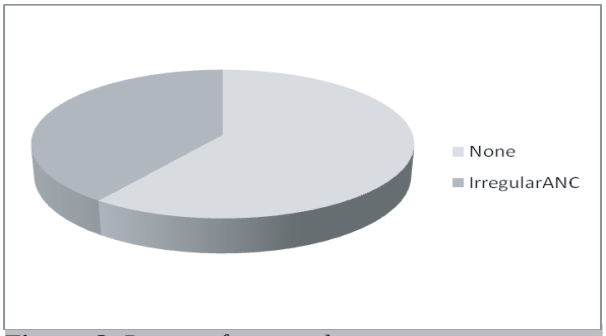

Figure -2: Pattern of antenatal care.

Of the 30 patients total 18 patients (60%) had no antenatal checkup. Twelve patients (40%) had irregular antenatal checkup and no patients had history of regular antenatal checkup (Figure 2). Majority of rupture occurred in unscarred uterus i.e. 16(53.33%) and 14(46.66%) rupture occurred in scarred uterus. Most common factor was injudicious use of oxytocin 13(43.33%) in scarred and 6(20%) unscarred uterus. Obstructed labour was in 9(30%) cases, one patient had silent rupture of previous caesarian section scar (Table II)

Table II: Etiology of ruptured uterus in scarred / non-scarred uterus

Causes	Scarred	Unscarred
Injudicious use of oxytocin	13	6
Silent scar dehiscence	1	0
Obstructed labour	0	9
Other cause	0	1

Out of the 30 patients, the rupture was confined to lower segment in 12(40%). In 13 patients (43.33%) had rupture extended to upper segment and lateral extension. Three 3 patients had injury to the urinary bladder (10%), and not explored in 5 patients due to death before operation (Table III)

Table III: Site of rupture.

Site of rupture	Number
Scar	5
Lower segment	7
Extension to upper and lateral segment	13
Injury to urinary Bladder	3
Not explored due to death	5

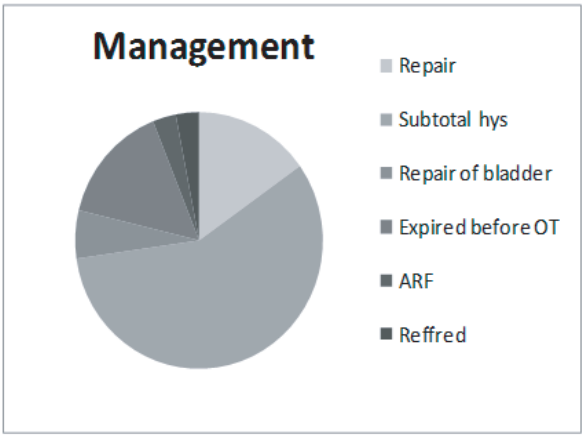

Figure 3: Pattern of management of patient.

Most of the patients 19(63.33%) underwent subtotal hysterectomy, one had total hysterectomy and 5(16.66%) had repair of rupture and 2 patients need repair of urinary bladder (Figure 3). Among 30 patients 25 underwent surgery (83.33%) and 5 patients expired during resuscitation (16.66%). Almost all patients were anaemic and received blood transfusion of 2 or more units, one patient had renal failure and one patient was referred for ICU support.

Discussion :

Ruptured uterus still remains one of the serious obstetric complications. Lack of health information, illiteracy, poor antenatal care, poverty, home delivery by traditional birth attendants and delay in referrals all contributes to uterine rupture[4]. Prevalence of uterine rupture in the present study is 0.83%. This study was similar to study done by Malik HS[4]. However the incidence is higher in a study done by Alam et al[6] who had a figure of 1.14%. In developing countries like in Ethiopia and Nigeria it is 0.03% and 0.83% respectively[7,8]. Studies conducted in developing countries gives strong evidence that uterine rupture is a major health problem in developing countries, with the rate higher in rural areas[9,10]. The studies also revealed that socioeconomic condition along with poor health services play a major role in determining the incidence of rupture.

Most of the patients in this study 9(30%) were between the age of 21-30 years. Which was compared with of Khan et al[11], where most of the women belonged to the age 31-35 years (47%). Majority of the ruptured occurred in primigravidae 12 (40%), and second in second gravid 9(30%), whereas Malik HS[4] found 42.7% in para (2-4). Majority of the patients were unbooked 18(60%) and with irregular antenatal checkup 12(40%) and similar results were found in other studies[4,10]. Most of the unbooked patients were taken to the hospital from remote area. Injudicious use of oxytocin and trial of labour was the common cause, whereas prolonged obstructed labour was the second common cause. This is similar to the study of Malik HS[4] and others where rupture of previous caesarian scar was the most common cause[12]. In this study 12 patients had rupture in the lower segment and 13 had extension in the upper segment or in the vaginal fornices, 3 had injury to urinary bladder. Subtotal hysterectomy was done in 19 patients, repair of uterus in 5 patients and repair of urinary bladder in 3 cases. In this series 5 patients were not explored as the patients expired during resuscitation, one patient developed acute renal failure; one patient was in coma and referred. The rest 23 patients (76.66%) improved. Perinatal mortality was 21(70%) which is similar to the study of Nawsaba et al[13].

Conclusion :

Lack of antenatal care, inappropriate counseling of patients with history of previous caesarian section for hospital delivery, delivery by untrained dai, misuse of oxytocin and 3 delay in seeking management are the main cause of ruptured uterus in this study. In this study rupture was significantly high among primigravid patients denoting the mismanaged labour management still now.

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