UTERINE RUPTURE: A REVIEW OF 34 CASES AT AYUB TEACHING HOSPITAL ABBOTTABAD

Sameera Khan,Zahida Parveen,Shamshad Begum,Iqbal Alam

Department of Obstetrics & Gynecology, Ayub Teaching Hospital Abbottabad Pakistan

Background: Uterine rupture is a deadly obstetrical emergency endangering the life of both mother and fetus. This descriptive study was conducted to determine the frequency of ruptured uterus at Ayub Teaching Hospital Abbottabad and to elicit possible causes/reasons of ruptured uterus. **Methods:** The study was conducted at the department of Obstetrics & Gynaecology, Ayub Teaching Hospital, Abbottabad, Pakistan over a period of one year from July 1st, 2001 to June 30th, 2002. All cases of uterine rupture presenting during the study period were recorded and managed in the department using a protocol prepared for the purpose of this study. Data was recorded on pre-designed Proforma. **Results**: There were 34 cases of ruptured uterus out of a total of 3435 deliveries (including 1128 Caesarian sections) over a one-year time period (incidence of 1/100 deliveries) with 31 intra-partum deaths. The most common age group was from 31–35 years (16/34, 47%), followed by the 26–30 years age group (13/34, 38.2%). A majority (29/34, 85.3%) were cases of unscarred uterus presenting with rupture; the most common cause of rupture in all cases was inappropriate injections of Oxytocin (11/34, 32.35%), followed by obstructed labour (9/34, 26.5%). All were anemic and most of them were in shock. **Conclusion**: The leading cause of ruptured uterus was found to be mismanagement by traditional birth attendants. We can reduce maternal mortality due to rupture uterus by giving proper training to traditional birth attendants and by mass education through electronic media.

Key words: Rupture Uterus, Obstructed Uterus, Traditional birth Attendants, Mother and child health care.

INTRODUCTION

Rupture uterus is a grave condition, which is almost always fatal for the fetus.[1] Uterine rupture may develop as a result of pre-existing injury like scar or perforation or anomaly. It may be associated with trauma or it may complicate labour in a previously unscarred uterus. The most common cause of uterine rupture is dehiscence of a previous Caesarian section scar.[2]

There are two types of uterine rupture, complete and incomplete, distinguished by whether or not the serous coat of the uterus is involved.[3] In the former the uterine contents including fetus and occasionally placenta, may be discharged into the peritoneal cavity, whereas in the latter the serous coat is intact and fetus and placenta are inside the uterine cavity.[4] The complete variety appears to be more dangerous of the two varieties.[5,6] Rupture of uterus during labour is more dangerous than that occurring in pregnancy because shock is greater and infection is almost inevitable.[7,8]

Obstetrical care in the western world is at its peak. But in the developing countries, it is still at the docks, especially in Pakistan due to illiteracy, male dominant society and untrained birth attendants. Majority of population living in rural areas do not have an easy accessibility to a maternity and essential obstetric care. Therefore they may develop life-threatening complications of pregnancy and the fatality rate associated with conditions like ruptured uterus is quite high.

The purpose of this study was to find out the frequency of ruptured uterus reporting at Ayub Teaching Hospital, to identify the major cause(s) and to give possible recommendations so that such grave

obstetrical complications can be reduced. Hence analysis was done for frequency, aetiological factors, clinical presentations and maternal and fetal outcome of ruptured uterus treated in this tertiary level teaching hospital.

Material and Methods

It was a one-year study starting from 1st July, 2001 to 30th June, 2002. All cases of rupture uterus whether booked or un-booked, which were received and managed in Ayub Teaching Hospital, Abbottabad, Pakistan, were included in the study. Data on age, place of residence (distance from hospital), parity, previous obstetric history, period of gestation, duration of labour pains and history of mishandling by midwives and traditional birth attendants were recorded. The site and type of rupture, the type of surgery performed, units of blood transfused and maternal and fetal outcome were recorded.

Analysis was done by manual method and incidence of ruptured uterus was calculated from the total number of deliveries that occurred in the hospital during the period.

RESULTS

A total of 34 cases of ruptured uterus were recorded from 1st July, 2001 to 30th June, 2002, among 3435 total deliveries including 1128 cesarean sections with an incidence of 0.98 %. None had received any antenatal care. All ruptures occurred outside the hospital.

Age of the patients ranged from 18 to 40 years with a mean of 35 years. Most of the affected patients were grand multigravidas (Para 5 and above), remaining cases were multigravidas (Table 1).

Table-1: Age & parity of the patients

Parity	15-20	21-25	26-30	31-35	36-40
1					
2			3		
3	1		1	2	1
4		1	2	2	
5		2	2	3	
6				6	
7			3	2	
8			2	1	

Most prevalent period of gestation was between 33 weeks to 40 weeks except for one case, which was 20 weeks (Table 2).

Table-2: Period of Gestation of the patients

POG	No. of Patients
Less than 28 weeks	1

28-32 weeks	0
33-36 weeks	15
37-40 weeks	18

Majority of rupture occurred in unscarred uterus, most common factor being obstructed labour (9/34, 26.47%). Among the rest 3 (8.8%) cases were due to secondary contracted pelvis, 2 (5.8%) due to spontaneous onset of labour with transverse lie, 2 (5.8%) due to direct trauma. In 2 (5.8%) cases there was spontaneous rupture in rudimentary horn. In other two cases 1 (2.9%) rupture was due to hydrocephalic baby and in second case no obvious cause was found. Patient came with complaints of breathlessness, chest pain and per vaginal bleeding. There was no history of labour pain (table-3).

Out of 34 cases five ruptures (14.7%) occurred with previous scar. In these there were 2 (40%) cases of scar dehiscence during spontaneous labour and 2 (40%) were due to induction with oxytocinon and in 1 (20%) case there was silent scar dehiscence (table-3).

Table 4 shows that the most common site of ruptured uterus was lower uterine segment (16/34, 47%) and the next most common site was left lateral rupture (8/34, 23.5%) followed by fundal rupture (7/34,20.6%) and right lateral rupture (3/34, 8.8%) respectively.

Most of the patients (16/34,47%)) underwent sub-total Hystrectomy. Twelve patients (35.3%) had rent repair with sterilization and 6 (17.6%) had repair without sterilization Table-5. One patient had splenectomy due to associated splenic rupture along with ruptured uterus (table-5).

Table-3: Etiology of rupture uterus in scarred and un-scarred uterus.

Causes	Scarred Uterus	Unscarred Uterus
Mishandled by TBA (injudicious use of oxytocinon)	2	9
Silent scar dehiscence	1	-
History of spontaneous labour	2	
Obstructed labour	-	9
Secondary contracted pelvis	-	3
Spontaneous rupture in rudimentary horn	-	2
Mal presentation (Hand prolapsed with rupture uterus)	-	2
Direct trauma	-	1 (forceps delivery) 1 (history of fall)
Others	-	2

Table-4: Site and type of rupture

Site of Rupture	Complete Rupture	Incomplete Rupture
Confined to lower segment	13	3
Left lateral rupture	8	-

Right lateral rupture	3	-
Fundal rupture	7	-
Total	31	3

Table-5: Management of rupture uterus

Rent repair with sterilization	12
Repair without sterilization	6
Sub-total Hysterectomy	16
Associated surgery	1 (repair of rupture spleen)

Almost all patients were anemic and had received three or more pints of blood transfusions. Twenty-nine patients (85.3%) had postoperative pyrexia and 3(8.8%) had wound infection. One patient had pulmonary embolism and another needed intensive care due to shock as shown in table 6.

Table-6: Post-op Complications

Wound Infection	3
Pulmonary Embolism	1
Shock needing intensive care	1
Anemia	34
Post-op Pyrexia	29

There were 31(91.2%) cases of perinatal mortality, however, there was no maternal mortality (table-7).

Table-7: Maternal and Fetal outcome

Intrapartum death of fetus	31
Neo-natal deaths	None
Mothers	all recovered

DISCUSSION

In Pakistan 30,000 women die each year due to pregnancy and childbirth related causes. This increase in incidence is attributed to malfunctioning of public health services and unsatisfactory quality of maternal health care.[9]

According to National Health Survey of Pakistan 89% deliveries take place at home and out of these 80% are conducted by traditional birth attendants.[9] The misery is that instead of providing good health care they send patients with complications such as obstructed labor, uterine rupture and intrapartum deaths, etc.

Other causes of increase maternal mortality include delay in seeking care or reaching hospital or delay in starting treatment at the facility due to absence of trained staff, shortage of medicine, etc.

People who live in remote places have delay in seeking care due to communication problem like roads, telephone and transport. But even people living close to hospital i.e. within one or two kilometer also had delay in seeking care due to taboos and fear of operation. Many cases with rupture uterus when interviewed personally almost 90% had delay in seeking care due to some reason.

The need is that the present basic health units and rural health centers should provide 24 hour health services and the TBA should be trained not to cause complications but to recognize them and to make referral at proper time.

RECOMMENDATIONS

1. Traditional birth attendants should be properly trained so that they should be able to recognize the problem in time and be able to seek the help of essential obstetrical services. They should not be allowed to use oxytocinon without the supervision of a trained doctor.

2. Basic health units and rural health centers should be well equipped with trained personals and there services should be utilized properly according to established medical ethical guidelines.
3. Contraception and Family planning services should be made more effective to prevent unwanted pregnancies and grand multi parity.
4. Roads and communication should be improved so that the people can reach earlier to a secondary or tertiary level health care in case of need. They should be provided with ambulances etc. This problem can only be worked out if government pay attention and improve health budget.
5. Public awareness campaign should be started to raise the public awareness of the need for the routine ante-natal care and diagnosis of possible complications.

ACKNOWLEDGMENTS

I wish to thank my Supervisor Professor Dr. Rahat un Nisa, Head of the Department of Obstetrics and Gynaecology at Ayub Teaching Hospital for her help in discussing the various aspects of this article. I wish to express my sincere thanks to Dr. M Ayub and Dr. Iftikhar Qayum who helped me at every step in writing this article. I am also thankful to Mr. Ajmal for helping me in the typing of this article.

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Address For Correspondence:

Dr. Sameera Khan, Department of Obstetrics & Gynecology, Ayub Teaching Hospital Abbottabad Pakistan