CASE REPORTS

Ruptured Uterus in Primiparous Women

IP ALAM[a], H AFROZ[b]

Summary:

Ruptured uterus is rare in developed country, but unfortunately it is common in a developing country like Bangladesh. It is one of the major obstetric emergencies. Rupture of unscarred uterus is uncommon event. Majority of the patients are multigravidae and in primipara it extremely rare. But in a tertiary referral hospital it is sometime seen. Four cases of ruptured uterus in primiparous patients are described. These patients were admitted as emergency cases in obstetrics and gynaecology department of Dhaka Medical College Hospital during the period 2000 –2001. These are due to injudicious use of oxytocin, obstructed labour due to hydrocephalus,cephalopelvic disproportion due to maternal kyphoscoliosis and road traffic accident in third trimester of pregnancy.

(J Bangladesh Coll Phys Surg 2010; 28: 45-48)

Introduction

Ruptured uterus is an unexpected, relatively uncommon occurrence in the general obstetric population and rare in developed country, but unfortunately it is common in a developing country like Bangladesh. It is one of the major obstetric emergencies, it carries high incidence of maternal and foetal mortality and morbidity[1].

According to UNFPA (2002), the estimated lifetime risk of dying from pregnancy and childbirth related causes in Bangladesh is 1 in 21, compared to 1 in over 4,000 in industrialized countries[2]. The World Bank, however, currently estimates the national MMR at 440 per 100,000 live births[3]. Bangladesh is one of the poorest countries in the world, with a maternal mortality ratio of 320/100,000 live births (NIPORT 2001) [4] . One of the causes of maternal mortality is ruptured uterus. Rupture uterus and obstructed labour (indirectly causes rupture in neglected cases) constituted about 19% of maternal death[1].

Most of the labours in our country are conducted by untrained dais (traditional birth attendants). They do not have enough knowledge and background to understand the presentation, lie, and position of the foetus. Also they can not asses state of maternal condition such as uterine contraction and progress of labour. Above all, due to illiteracy and low socio-economic condition and conservative religious belief, most of our pregnant mothers are deprived of proper antenatal care that is available. Majority of poor women deliver at home unattended by doctor and attended by dais. They seek medical help only when a woman fails to deliver after a long time at home or when there is serious deterioration in her condition. Often there is delay in every step from decision making to final hospital management.

Rupture of uterus in multigravidae during labour is well-documented complication but rupture of unscarred uterus is uncommon event and in the primigravidae it extremely rare. But in a tertiary referral hospital it is sometime seen. Here four cases of ruptured uterus in primiparous patients described all of these cases were admitted in Obstetrics unit of Dhaka Medical College hospital (DMCH) which is one of the biggest tertiary referral hospital located in Dhaka city. These cases are due to injudicious use of oxytocin, obstructed labour due to hydrocephalus, cephalopelvic disproportion due to maternal kyphoscoliosis and road traffic accident in a patient in third trimester of pregnancy.

Case-1:

A 22year primigravid lady married for two years at full term pregnancy was admitted in labour ward with severe abdominal pain and per vaginal blood stained

a. Dr. Irin Parveen Alam. FCPS (Obst&Gynae), Junior consultant (Obst and Gynae)

b. Dr. Hasina Afroz.MS, FCPS,MCPS (Obst&Gynae) , Assistant Professor (Obst&Gynae) Dhaka Medical College Hospital .

Dhaka Medical College Hospital .

Address of Correspondence : Dr.Irin Parveen Alam. 64/A Hossaini Dalan Road, Johora Bhavan, Dhaka. E- Mail dririn.alam@yahoo.com.

Received: 22 August, 2007 **Accepted:** 6 August, 2009

discharge for two hours. She was in regular antenatal checkup by a renowned gynaecologist in Dhaka city in her antenatal period and she was immunized. But at the onset of labour pain in the absence of patient's husband her mother in law instead of transferring her to hospital called a dai and she gave one ampoule of intramuscular injection of oxytocin directly. Patients pain increased but delivery not occurred, she counseled the patients attendant that they often do such and delivery usually occur then again another oxytocin injection was given intramuscularly. But delivery not occurred in spite of presence of severe abdominal pain. Patient's condition was deteriorating and decided to transfer her to hospital. Patient was transferred to a nearby clinic but they referred her to Dhaka Medical college Hospital. Patient was pale and anxious. On examination she was severely anaemic her pulse rate was 100/min and blood pressure was 90/60mmof Hg. she could not lie down and she prefers to sit in bed. Patient did not allow touching her abdomen due to pain. So per-abdominal and pervaginal examination could not performed properly, and the patient was diagnosed clinically as a case of rupture uterus. Resuscitation was done by opening two intravenous channels, giving oxygen by facemask. Urgent laparotomy was done after arrangement of blood transfusion. After opening abdomen there was haemoperitoneum of about 4 liters and the foetus was dead and found outside the uterus, the rupture was on the posterior wall and very irregular in type, it was repaired with difficulty. Subsequent postoperative period was uneventful and patient discharged.

Case-2:

A 24years old primiparos woman admitted with labour pain. She was never in antenatal check up and not immunized and could not mention duration of pregnancy. On examination her pulse was110/minutes blood pressure was 90/60mmof hg respiratory rate was 26per minute and she was moderately anaemic. Per abdominal examination revealed fundal height about 36weeks with a longitudinal lie and contour of uterus was normal, foetal heart sound could not detect. Pervaginal examination revealed a full-dilated cervix with a big soft caput with station high up. Clinical diagnosis of obstructed labour was made with suspected ruptured uterus. Only blood grouping and Rh typing was done for emergency blood transfusion. Emergency laparotomy was done and found that there was haemoperitoneum and rupture of anterior wall of uterus, which extended downwards up to vaginal vault. Foetus was in utero and a big hydrocephalus foetus was delivered, which was not diagnosed previously. Uterus was repaired in two layers abdomen was close after keeping a drain. Subsequent postoperative period was uneventful and patient discharged at 8th postoperative day.

Case-3:

A 25year old poor woman short stature emaciated patient at her term pregnancy admitted in labour ward with abdominal pain and parvaginal bleeding. She was married for 4 years with no issue. She was never in antenatal check up. She had kyphoscoliosis of thorax her pelvis was deformed and scoliotic in type, fundal height was of 36 weeks, abdomen was tender and rigid foetal heart sound was absent and pervaginal examination shows irregular cervix of about of 4cm, cephalic presentation with high up head. pervaginl bleeding was present. Her skeletal deformity was such that she could not lie down properly even after anaesthesia and her knee joints persist always in flexed position. Emergency caesarian section was done due to contracted pelvis and found that uterus was ruptured irregularly in anterior wall. Uterine bleeding continued and the patient ultimately required a subtotal hysterectomy due to postpartum haemorrhage. Postoperative period was uneventful, the patient discharged home at 9th postoperative day.

Case: 4

A 25 years old primigravidae patient at her 37weeks pregnancy was traveling in rickshaw and suddenly road traffic accident occurred and she was brought in labour emergency room. She had severe abdominal pain; she was restless and developed shock within short time. She was diagnosed as a case of internal haemorrhage. Resuscitation and arrangement of emergency laparotomy was done under general anesthesia. Operative findings revealed a large haemoperitoneum (about 4000ml bloody ascitis in peritoneal cavity) and the foetus was floating in the peritoneal cavity. After urgent delivery of the foetus

from the abdominal cavity about 8cm irregular laceration was found on the posterior uterine wall extending from upper to lower segment. Placenta was in fundal area and delivered. Foetus was fresh stillborn. Primary repair of uterus was done. After appropriate treatment mother was discharged on 10th postoperative day.

Discussion:

It is well known that women who have previous gynaecological operations resulting in scarred uterus are at high risk for uterine in pregnancy; the occurance is often intrapartum. Therefore close observation and followup during the labour are emphasized in these patients[5]. Uterine rupture accounts for significant number of maternal death in developing countries but it is also increasing in developed countries due to vaginal birth after caesarian delivery. The incidence of rupture of gravid uterus in DMCH is 0.85% of total admission [6]. In a study in Sir Salimullah Medical College and Mitford Hospital (SSMC&H) was 1 in 104.4 deliveries[1], another study performed in SSMC between 1986-1988 showed that there was one ruptured uterus per 102 hospital deliveries[7]. But in those studies there was no rupture in primiparous patient. In literature review shows an oxytocin associated rupture in unscarred uterus in second stage of labour[8]. In a case report there was a spontaneous fundal rupture secondary to placenta percreta that necessitated performing a total abdominal hysterectomy [9,10]. Another case report describes a rupture in a primigravid patient who was at 38weeks' gestation undergoing labour induction under epidural analgesia. The patient was diagnosed as a rupture case in the post delivery period subsequently developed dissiminated intravascular coagulation and ultimately required a hysterectomy[8]. However there have been a few case reports of spontaneous uterine rupture, without significant risk factors [11,12] . In the presented 4case reports two cases were diagnosed as obstructed labour. Obstructed labour for a prolonged period caused rupture in these cases. The patients were primigravidae and had no congenital anomaly of uterus or placental abnormality. The placenta was easily removed from the fundal area; the placenta did not invade the rupture site as established after careful examination of the uterus and the observation that it was grossly normal. In the reported case, histopathology was not done, so any possibility of underlying pathological changes could not exclude.

The incidence of ruptured uterus is reflection of the level of health care delivery service available in a community. Now a day's rupture of uterus in labour in women with history of previous caesarian section recognized as an important factor. Multiparity with obstructed labour also recognized as important common factor. In this case report all of the ruptured uterus patient came in hospital in the terminal stage, all of the cases occurred during labour, there was intrauterine death of all the foetus before admission. All the patients except the patient with road traffic accident, never sought antenatal advice, they are also socioeconomically deprived.

Conclusion:

It is obvious that lack of adequate antenatal care, lack of community awareness, illiteracy, poor referral system and poverty are predisposing factors for uterine rupture. Spontaneous rupture of the primigravid uterus can occur in the absence of a history of uterine trauma or infection rarely. If a gravid woman presents with hypotension, abdominal pain and fetal distress, the differential diagnosis should include rupture of the uterus. Rapid diagnosis, blood product replacement and emergency laparotomy are the key steps in successful management. By reviewing the case reports, we should keep in mind that prompt response to every woman during labour is of paramount importance to avoid repeating the occurrence of uterine rupture.

Acknowledgement :

I acknowledge Professor Sayeba Akhter, Professor Atika Begum, Dr. Salma Rouf ,Assistant Professor (Obst &Gynae).

References:

1. A Begum. Ruptured Uterus-A Study of 32 Cases. Bangladesh J Obstet Gynaecol, 1997; Vol 12 (1):29-35.
2. Maternal Mortality Statistics by Region and by Country. UNFPA Website,`accessed15/08/2002: http://www.unfpa.org/rh/mothers/statsbycountry.htm UNFPA (2002).
3. Attacking Poverty. Oxford: Oxford University Press for the World Bank. World Development Report 2000/2001.

4. "Bangladesh Maternal Health Services and Maternal Mortality Survey." Final report. Calverton, Md.: ORC Macro Calverton. NIPORT (National Institute of Populations Research and Training). 2001.

5. Wang P H, Yuan C C, Taichao H, Yang M and Ng H T. Case report. Posterior uterine wall rupture during labour. Human Reproduction Volm.15 no.5pp.1198-1199,2000.

6. S Rouf, N Nasrin, J Begum, MR Begum, S nahar, A Begum. Emergency Peripartum Hysterectomy- in a Developing Country. J Bangladesh Coll Phys Surg 2002; 20:68-75.

7. Nessa A(1990) Rupture uterus: A study of 46 cases Obstetrics and Gynaecological case records and commentaries for MRCOG examination 1990;276.

8. Catanzarite V, Cousins L, Dowling D, and Daneshmand S, Case report Oxytocin-Associated Rupture of an Unscarred Uterus in a Primigravida. Obstetrics & Gynecology 2006;108:723-725

9. Imseis HM, Murtha AP, Alexander KA, Barnett BD Spontaneous rupture of a primigravid uterus secondary to placenta percreta. A case report. J Reprod Med. 1998 Mar;43(3):233-6.

10. Nagy, P.S. (1989) Placenta Percreta induced uterine rupture and resulted in intraabdominal abortion. Am J. Obstet. Gynecol.,161, 1185-1186.

11. Langton J, Fishwick K. Kumar B.and Norosu,E.C.(1997) Spontaneous rupture of Unscarred gravid uterus at 32 weeks gestation. Hum Reprod. 12.2066-2067.

12. Wang P H,Chao H.T, L.L.and Yuan, C.C,(1999). Primary repair for corneal rupture occurred in a 21-gestational weeks pregnant woman. Hum. Reprod. 14, 1894-1895.