Maternal & Foetal out Come In Rupture of Uterine Scar During Term Labour

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Abstract:

Objective:

1. Determine the maternal morbidity and mortality associated with uterine rupture.
2. Observe the foetal outcome associated with uterine rupture.

Study Design: Case Series

Place & Duration Of Study: All gynecological and obstetrical unit of Liaquat University Hospital, Hyderabad for two years Study with effect from 01-01-2006 to 31-12-2007

Methodology: 50 patients diagnosed to be ruptured of uterine scar during term labour were included in this study on the basis of non probable-Purposive sampling. These patients were diagnosed by clinical examinations and diagnosis was confirmed on laparotomy after resuscitation and relevant investigations.

Results: The average age of patient was (33) range (20 – 40). Hysterectomy was done in 15 (30%) patients, out of which subtotal hysterectomy was done in 10 cases (20%) and total hysterectomy in 5 patients (10%). Repair was done in 35 patients (70%). Operative and post operative complications. Fifteen patients (30%) developed sound infection. Five patients (10%) developed severe peritonitis. Three patients (6%) developed vesico vaginal fistula. Two patients (4%) developed pneumonia. One patients (2%) developed renal failure due to hemorrhage. One patient (2%) developed generalized sepsis. One patients (2%) developed thromboembolic complication. Two maternal deaths (4%) occurred were due to severe maternal hemorrhage.
48 babies (96%) were stillbirths.

Conclusions: Rupture of gravid uterus is a life threatening emergency requiring immediate surgical intervention with more than 95% feotal deaths and Injudicious use of oxytocin by Dais/ TBAS was the most common cause of ruptured uterus.

High parity, illiteracy, ignorance coupled with inadequate maternity service, lack of antepartum and intraprtum care, prior caesarean delivery were identified as risk factors for uterine rupture, its occurrence is usually associated with considerable maternal and fetal mortality and morbidity.

Keywords: Uterine Rupture, Hysterectomy, Traditional Birth attendance.

Introduction:

Rupture of the gravid uterus is an obstetrical catastrophe. It is the separation or disruption of uterine wall with fatal consequences for both mother and foetus.

Incidence of uterine rupture varies among Institutions and countries. Incidence is high in developing countries and is rare in developed countries. Occurrence of uterine rupture is significantly associated with grand multiparity, scarred uterus, lack of antenatal care, unsupervised labour at home. Low socioeconomical status of patients, induction with oxytocin or prostaglandin preparations, dysfunctional labor, and even previous perforation of the non-pregnant uterus by curettage, hysteroscopy, metroplasty, and myomectomy[1,2].

Patients with uterine rupture present with abdominal pain and there is usually some vaginal blood loss, which may be slight, contraction cease, foetal rate pattern become abnormal[3]. Diagnosis of rupture of uterus in majority of cases is made by clinical assessment alone as these patients present as acute emergency. Continuous cardiotocography with intrauterine pressure measurements may help to identify[3]. Rupture of gravid uterus requires an immediate laparotomy whether a hysterectomy or a repair is required depending on age, parity, cultural background, general condition of patients, presence of infection and type, site and extent of rupture[4]. In foetus, rupture can cause sudden severe bradycardia leading to intrauterine death. If saved miracously then low apgar score with long term neurological sequelae. Hemorrhage, disseminated intravascular coagulation, sepsis, shock, caesarean hysterectomy and later genitourinary fistulae are gave maternal complication of rupture uterus[4].

Rupture of uterus is avoidable by proper education, training of patients and traditional birth attendants (Dais) and by providing effective family planning service, transportation, diagnostic facilities and by reducing the unnecessary caesarean section[5]. Patient with scarred

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uterus should be education to have regular antenatal check-up and hospital delivery in next pregnancy[6]. Prognosis in ruptured uterus depends on prompt diagnosis, skilled anesthetic and intensive care facilities. As uterine rupture is an obstetrical emergency with grave consequence, the purpose of this study is to report rate of different maternal and foetal complications with a view to draw conclusion aimed at improving our management. Efficient pre-operative monitoring and post-operative care.

Methodology:

The objectives of the study are to:

5. Determine the maternal morbidity and mortality associated with uterine rupture.
6. Observe the foetal outcome associated with uterine rupture.

Study Design:

Cases series

Setting:

The study has conducted in all patients diagnosed as rupture of uterine scar and admitted in all gynecological and obstetrical unit of Liaquat University Hospital, Hyderabad.

Duration:

Two years Study with effect from 01-01-2006 to 31-12-2007.

Sample Size:

50 patients diagnosed to be rupture of uterine scar during term labour.

Sample Technique:

Non-probable purposive.

Inclusion Criteria:

Uterine scare rupture during term labour.

Exclusion Criteria:

Uterine rupture before term.

Uterine scare other than caesarean section.

Data Collection:

All patients who present with rupture of uterus scare after previous caesarian section at term were included in this study at all gynecological and obstetrical emergency wards of Liaquat University Hospital, Hyderabad. These patients were given appropriate information regarding their inclusion and participation. Provisional diagnosis of uterine rapture was made on history (Severe abdominal pain cessation of contractions) and clinical examinations (Signs of shock, easily palpable foetal pats, irregular are absent foetal heart sound, bleeding pervaginal), diagnosis was confirmed on laparotomy after resuscitation and relevant investigations. Surgical intervention (repair or hysterectomy) depended upon general condition of the patients, age, parity and extend of tear. Operative findings foetal and maternal outcome were recorded on specially designed proforma.

Results:

During 2 years of this study period at Liaquat University Hospital, Hyderabad 50 patients of uterine rupture were diagnosed and managed.

Average Age:

The average age of patient was (33) range (20 – 40). Four patients were aged 20 – 24, ten were 25 – 29, Sixteen were 30 – 34 and twenty were 35 – 40

Booked / Unbooked Cases:

Out of 50 patients 44 (88%) were unbooked and 6 (12%) were booked.

Parity Distribution:

Twenty three (46%) were in parity groups 1-2 while twenty four (48%) in parity group 3 – 4, three (6%) were grand multiparous.

Causes for ruptured uterus:

Twenty five (50%) had uterine rupture due to injudicious use of oxytocin by Dai/TBAS.

Twenty patients (40%) had uterine rupture due to prolonged or obstructed labor.

Two patients had uterine rupture due to trials for labour.

Foetal anomaly (Hydrocephalus) was the cause in only one patients (2%).

Forceps application leading to extension of cervical rear was the cause in two patients.

Types of Operation Done:

Hysterectomy was done in 15 (30%) patients, out of which subtotal hysterectomy was done in 10 cases (20%) and total hysterectomy in 5 patients (10%).

Repair was done in 35 patients (70%). As shown in

Maternal complications:

Operative and post operative complications

Fifteen patients (30%) developed sound infection.

Five patients (10%) developed severe peritonitis.

Three patients (6%) developed vesico vaginal fistula.

Two patients (4%) developed pneumonia.

One patients (2%) developed renal failure due to hemorrhage.

One patient (2%) developed gereralized sepsis.

One patients (2%) developed thermboembolic complication.

Maternal Deaths:

Two maternal deaths (4%) occurred were due to severe maternal hemorrhage.

Perinatal deaths:

48 babies (96%) were stillbirths. Among two babies (4%) alive. One suffered sever asphyxia neonatorum.

Discussion:

Uterine rupture, whether in the setting of a prior uterine incision or in an unscarred uterus, is an obstetric emergency with potentially catastrophic consequences for both mother and feotus[7]. In the developed countries, where level of obstetric care is adequate; its occurrence is rare. These countries have institutions that have in-house obstetric, anesthesia and surgical staff in which close monitoring of foetal and maternal well being is available and therefore uterine rupture does not result in major maternal morbidly and mortality or in neonatal mortality[8]. The same unfortunately cannot be said for developing countries including Pakistan, where poverty, ignorance and illiteracy, aversion to abdominal delivery, traditional practices and grand multiparity make this serious complication a common occurrence.

Importance of this 2 years study is to reduces the complications which can develop as a result of this obstetric emergency and to suggest ways to reduces the incidence of uterine rupture in the concerned population. In this study 88% patients did not receive antenatal care. This is same to the figure of 88% unbooked cases reported by Humaira Saeed Malik[9]. In this study 54% of women are grand multiparous and 46% were of parity below 2. This is consistent with Landon MB at all [10]. They stressed that Multivariable analysis confirmed that multiple prior caesarean delivery was not associated with an increased risk for uterine rupture.

Injudicious use of oxytocin by Dais/TBAS followed by prolonged and obstructed labors were the commonest etiological factor identified from this study. This is same described by Alia Bashir at all [11]. Khan s [12]. These common etiological factor are again comparable with Konje and Odukoya study conducted in Nigera [13]. And by Sachdev and Aftab Munir [14].

In this series 30% of patients underwent hysterectomy, out of which subtotal hysterectomy was done in 20% cases and total hysterectomy was done 10% of cases. Repair was possible in 70% of cases. This is comparable to study conducted Humaira Saeed Malik[9]. In contrast to chatterjee SR [15], Ozdemir I [16] described more hysterectomies.

In this study, the commonest complications being wound infection, peritonitis, Vesico Vaginal Fistula and generalized sepsis. Vesico vaginal fistula developed in 6% of cases as a result of prolonged and obstructed labors. This is same described by ojenuwah SA [17] in his study. The chief factors influencing prognosis were early presentation of patients, promptness in diagnosis, promptness and efficacy of treatment, the amount of hemorrhage, the presence and absence of infection whether or not rupture took place through a caesarean scare. The prognosis was best in the rupture of a caesarean section scare [18, 19].

In our series maternal mortality 4%. Unbooked multigravida with scarred uterus was at much greater risk. It is higher 30% described by chatteryjee SR [15], but it is about 0% described by Guise JM [20]. Fetal mortality was 96% while Humaira Saeed Malik[9] Reported 82% Fetal Mortality while Alia Bashir[11] Reported 71% fetal mortality.

This high maternal fetal mortality rate is a reflection of poor health services available in our country.

Most of etiological factors were preventable by good antenatal care and outcome improved by early referral.

Conclusion:

Rupture of gravid uterus is a life threatening emergency requiring immediate surgical intervention with more than 95% feotal deaths and Injudicious use of oxytocin by Dais/ TBAS was the most common cause of ruptured uterus.

High parity, illiteracy, ignorance coupled with inadequate maternity service, lack of antepartum and intraprtum care, prior caesarean delivery were identified as risk factors for uterine rupture, its occurrence is usually associated with considerable maternal and fetal mortality and morbidity.

The Following suggestions should be considered to avoid this catastrophe emergency.

1. The women should be educated repeated through TV, Radio & Newspaper, Poster, Pamphlets to get regular antenatal visits.
2. They should be advised to follow their obstetrician's advice.
3. There should be a awareness against quacks/ untrained Dias.
4. Without a rise in the awareness of general society such complications are not likely to come down.

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