

RUPTURED UTERUS: A PROSPECTIVE STUDY IN EASTERN INDIA

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ABSTRACT

INTRODUCTION: Rupture of the gravid uterus is a grave obstetric complication that is associated with high maternal and perinatal mortality rates. In India, the incidence remains high and continue to increase because of poverty, illiteracy, unavailability of manpower, poor supply of medical equipment and consumables, and poor health.

care funding.

OBJECTIVE: To study the cases of rupture uterus in pregnancy by evaluating the risk factors, type and site of rupture, management, and maternal and perinatal outcome. **METHODS:** A 3-years prospective observational study from December 2017 to December 2020 of all cases of ruptured uterus at MKCG Medical College, Berhampur, Odisha, India. The relevant history, intra-operative findings and postoperative morbidity and mortality was documented and analysed.

RESULTS: A total of 150 cases of ruptured uterus from 29640 deliveries were recorded, giving an incidence of 5 in 1000. Predisposing or aetiological factors for rupture were prolonged labour (10.66 percent), grand multiparity (50 percent), injudicious use of oxytocin (4.66 percent), uterine scar (21.33 percent), obstetric manipulation (6 percent) and abnormal lie (7.33 percent). All the patients had surgery, of which 92 (61.33 percent) had total abdominal hysterectomy, 58 (38.66 percent) had repair of the rupture and bilateral tubal ligation. No maternal deaths occurred with in the study period.

CONCLUSION: Ruptured uterus remains a problem India, with primary health centres and mission houses being identified as major contributors to this condition. They primarily failed in the recognition of abnormalities in the antepartum and/or intrapartum periods, with delays in referral and the injudicious use of oxytocin.

Keywords: grandmultipara, prolonged labour, ruptured uterus

INTRODUCTION

Rupture of the gravid uterus is a grave obstetric complication. It is associated with high maternal and perinatal mortality rates. Even where the patients survive, their reproductive function is abruptly terminated, and recovery is often prolonged and turbulent(1-7). The incidence of ruptured uterus varies in different parts of the world. (8,9).It is still a major public health problem in developing countries. Most cases of uterine rupture that occur in most developing countries are due to ignorance, quackery, and maldistribution, maladministration or unavailability of essential medical supplies. In developed countries this complication is due to iatrogenic causes of poorly-supervised labour in the scarred uterus, and the use of prostaglandins and its analogues in induction of labour(3-5,7-9). In India , the incidence of uterine rupture remains high and continues to increase because of poverty, illiteracy, unavailability of manpower, poor supply of medical equipment and consumables.

AIM: In this study, we aimed at estimating the current incidence of ruptured uterus in our locality and its contribution to maternal and perinatal mortality. We also highlight the changing aetiology of this preventable problem.

METHODS

It is a prospective study of patients with uterine rupture attending MKCG Medical Collegel, Berhampur a rural medical college in eastern India. The study period of 3 years, from December 2017 to December 2020 is chosen. All patients attending obstetric emergency care unit and labour room during the study period were included in the study. Cases of suspected rupture uterus were isolated from the total number of cases attending out patient department. Their relevant history documented. Intra operative findings regarding site and type of rupture, mode of management and associated injury to adjacent organs were noted. Postoperative maternal and neonatal morbidity and mortality was studied.

RESULTS:

A total of 150 cases of ruptured uterus from 29640 deliveries were recorded, giving an incidence of 5 in 1000. Predisposing or aetiological factors for rupture were: prolonged labour (10.66 percent), grand multiparity (50 percent), injudicious use of oxytocin (4.66 percent), uterine scar (21.33 percent), obstetric manipulation (6 percent) and abnormal lie (7.33 percent)(Table 1). All the patients had surgery, of which 92 (61.33 percent) had total abdominal hysterectomy, 58 (38.66 percent) had repair of the rupture and bilateral tubal ligation. In 19 cases bladder injury were found and repaired. Intestinal injuries found in 2 cases and operated. 78% cases presented in shock and 4% cases developed DIC.(Table 2).

DISCUSSION

The incidence of ruptured uterus 5 in 1000 deliveries in this study . This shows that ruptured uterus is decreasing but is still a major contributor of maternal morbidity and mortality in our environment. This may be a reflection of the overall utilisation of obstetric health facilities which have been shown to be on the decline.

The majority of patients in this series had received care either antenatally and/or intrapartum at primary health care centres. In spite of recognisable risk factors

present in almost all of them in the antenatal period, they continued care in these centres and proceeded to labour. Maximum cases had prolonged labour and yet this was either not recognised, or recognised and managed erroneously by the administration of enormous doses of oxytocin. The injudicious use of oxytocin was found to be a significant predisposing factor in this series. This, as well as the manner, route and doses administered in some patients suggest a defect in the knowledge, attitude and practices associated with this potentially dangerous drug. In India, the primary health care centres are manned by a category of semi-skilled health workers referred to as community health extension workers. They receive basic training in the conduct of normal deliveries and the recognition of high-risk pregnancy for prompt referral. However, emerging reports have consistently shown that they cause less benefits. Most patients (61.33%) had hysterectomy done while (38.66%) had repair and bilateral tubal ligation. Therefore, over two third of patients lost their reproductive and/or menstrual function. The rest could only reproduce at immense risk. Ruptured uterus therefore has grave socio-cultural implications, especially in a society where these functions are considered the very essence of womanhood. For a preventable condition, the morbidity and mortality associated with ruptured uterus remains unacceptably high. Ruptured uterus remains a problem in India.

The primary health care providers primarily fail in the recognition of abnormalities in the antepartum and/or intrapartum periods, with delays in referral and the injudicious

use of oxytocin. The utilisation of the antenatal risk scoring index and the partograph are recommended as tools in recognising deviations from normal,

hence facilitating early referral. Continued education of staff providing care in these centres is necessary. Referrals could also be facilitated by the provision

of a network of ambulance services. The above suggestions would require close supervision and monitoring. Hence, we recommend a pyramidal health

structure such that primary health centres would be directly responsible to secondary health centres, who in turn would be directly responsible to tertiary health centres.

We also recommend prohibition of the unsafe prescription of oxytocin. Health education of women in the reproductive age is also required, especially pertaining to risk status

TABLE 1: PREDISPOSING FACTORS OF RUPTURED UTERUS

Predisposing factors	No of cases	Percentage
Prolonged Labour	16	10.66%
Grand multiparity	75	50%
Previous uterine surgery	32	21.33%
Abnormal lie	11	7.33%
Obstetric manipulation	9	6%
Injudicious use of oxytocin	7	4.66%

TABLE 2: COMPLEICATIONS AND PROCEDURES DONE IN PATIENTS

Complecations associated	No of cases	Percentage
Bladder injury	19	12.66%
Bowel injury	2	1.33%
Shock	117	78%

DIC	6	4%
Prolonged hospital stay	70	46.66%
Peripartum hysterectomy	92	61.33%
Uterine artery ligation	12	8%
Repair of ruptured uterus	58	38.66%

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