Rupture of Gravid Uterus Following Road Traffic Accident. Literature Review and Case Report

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Abstract

Rupture of gravid uterus is a major obstetrics emergency that contributes significantly to high maternal and perinatal morbidity and mortality. Risk factors includes oxytocin use, uterine scar, obstructed labour, low socio economic status, high parity, lack of antenatal care and as a result of trauma following road traffic accident. Mrs HD was a 33 years old unbooked grandmultiparous woman referred from jigawa state at gestational age of about 26 weeks with complaints of generalized abdominal pain distention, absent fetal movement and vaginal bleeding for 2 days following road traffic accident. A diagnosis of Posterior uterine rupture extending from the fundus measuring about 12cm in length, secondary to blunt abdominal trauma was made. She had exploratory laparotomy, total abdominal hysterectomy with conservation of the ovaries.

Introduction

Rupture of gravid uterus is a major obstetric emergency that exposes both the mother and the fetus to grave danger1. It is an entity that clearly exposes the inequities and precarious state of our health care system and the failure of society at large to accord the lives of women the value it deserves 1,2 .The condition demonstrates the failure of developing countries to replicate the success story of developed countries in terms of improving the quality of life of women and significant reduction in maternal mortality despite all the programmes on ground2. It has the potential to impact negatively on the attainment of the Millennium Development Goals 4 and 5 because it contributes significantly to maternal and fetal mortalities which these Goals seek to reduce2. The incidence of ruptured uterus varies from place to place. An incidence of 1 in 210 deliveries was reported from Ilorin3, 1 in 188 deliveries from Enugu4, 1 in 258 deliveries from Porthacourt5, 1 in 278 deliveries from Kano6, 1 in 74 deliveries from Sokoto7, 1 in 124 deliveries from Ghana8 while 1 in 7440 deliveries is reported from Industrialised countries9. It accounted for 31.9% cases of maternal mortality in south eastern Nigeria10, 38% cases of maternal mortality and 98 to 100% cases of perinatal mortality in Sokoto and Bida respectively7,11. Risk factors for ruptured uterus differ from developed to developing countries. In developed countries where women are supervised in labour, rupture usually occur in those women exposed to oxytocin or have scarred uterus12, whereas in developing countries it is associated with unbooked status, grandmultiparity, prolonged obstructed labour and poor supervision in labour3,6.

Case Report(s)

A 33years old G6P5+0A3 who was unsure of her last menstrual period, but said to be about 26 weeks of gestation. She was referred from jigawa state on account of blunt abdominal injury following road traffic accident. She was involved in a road traffic accident two days prior to presentation when the motor bike on which she was a passenger had head on collision with an on-coming vehicle. The motor cyclist died in the Hospital few hours after the incident. She noticed progressive abdominal swelling and stopped feeling fetal movement. She also started bleeding per Vaginam which was scanty and dark coloured. There was no history liquor drainage, or fainting attacks. On examination she was found to be a young woman, acutely ill looking and severely pale. Her pulse rate was 108 beat per minute, blood pressure of 85/60mmHg. The abdomen was moderately distended with supra pubic tenderness and guarding. The uterus was difficult to palpate. Pelvic examination revealed normal external genitalia. The cervix was closed, 3cm long, firm and posterior. There was fullness in the pouch of douglas and the examining finger was stained with blood. An assessment of ruptured uterus secondary to blunt abdominal trauma was made. She was admitted into gynaecology ward, intravenous access was secured with wide bore cannular, samples were taken for The packed cell volume was 16%, while urea, electrolytes and creatinine were normal and 4 pints of blood were grouped and cross matched. She was resuscitated with intravenous fluid and commence on intravenous antibiotics (Augmentin and metronidazole). She was counselled for exploratory laparotomy and informed consent was obtained. The Theatre and Anaesthetists were informed. Surgeons were also invited. She had exploratory laparotomy with...
total abdominal hysterectomy and conservation of both ovaries. Intra operative findings were 1.5 litres haemoperitoneum, macerated male fetus extruded to the peritoneal cavity weighing 800 grams. Posterior uterine rupture extending from the fundus measuring about 12cm in length, normal tubes and ovaries bilaterally. Estimated blood loss from the surgery was about 500mls. She was transfused with 2 pints of blood in the during the procedure and further 2 units postoperatively. post operatively period was uneventful. She was discharged on the 7th post operative day. She was seen 2 weeks after discharge and has no new complaint. Further review at after 6 weeks was uneventful.

Discussion

Rupture of a gravid uterus may complicate pregnancy, labour or delivery with feto maternal mortality and morbidity. In most developing countries ruptured uterus is still a common obstetric problem because of wide spread poverty, high women illiteracy rate and poor or no maternal health care services especially in the rural areas where the majority live. Rupture of the uterus in pregnancy is a rare event. It occurs in a patient with previous classical caesarean section, patient with pregnancy in an accessory horn of a double uterus, following uterine manipulations in late pregnancy like external cephalic version especially in patients with previous scar following hysterotomy, and also following road traffic accidents. Mrs HD was referred with complain of progressive abdominal swelling, absent fetal movement and bleeding per vaginum following road traffic accident. She was diagnosed as a case of ruptured uterus with impending shock. The principles of managing a patient with ruptured uterus involve intensive resuscitation, use of broad spectrum antibiotics, emergency laparotomy and adequate post operative care. Mrs HD was admitted into labour ward and resuscitated with intravenous fluid. She was given antibiotics and planned for exploratory laparotomy. The surgical options at laparotomy are hysterectomy, repair or repair and sterilisation. The choice of surgical procedure depends on the type and extent of the rupture, skill of the surgeon and the clinical state of the patient. The correct procedure in each individual case is the one which is shortest and quickest with least shock and thus get the patient off the operating table in the best condition. Mrs HD had total abdominal hysterectomy because she is a grandmultiparous woman with extensive posterior rupture that is associated with complications such as adhesion formation and subsequent intestinal obstruction. Other complications of ruptured uterus includes infection, anaemia, puerperal pyrexia, genital tract infection, wound sepsis, obstetric palsy, urogenital fistula and repeat uterine rupture in subsequent pregnancy if uterine repair without tubal ligation had been done. Similar cases of ruptured uterus following road traffic accident with additional complications such as pelvic fracture and head injury were also reported. Mrs HD was discharged on the 7th post operative day and had no complication.

Conclusion

Rupture of the gravid uterus remains one of the most disastrous complications of labour. It may complicate pregnancy, labour or delivery with feto maternal mortality and morbidity and also following road traffic accidents. High index of suspicion should be exercised with adequate resuscitation prior to surgery. The management in each case is individualised employing the shortest and quickest technique to get the patient off the operating table in the best condition; in this case hysterectomy and conservation of the ovaries was the operation of choice.

Authors contribution(s)

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