

A Case of Rupture Uterus with Compound Presentation

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1. CASE DESCRIPTION

A 24 year old G2P1L1 patient with postdated pregnancy came in labor pain to my clinic on 23/3/2013 at 12:30 P.M. She had one full term vaginal delivery two years ago. Postpartum period was uneventful. No history of manual removal of placenta following delivery or of any previous miscarriages and IUCD insertion thereafter. And also no history of any fall or any uterine anomaly detected in the previous ultrasound report. On examination, she was stable. Pallor was absent. Her vital signs were within normal limits. No abnormality was detected on cardio-vascular and respiratory system examination. Abdominal examination: Abdomen was longitudinally distended. The fetus was in a longitudinal lie, uterus was mildly contracting. Symphysiofundal height was 36cms. No abdominal tenderness noticed. FHR was 142/min. On vaginal examination: cervix was anterior, 2cm dilated, 25% effaced, membrane was present, head was at -1 station, pelvis was adequate for vaginal delivery. She was advised admission immediately but she reported to the hospital at 5:40 P.M. On examination, after admission, uterus was mildly contracting, no abdominal tenderness, FHR 140/min, head was fixed. On P/V examination: cervix was 3-4cm dilated, 50% effaced, head at 0 station. 2.5 units of Syntocinon was started in 5% Dextrose at the dose of 6 drops per minute. ARM was done at 6:10 P.M. At around 7:30 P.M. on P/V examination, hand was felt at the side of the fetal head. Cervix was 5-6 cm dilated, well effaced.

In view of compactness of fetal hand in the pelvis, L.S.C.S. was advised. But patient and the party refused the same. Immediately, Ultrasound was done which showed single, live fetus of 38-39 weeks of gestation with cephalic presentation with hand at the side of the fetal head. At 9:10 P.M., FHR dropped to 70/min. In spite of explaining the prognosis of fetus and mother, patient and the party refused L.S.C.S. In the meantime the FHR was not able to be recorded and on P/V examination, cervix was fully dilated, head at +1 station. Patient started bearing down continuously. As all indication for imminent delivery was there, Episiotomy was given. Suddenly she collapsed with cessation of uterine contraction. There was no vaginal bleeding. Diagnosis of Abruptio placenta or rupture of uterus was made. She was taken for laparotomy immediately.

Per operative findings: Hemoperitoneum of around 1500 ml noticed. A dead female fetus was delivered from the peritoneal cavity weighing 2.8 kg. There was a linear vertical tear on the posterior wall of uterus extending from the lower uterine segment to the upper uterine segment. Placenta removed completely. In view of linear tear and desire of future conception, tear was sutured with No 1. Vicryl in 2 layers. After maintaining complete hemostasis abdomen closed in layers. Since there was bradycardia throughout surgery she was shifted to higher centre. Later on bleeding per vagina was noticed which may be due to intermittent contraction and relaxation of uterus or may be due to ongoing DIC. Patient was taken for hysterectomy on 24.03.2013 at 11.45 A.M. Totally 25 pints of blood, 25 pints of FFP and 10 pints of platelet was transfused. Later on patient had multi organ failure with septicemia and DVT which was well managed by various specialities. She was ambulant and discharged on 16.05.2013. Later on she did not come to the clinic and was lost to follow up.

2. INTRODUCTION

Rupture of uterus is defined as disruption in the continuity of all uterine layers (endometrium, myometrium & serosal) any time beyond 28 weeks of pregnancy.

The overall incidence of uterine rupture is 1 in 2,000 deliveries. Improved obstetric care reduces the rupture from obstructed labor but there has been increased prevalence of scar rupture following increased incidence of caesarean section over the years¹. Maternal Mortality reported varies from 8-25% which is far higher in the spontaneous rupture group rather than in the scar rupture group.

Compound presentation is defined as an extremity prolapsed beside the main presenting fetal part. The reported incidences ranges from 1-377 to 1-1213 deliveries. The combination of an upper extremity and the vertex is the most common type of compound presentation as has been observed in the present case.

Perinatal mortality is as high as 80-95% in the spontaneous rupture group but only 15-20% in the scar rupture group. A fetal mortality rate of 4.8% has been noted if no intervention is required, compared with 14.4% with intervention other than caesarean delivery².

Although maternal age, race, parity and pelvic size have been associated with compound presentation, prematurity is the most common consistent clinical finding.

3. DISCUSSION

Uterine rupture is traditionally classified into complete and incomplete varieties depending upon whether or not the serous coat of the uterus is involved. But, this classification is not clinically relevant.

Classification based on etiological factors³:

Table: 1

Spontaneous rupture	Scar rupture	Traumatic or iatrogenic rupture	
Rupture of an unscarred uterus due to obstructed labor of delayed second stage due to the following factors:	The scars commonly encountered are due to following operations:	As a result of surgical or medical intervention:	
		Surgical Intervention	Medical Intervention
Cephalo pelvic disproportion Malpresentations particularly brow, shoulder or persistent occipito posterior Congenital anomalies particularly hydrocephalous, or rarely fetal monsters Congenital anomalies of the uterus, particularly pregnancy in an undeveloped uterine horn. Soft tissue obstruction	Lower segment caesarean scar Classical caesarean section or extension of lower segment incisions Hysterotomy scar Myomectomy scar Metroplasty scar Scar of previous rupture uterus Scarring following Previous uterine Perforation or Vigorous curettage Placenta increta Placenta percreta or perforating vesicular mole	Internal version Difficult forceps delivery Breech extraction Difficult manual removal of placenta Destruction operations Perforation by intra uterine pressure monitoing catheter	Labor stimulation by oxytocin or prostaglandins Intra-amniotic instillation like prostaglandins or amnioinfusion

Caesarean section scars alone account for more than one half of all raptures. Successful vaginal delivery following previous caesarean section provides no immunity from the risk of rapture². The other two principal etiological groups are spontaneous rupture of the unscarred uterus and traumatic or iatrogenic rupture.

Spontaneous rupture of uterus during pregnancy is an extremely rare occurrence. Rupture has been attributed to a previous curettage either of the puerperal uterus or during legal or criminal abortion and previous perforation of the uterus by an IUCD.

Rupture of a previously intact uterus at the time of labor most often involves over stretched lower uterine segment where it extends transversely in to the broad ligament or obliquely into the body of uterus. Sometime initially rent will extend downwards through the cervix into the vagina. When the rent extends laterally the tear often involves the uterine artery resulting in both vaginal bleeding and broad ligmental hematoma.

Uterine rupture is associated both with fetal and maternal clinical manifestation. Fetal bradycardia with or without preceding variable or late deceleration is the most common finding occurring in 10 to 33% of cases. In some circumstances, a loss of fetal station in labor may occur. Maternal clinical manifestation are variable and may include acute vaginal bleeding, constant abdominal pain or uterine tenderness, change in uterine shape, cessation of contractions, hematuria and signs of hemodynamic instability. Laparotomy will demonstrate complete disruption of the uterine wall with bleeding and partial or complete extravasation of the fetus in the maternal abdomen.

As compared to scar rapture, the margins of a spontaneous rupture are irregular and ragged leading to a greater difficulty in suturing. Hysterectomy is the treatment of choice. In present case rupture of uterus was not ragged, and there was no active bleeding. In view of patient's general condition and desires of future conception, hysterectomy was withheld initially.

4. COMPOUND PRESENTATION

The diagnosis should be suspected with any arrest of labor in the active phase or failure to engage during active labor. Diagnosis is made by vaginal examination by discovery of an irregular mobile tissue mass adjacent to the larger presenting part. Recognition late in labor is common and as many as 50% of persisting compound presentation is not detected until second stage. When intervention is necessary caesarean delivery appears to be the only safe choice which is required in 2-25% of compound presentation³. In the present case it was detected in first stage of labor and she was left alone for the spontaneous correction, since, the fetal hand was jammed between fetal head and pelvis. Manual reposition also tried. Requirement of LSCS was promptly informed to the patient and the party, but they were not willing for LSCS and were insisting for attempting normal delivery. Due to their negligence the uterus was ruptured leading to fetal death, DIC, removal of Uterus, multi organ failure and DVT.

Overall rate of perinatal mortality in compound presentation is 93 per 1000. Fetal risk in compound presentation specially associated with birth trauma and cord prolapse. Common fetal morbidity includes neurologic and musculoskeletal damage to the involved extremity. Maternal risk includes soft tissue damage and obstetrical laceration. However a simple compound presentation (Ex: Hand with vertex) may be allowed to labor if progressing normally with reassuring fetal status.

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