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Silent Pre Labour Rupture of Scared Uterus Managed by Supracervical Hysterectomy. Case Report of a Client Admitted at Mbeya Regional Referral Hospital in Mbeya city, Tanzania

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Abstract: A 30 years-old woman gravida 4, para 3, living 3 who had two previous cesarean section scars presented with acute onset lower abdominal pain and per vaginal bleeding at 28 weeks of gestation. She was diagnosed with a ruptured uterus with fetal demise. She was resuscitated aggressively with intravenous fluids before she went for emergency laparotomy. Intraoperative findings: a uterine rupture along the previous uterine scars with haematoma formed to the broad ligament and lateral sides of the uterus. The estimated intra-peritoneal hemorrhage of about 800mls; with protruding fetal head to the peritoneum. A male baby, fresh still birth, weighted 1.6kg was extracted with the extensive uterine rupture. Then Supracervical hysterectomy was done to control the hemorrhage. She was discharged 5 days-later with stable vital signs and followed up for two weeks and found to be recovered and discharged from the clinic.

Keywords: *Silent Pre Labour Rupture of Scared Uterus, Gestation Age of Twenty-Eight Weeks, Supracervical Hysterectomy.*

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I. INTRODUCTION

Uterine rupture can be complete involving even the uterine serosa and normally the fetus is seen dead or partial uterine rupture by which the uterine serosa remains intact, and the fetus may be alive. The overall prevalence of ruptured uterus regardless with the number of scar or scars is approximately 0.5%-1% with reported high rates in the low -and middle income countries (Getnet et al, 2023).The risk of uterine rupture is higher in women with other types of hysterotomies especially if classical cesarean incision was made (1, 2). Studies shows spontaneous uterine rupture at 32weeks was reported in a patient who underwent arterial uterine embolization in the past as a treatment of ectopic pregnancy(2); however in this case a patient had uterine rupture at 28 weeks of gestation age. The identified risk of uterine rupture at this gestation age was present of two prior cesareans, 0.6% and 1.7% for one and two or more previous uterine scars respectively. Therefore, the risk increases as the number of previous scars increases. Although other studies report other factors to be short inter pregnancy interval, single layer uterine closure, prior preterm cesarean, labor induction and augmentation (3). Different studies have reported that uterine rupture was associated with significant

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increase of maternal and featal morbidity as well as mortality.

II. CASE REPORT AND METHODS

A 30 years-old woman gravida 4, para 3, living 3 who had two previous lower segment cesarean section scars presented with acute onset lower abdominal pain and per vaginal bleeding for one hour prior to admission, at 28 weeks of gestation. There was no significant history of presenting illness. During her index pregnancy she had normal hemoglobin, blood pressure, she attended antenatal clinic (ANC), four times and received all the appropriate packages as per Tanzania ANC guideline. However, she delivered her first child vaginally and the other two children were by cesarean section with an interval of 4years apart. There was no complication that occurred to her past pregnancy and all the scars healed spontaneously. She had no surgical or medical condition prior to this event.

On physical examination, Alert, weak, oriented, afebrile, severe pale, not Jaundiced, not dyspoenic, not cyanosed. Vitals sign: Blood Pressure 90/50mmHg, Pulse rate 112beats/min, Respiratory rate 18cycle/min, Temperature 36.7°C, Oxygen saturation 96% in room air. No significant findings on Cardiovascular system and respiratory system examination. However abdominal was distended, moves with respiration, there were generalized tenderness, rebound tenderness and muscle guarding on palpation. Fundal height was not easy to palpate, fetal heart rates were not heard. Liver, Kidney and Spleen were not palpable. Bowel sounds were heard and were normal. The Pelvic examination presented normal external genitalia, healthy cervix posterior, external os closed, with blood clots evacuated. The diagnosis of Hypovolemic shock due to ruptured uterus and intrauterine featal death was made with differential diagnosis of abruptio placenta. Plan was to do immediate emergency explorative laparotomy. She was Blood group O Rhesus positive, Hemoglobin level: 7.0 g/dl, Platelets and other coagulation profile were normal, Biochemical laboratory tests were normal. Patient was given Intravenous fluid Normal Saline and ringers lactate (4 liters) was given fast while the patient was taken to an operating theater. The patient was placed given general anesthesia, a midline incision was made through the old previous incision scars with multiple adhesions encountered but adhesiolysis was done.

Intraoperative findings: a uterine rupture along the previous uterine scars with haematoma formed to the broad ligament and lateral sides of the uterus. The uterine laceration which extended from the fundus toward its lateral sides involving posterior aspects, with 1200mls of intraperitoneal bleeding. The fetal head was protruding into the peritoneum. A male baby, fresh stillborn, weighing 1.6kg was extracted. Placenta and membranes were delivered; Due to extensive uterine rupture/ irreparable uterine rupture, Supracervical hysterectomy was done to control the hemorrhage, both ovaries and fallopian tubes were conserved. Abdomen was closed in layers. Post operation vital signs; Blood Pressure 110/70mmHg, Pulse rate 96 beats/min, Respiratory rate 20cycle/min, Temperature 36.5°C, oxygen saturation 96% in room air. She monitored the ward for 6 days with much improvement, sutures were removed in the 7th day where by the wound was clean and dry. Thereafter, she was discharged home while clinically was stable.

III. DISCUSION

Clinically most uterine ruptures present with features of shock due to internal hemorrhage and fetal parts are easily palpable abdominally, often with absence of fetal heart tones, vaginal bleeding. In the case above patients presented with clinical features of hypovolemic shock and intrauterine fetal death. Other clinical findings were localized tenderness in the supra pubic region, corresponding to the anatomical location of uterine lower segment. This clinical presentation correlates with intra operative findings: the uterine rupture was characterized by tears on previous scar with head protruding through the peritoneum. Though the clinical presentations were not specific to reach the clear diagnosis of ruptured uterus. There were no cardinal signs such as term pregnancy in active phase of labour, persistent tenderness along previous scared uterus, cessation of uterine contractions, featal tachycardia/bradycardia and finally featal death. Unfortunately, in the case report above, there were suddenly silent uterine rupture at 28 weeks, not inactive phase of labour and occurred while the patient was at home and ended up with intrauterine fetal death. In our settings early detection and prevention uterine rupture is a challenge because we are depending more on clinical features. But in other developed countries the use of imaging techniques like ultrasound and magnetic resonance imaging reported to improve the early detection of uterine dehiscence but in the acute setting abnormal fetal heart rate patterns which provide early diagnostic information of hypovolemic shock (5). Ultrasound is indicated to measure the lower uterine segment thickness (more than 3.5mm thickness) at gestation age between 36 and 38 weeks (7), in the case above it was only 28weeks of gestation even before the formation of the lower segment.

Management of patients with ruptured uterus involves resuscitation and surgical management. In the presented case above, the patient was treated by supracervical hysterectomy due to difficulties to control haemostasias (4). Also, because she had uterine laceration which extended from the fundus toward its lateral sides involving posterior part and was difficult to repair. There were some challenges in management, especially on the criteria to be used to decide which group of patients to undergo hysterectomy and which one to repair their uteruses. Some studies in the developed countries reported some of the indications for hysterectomy to be indicated when the uterine defect is irreparable or in the setting of uncontrollable maternal hemorrhage. While lateral ruptures and very large ruptures require ligation of the adnexal vasculature, and often hysterectomy(4). Again the other approach will depend on the site and extent of the rupture, condition of the patient, patient's parity and experience of the surgeon(5, 6).

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IV. CONCLUSION

Silent uterine rupture can occur even at lower gestation age like in the case above it occurs before labor onset at gestation age of 28 weeks. This means pregnancy women with two or more previous cesarean scars should be monitored closed from antenatal clinic and they should be informed on the early danger of having pregnancy with two or more uterine scars. This is because the signs and symptoms of uterine rupture are none specific especially before term pregnancy and active labour , making diagnosis challenging. Delay to diagnose and initiate appropriate management (resuscitation and laparotomy) causes significant maternal or featal mortality and morbidity. For a better outcome, risk assessment needs to be considered particularly for the patients from low-resource settings and possibly counselling on having not more than two previous scars to be advocated.

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AUTHORS' CONTRIBUTIONS

GAR conceptualized and designed the case report, supervised the data collection, analyzed the data, interpreted the results, and drafted the manuscript. AMM, SLV and LEL supervised and designed the study, interpreted the results, and drafted the manuscript. All authors read and approved of the final manuscript.

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