

## Unusual Presentation of Preterm Uterine Rupture; Placenta Accreta- Three Case Reports

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**Abstract:** We herein report three cases of preterm uterine ruptures. The etiology of ruptures was placenta accreta in various forms like; placenta increta and percreta. All cases presented with abdominal pain and vaginal discharge. Though uterine rupture secondary to adherent placentation had been observed in multiparous women with previous history of cesarean sections, myomectomy, dilatation and curettage and infection, in this series a primigravida without any previous associated risks had uterine rupture at 26 weeks gestation due to placenta increta. All patients' undergone hysterectomy as life saving procedure. No post op morbidity was observed. Only one baby survived out of three cases. Placenta accreta should be included in the differential diagnosis when a gravida presents with acute abdomen and vaginal discharge and early diagnosis with timely decision for laparotomy followed by hysterectomy can lead to successful management. A low resource country where modern techniques like uterine emboli is not available or not affordable, hysterectomy is a way out option for life saving procedure in placenta accreta.

**Keywords:** Abnormal placentation, placenta increta, placenta percreta, primigravida.

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### INTRODUCTION:

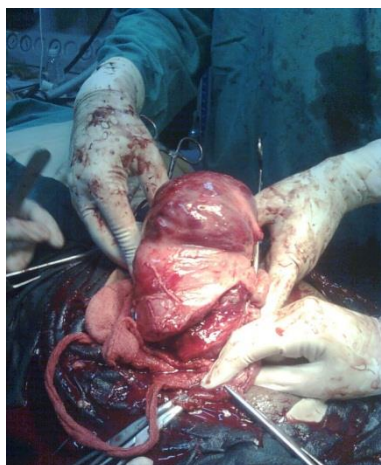
Abnormally implanted placenta with undue myometrial adherence and penetration is an important clinical entity with life threatening feto-maternal consequences. This pathology is known as placenta accreta and classified according to the degree of invasion of placental villi into myometrium. When placental villi are embedded directly into myometrium in the absence of decidua it is called placenta accreta vera; in placenta increta, placental villi are found deeper inside the myometrium; while in placenta percreta, the villi have penetrated the entire uterine wall and extended up to the uterine serosa [1]. The associated obstetric complications with this pathology range from severe postpartum hemorrhage (PPH) to uterine perforation and rupture with attending sequelae [2]. We report here three cases of placenta accreta and discuss their line of management with clinical outcome, to stress upon the unusual modes of presentation and importance of early diagnosis.

### CASE REPORTS:

#### Case 1-

A 25 year old, second gravida at 31 weeks four days gestation presented with chief complaints of leakage of liquor amnii off and on since three months and acute pain abdomen since two days with loss of fetal movement. Obstetric history elicited a term

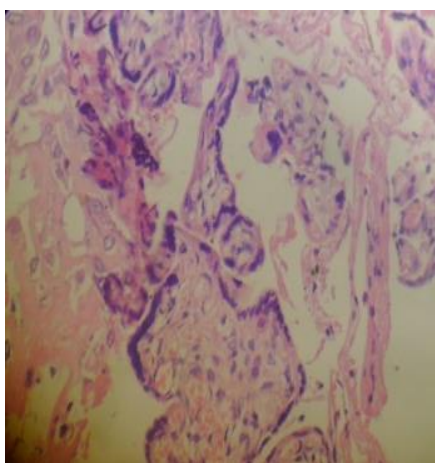
delivery by cesarean section three years back. Her antenatal investigations were within normal limits. On general examination vitals were stable. Obstetrical examination revealed a uterus corresponding to 32 weeks gestation with fetal bradycardia and liquor was seen dribbling actively from the cervix. Ultrasonography showed reduced liquor amnii with a living fetus at 31 weeks gestation and no other abnormality was mentioned. Cesarean section was planned for obstetric indication, and on entering peritoneal cavity to our surprise we found collected blood and dehiscence in the fundus of the uterus (Fig-1). A 1200gm baby was delivered through the lower segment with an Apgar score of 5 at 5 minutes. Placenta was morbidly adherent to the dehiscence site and after a few failed attempts at removal of the same, placenta accreta was suspected and we went for hysterectomy as a life saving procedure. Intra-operative blood loss was approximately 2000ml. Three units of blood were transfused post operatively. Postoperative period was uneventful although the baby later expired due to septicemia and prematurity. Histopathology confirmed the diagnosis to be placenta increta.



**Fig1: During operation uterus showing dehiscence which confirmed presence of placenta increta in histopathology (Case no- 1).**

**Case 2-**

A 30 year old primigravida was admitted at 26 weeks gestation with abdominal pain and syncopal attack. The history did not reveal any previous obstetric or gynecological interference. On examination she was significantly pale with hypotension and tachycardia. Uterine size corresponded to 24 weeks of gestation. Sonography showed a live fetus at 28 weeks four days gestation with effective fetal weight 1130gm and a central placenta previa. There was also evidence of intraperitoneal bleed which called for immediate intervention. Laparotomy revealed rupture over the uterine fundus with placenta deeply embedded into it. An extremely premature baby was delivered with a poor Apgar score. Thereafter considering the degree of rupture total abdominal hysterectomy was carried out as an emergency procedure. Intra-operative blood loss was about 3000ml. The baby died on the tenth day as a result of severe asphyxia and extreme prematurity. Maternal postoperative period was uneventful. Again on histopathology placenta increta was found to be the cause of rupture uterus (Fig-2).



**Fig-2: Histopatho microscopy of placenta increta hematoxyline eosin stain (magnification 100x) (Case no-2)**

**Case-3**

A second para with two live births, first delivered at term by LSCS two years back and the other vaginally at 35 weeks gestation one hour back, was referred from a local urban hospital with complaints of retained placenta. She had a live preterm baby weighing 2.1kg with an Apgar score of eight in five minutes. On examination she was normotensive and had pulse rate of 86/ minute. Uterus corresponded to 24 weeks size and bleeding per vagina was mild. All antenatal investigations were within normal limits. An ultrasonography done at eight months showed a live fetus at 32 weeks gestation without any birth defect and a normally situated placenta. Under general anesthesia manual removal of placenta was tried but failed and so laparotomy was attempted, suspecting presence of placenta accreta. A rent in the fundus of uterus was observed and placenta was deeply insinuated into its margins ( Fig-3). Subtotal hysterectomy was carried out as a life saving procedure and later histopathology proved presence of placenta percreta. Intra-operative blood loss was almost 2.5 liters. At third and sixth months follow up all women were healthy.



**Fig- 3: Hysterectomized specimen of uterus showing presence of placenta percreta (Case no-3)**

**DISCUSSION:**

Previously the incidence of abnormal placentation including placenta accreta, increta and percreta ranged from 1: 540 to 1: 93000 with an average of 1: 7000 pregnancies [2, 3]. Nowadays the incidence has increased 10 fold in past 50 years and occurs with frequency of 1 per 2500 deliveries [4]. Placenta accreta vera constitutes 75 to 80% of this pathology, 17% are placenta increta and remaining 5% are placenta percreta [5]. The alarming rise in the incidence of placenta accreta is attributed to several associated high risk factors; scarred uterus resulting from previous cesarean sections, myomectomy, endometritis, history of manual removal of placenta, Asherman syndrome, multiple pregnancies, dilatation curettage and advanced maternal age<sup>5,6</sup>. Clarke et al correlated placenta previa, abnormal

placentation and cesarean section and stated that when a placenta previa was present, the occurrence of placenta accreta increased from 5% without LSCS to > 25% with one and up to 67% with four or more sections [6]. Wax *et al.*; observed a shorter time interval between cesarean section and conception in the patients with placenta increta [7]. In two of our cases history of cesarean section was present, while in one of these chorioamnionitis from PPROM was suspected. Several case reports have highlighted the clinical presentation of adherent placenta as pain abdomen and bloody vaginal discharge [8, 9]. Which was similar to two of our cases? A relatively rarer presentation was the primigravidae presenting as prelabour preterm uterine rupture at only 26 weeks gestation.

Pregnancy outcome has been analyzed by various studies and they have observed a gloomy outcome with higher incidence of preterm delivery, small for gestational age babies and perinatal loss in developing countries [1, 10, 11]. All abnormal placentation led to preterm rupture of uterus here. Although two perinatal deaths occurred out of these three cases, the preterm requiring NICU had a better outcome later on.

As abnormally implanted placentas endanger fetomaternal life, antenatal detection plays a vital role. Sonography with Doppler can diagnose placenta accreta effectively. Several criteria have been outlined i.e. absence of a normal hypo dense retro placental myometrial zone, a reduced or absent surface between serosa and urinary bladder with occasional presence of exophytic tissues, features of abnormal vascular lakes within placental parenchyma [12, 13]. MRI is helpful when difficulties arise in sonography [14]. Cystoscopy is another tool which helps in preoperative detection of any bladder involvement by placenta percreta, but it is reserved for cases with special features like hematuria, or in cases having sonography proven bladder wall involvement.

Management strategy involves conservative measures and surgical removal of uterus. Ideally any intervention should be started after delivery of the baby. If uterine preservation is desired then prevention of blood loss due to the adherent placenta is the first priority of the situation. The immediate techniques include ; uterine curettage with packing, over sewing of the placental bed, localized excision of placenta then repair of the rent and step wise devascularization with hypo gastric artery ligation if required. A left behind placenta may also be managed with adjuvant chemotherapy [15]. Xinyan *et al.*; found uterine artery embolization (UAE) to be one of the preferred conservative management methods for heavy hemorrhage in these cases [16]. Although current trend is shifting towards conservative management, certain obstetricians still find it more risky than a definitive

surgical approach. Fox *et al.*; reported that conservative treatment caused a four times higher mortality rate than treatment with an immediate hysterectomy [3]. In fact the ACOG committee opines that if the clinician is extremely confident about the diagnosis, it will be a wise decision to carry out hysterectomy with attached placenta after delivery of the baby [4].

The presence of any of the already mentioned risk factors along with complaints of abdominal pain, tachycardia and vaginal discharge in a gravida should always alert us to the probability of abnormal placentation. Attempts to deliver the placenta in toto can create hazardous hemorrhage, and applying other techniques to stem bleeding may led to substantial maternal morbidity and mortality by buying time. We feel that decision making for hysterectomy at the right time plays a pivotal role in avoiding mortality where uterine artery embolization is unavailable or too expensive. Decreasing cesarean deliveries can reduce incidence of maternal morbidity and mortality due to placenta accreta.

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