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FUNDAL PLACENTA PERCRETA WITH UTERINE RUPTURE- A CASE STUDY

Gynaecology

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ABSTRACT

Placenta percreta is a type of an abnormal placentation wherein the placental villi penetrate the myometrium and reach up to serosa. High risk factors include placenta previa, previous caesarean section, previous D&C, increased maternal age, high parity, previous myomectomy, previous Asherman's syndrome and unusual high levels of alpha fetoproteins. Usually the placenta percreta is found in lower uterine segment especially in the patients with placenta previa and previous caesarean deliveries. We report a case of third trimester uterine rupture in a patient with fundal placenta. A 29 year old young patient with previous caesarean delivery presented to us with preterm rupture of membranes and leaking since 8 hours. Ultrasonography shows single live fetus 32 weeks with fundal placenta with decreased liquor. She was managed with intravenous antibiotics and intravenous betamethasone for lung maturity. After 7 hours of hospital admission, suddenly patient's condition detoriated with abdominal pain ,tenderness, excessive perspiration and unexplained shock. Emergency laparotomy was done. There was uterine rupture at fundal area with placenta percreta. Baby was delivered with low Apgar score but was resuscitated. Subtotal hysterectomy was done. This case highlights that plecenta percreta can be encountered in normal located placenta (upper segment placenta). It is crucial to maintain high index of suspicion for placenta percreta particularly in patients with previous caesarean deliveries.

KEYWORDS

Placenta percreta, Uterine rupture, Sub total hysterectomy

INTRODUCTION

Placenta percreta is an obstetric emergency of fatal consequences and unfortunately increasing at an alarming rate. Placenta accrete is a condition in which placenta is firmly adherent to uterine wall(1). The condition has been classified according to the degree of penetration of placental villi into the uterine wall : placenta accrete when placental villi reach the myometrium ; placenta increta when it penetrates the myometrium and placenta percreta when it reaches the uterine serosa where it can penetrate serosa and can invade the neighbouring organs(2). So placenta percreta is one of the most severe forms of abnormally adherent placenta.

The exact mechanism of abnormal placentation is not known but it may be due to defective or excessive trophoblastic invasion as a consequences of partial or complete absence of decidua basalis and imperfect development of the fibrinoid layer. Spontaneous uterine rupture in course of pregnancy is a very rare complication ,more so , if placenta is located normally in upper uterine segment.

High risk factors include previous caesarean delivery, curettage, advanced maternal age etc. we present here an interesting case of this potentially life threatening complication where patient had spontaneous uterine rupture at fundus at 32 weeks of gestation.

CASE REPORT

We present a rare case of fundal placenta percreta with uterine rupture causing hemoperitoneum and shock. A 29 year old patient was referred to us from Sub-district hospital Chadoora of Kashmir as previous LSCS with preterm leaking at 32 weeks gestation at 1 pm. She was G2P1 –previous LSCS with last delivery 2 years back with no history of D&C or any other uterine surgery except caesarean in the past. Records of previous C-sections were not available. Patient gave history of preterm leaking since 8 hours for which she was taken to local sub district hospital from where she was referred to us On examination, patient was afebrile with mild anemia and not in labour. Her fundal height was 32 weeks with a fetal heart of 146 beats/min. On per speculum examination cervical os was closed and clear frank leaking was present. She was started on antibiotics and Injection Betamethasone was administered for lung maturity. Meanwhile an ultrasound was done along with other routine investigations. Ultrasound showed live, 32 weeks pregnancy with fundal placenta and reduced liquor.Patient was stable till 8pm when she suddenly started with pain abdomen and went into a state of unexplained shock .Blood pressure and pulse were un-recordable and on per abdomen examination there was tenderness all over the abdomen but fetal heart was present. Patient was resuscitated and decision for immediate laparotomy was taken in view of shock and tender abdomen. On opening the abdomen, around 1-2 l of hemoperitoneum was seen .The cause of bleeding was the uterine rupture at the fundus towards left cornu where placenta had invaded the myometrium up to the serosa. The whole posterior fundal area was traversed by big blood vessels typical of placenta percreta. Immediately baby was delivered through the incision in the lower uterine segment. Preterm baby with Apgar score 6/10 was delivered .Placenta could not be separated as there was no cleavage present between it and the uterus. Diagnosis of placenta percreta invading the myometrium and serosa causing rupture of left fundocornual region was made. Consent for hysterectomy was taken and sub-total hysterectomy was promptly done. 5 units of blood were transfused intra-operatively. Specimen was sent for histopathological examination which confirmed placenta percreta. Post-operative recovery was good and she was discharged on 10th post operative day.



Figure 1:Placenta percreta invading the myometrium and serosa causing rupture of uterine fundusa



Figure 2:Uterine fundus traversed by big tortuous vessels typical of placenta percreta

DISCUSSION

Placenta percreta is a rare but serious life threatening complication of pregnancy as it is a cause of massive hemorrhage with a significant maternal and fetal morbidity and in some cases, mortality (3). Estimates of the incidence of placenta percreta vary, however, it is clear that the incidence is rising, primarily as a consequence of the rising cesarean delivery rate(4). Incidence varies between 1 in 540 to 1 in 93000 with an average of 1 in 700 pregnancies (5,6). Placenta percreta at fundus is a very rare occurance, rate being 1 in 20,000. The earliest reported case of placenta percreta in modern literature comes from Plater in 1588 (7).

Most important predisposing factor for adherent placenta is previous caesarean section. Other factors include prior uterine scar such as uterine curettage, myomectomy, Asherman's syndrome, iatrogenic uterine perforation, manual removal of placenta, placenta previa and advanced maternal age. In vitro fertilization is also a high risk factor for abnormally adherent placenta. Spontaneous uterine rupture due to placenta previa is one of the most urgent obstetrical complications resulting in severe maternal and fetal morbidity and mortality which is more commonly seen in third trimester(8). It is crucial to maintain high index of suspicion for placenta percreta, particularly in patients with a history of prior caesarean delivery and placenta previa in current pregnancy. It is known that a previous caesarean section scar can be a favourite site for placenta percreta.

Since the condition is of significant potentially life threatening nature, prenatal diagnosis and appropriate management is critical. Antenatal ultrasound with Doppler study is the technique of choice to establish the diagnosis and guide clinical management as it is cost effective and freely available. If the ultrasound findings are suspicious or the placenta is located in lower uterine segment i.e placenta previa especially in patients with previous caesarean deliveries, magnetic resonance imaging (MRI) can be done for confirmation. It provides crucial information on the vascularization of the anatomic planes and of the degree of invasion of placental villi. The contrast study MRI allows correct radiological differentiation between placenta accreta , increta and percreta(9,10). Other than the imaging methods, elevated biochemical markers in maternal serum such as unexplained elevated levels of alpha-fetoproteins and maternal serum creatinine kinase has been reported to be associated with an increased risk of placenta percreta(11,12).

The ideal approach to the problem is cesarean delivery via uterine incision which avoids the placenta. It has been shown that attempts to remove the placenta are associated with worst outcomes (13). Hysterectomy is then performed leaving the placenta in place. It is desirable to reduce the uterine blood supply prior to performing the hysterectomy either by ligation of the uterine artery or by embolization of these vessels(14).Surgery is often difficult in these patients, for this reason, it is advisable to have most experienced surgeon available involved in the surgery and to perform it in well- equipped operating theatre.

CONCLUSION

Placenta percreta is a serious condition with which the obstetricians will have to confront more often owing to the rising cesarean delivery rate. Although found most commonly in lower uterine segment but its presence in upper uterine segment cannot be ruled out. Familiarity with risk factors, a high index of suspicion ,prenatal diagnosis, & pre-delivery proper planning have the potential to produce the best outcomes & avoid serious complications and mortality with these conditions.

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