

Morbidly Adherent Placenta at Upper Segment of Uterus- A Case Report

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Abstract:

Background: Morbidly adherent placenta (MAP) is a spectrum of disorder which describes adherence of all or part of the placenta to the uterine wall or surrounding organs. It is one of the most devastating complication of pregnancy. It occurs when there is abnormally firm attachment of placental villi to the uterine wall with the absence of normal intervening decidua basalis and nitabuch's layer. MAP is often asymptomatic antenatally and the diagnosis is only established after unsuccessful attempt to remove of the placenta at delivery. A majority of morbidly adherent placenta are diagnosed during the third stage of labour or during caesarean section which results in adverse consequences including exsanguinating haemorrhage. It is one of the most common cause of obstetric hysterectomy. Accurate prenatal diagnosis is critical to reduce the risk of maternal morbidity and mortality.

Aim: To report the case of a morbid adherent placenta at upper segment of uterus with conservation of uterus following reconstructive surgery.

Case Presentation: A 24 years old 3rd gravid women with morbid adherent placenta at upper segment was treated by segmental resection and reconstructive surgery.

Her post- operative period was uneventful.

Conclusion: Antenatal diagnosis of morbidly adherent placenta, multi-disciplinary team with surgical expertise and facilities for blood transfusion can reduce maternal mortality and morbidity. This rare morbid attachment of placenta at upper segment is one of the example.

Key Words: Morbidly adherent placenta, upper segment.

Introduction:

Morbid adherent placenta (MAP) is a spectrum of disorder which describes abnormal adherence of all or part of the placenta to the underlying uterine wall. It is suspected when placenta fails to detach from uterine wall due to abnormal implantation at the basal plate. Myometrial tissue trauma and scarring are the main predisposing factor resulting in MAP. MAP often leads to preterm birth and carries its usual risk¹. Normally placenta adhere to decidua basalis allowing for a smooth separation of the placenta from the uterus after delivery. But in morbid adherence, placenta directly anchored to the myometrium

partially or completely without any intervening decidua. The probable cause is due to absence of deciduous basalis and poor development of fibrinoid layer. MAP is potentially life-threatening condition responsible for 7 to 10% maternal mortality². This often leads to massive obstetric hemorrhage and sequelae such as need for blood transfusion, hysterectomy, multi- organ failure and even death³. It is becoming an increasingly common complication of pregnancy, which is related to the increasing rate of caesarean delivery over the last five decades^{4,5} & currently most common indication for peripartum hysterectomy. Its frequency is increasing particularly

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in developed nations⁶⁻⁹, likely due to dramatic and persistent increase in the rate of cesarean delivery¹⁰. In 1970 it was 1/70000, from 1985 to 1994 it is increased to 1/2510¹¹ and from 1992 to 2002 reported incidence is 1/533¹². There are several risk factors of these condition including previous uterine surgery such as myomectomy, dilatation and curettage operation, placenta previa following previous caesarean section¹³. During pregnancy morbid adherent placenta may be either asymptomatic or may present with ante-partum hemorrhage¹⁴. While in intrapartum it may present as retained placenta, APH or uterine rupture. It is important to diagnose MAP prior to delivery as early in pregnancy as possible in order to allow prevention of maternal mortality and morbidity due to massive hemorrhage. Ultra-sonogram imaging, colour Doppler and MRI have valuable role in the diagnosis of MAP¹⁵, Colour Doppler have a higher specificity in the diagnosis of morbidly adherent placenta & in the assessment of the depth of invasion. Thinning <1 mm or absence of the hypochoic myometrial retro-placental zone has a sensitivity of 93 %, specificity of 79% and positive predictive value of 78%. MRI is indicated in case of inconclusive ultrasound or Doppler finding and allows detailed visualization of pelvic anatomy which can be further improved by three- dimensional reconstruction. MRI has a sensitivity of over 88% and specificity for 100%^{16,17}. Delivery plan requires multidisciplinary team approach which should involve an anesthesiologist, senior obstetrician, maternal-fetal medicine specialist, neonatologist, urologist, hematologist and interventional radiologist to optimize patient outcome^{18,19}.

Case report:

A 24 years old 3rd gravida, from middle class family was admitted in a private clinic on 31st July, 2021, at her 28th weeks of pregnancy with the complaints of premature rupture of membrane (PROM) and history of previous one caesarean section. Her first pregnancy was delivered by caesarean section four years back and baby was stillborn. Second pregnancy ended with spontaneous abortion at 10th week which needed dilatation, evacuation and curettage two years back. This was her planned pregnancy and she was on regular antenatal check up outside this hospital.



Fig.-1: Per-operatively finding of engorged placental Vessel



Fig.-2: Morbidly Adherent Placenta at Upper Segment Of Uterus

Her 20th weeks ultra-sonogram of pregnancy profile was normal. Her pregnancy was uneventful up to 28 weeks. Then she developed premature rupture of

membrane for which she admitted in this Hospital. After admission an ultra-sonogram was done which reveals single live pregnancy

28 week with severe oligohydramnios (AFI-4.4 cm). EFW- 1298 gram and placenta fundo- anterior. On examination patient was co-operative, non-anemic, normotensive, non-diabetic but she took thyroxin 1+0+0 for hypothyroidism. Symphysis fundal height was 26th weeks of pregnancy. Abdomen was full of fetus. Fetal Heart Sound-146 beat/minute. Scar tenderness was present. So after completion of dexamethasone dose with proper counselling and keeping NICU support, LUCS was done. A male baby of 1.4kg was delivered and transferred to NICU immediately. After delivery of the baby, removal of placenta was tried by control cord traction (CCT), but failed. Then tried manually but placenta found morbidly adherent to upper uterine



Fig.-3: Picture showing after resection of placenta & repair of uterus.

segment and no cleavage was found between placenta and uterine wall. As she has no living issue decision was taken for preservation of uterus. Keeping two units of blood ready and taking consent for hysterectomy, placenta removed by segmental resection of uterus upto placental margin, Then uterus repaired and proper hemostasis was ensured. Post-operatively patient was treated by injection tranexamic acid, injection ergometrine and oral misoprostol drug for prevention

of PPH. Her ²-HCG was done on first post-operative day which was 44000 IU/ml. Histopathology report of placenta revealed trophoblastic tissue invading myometrium.

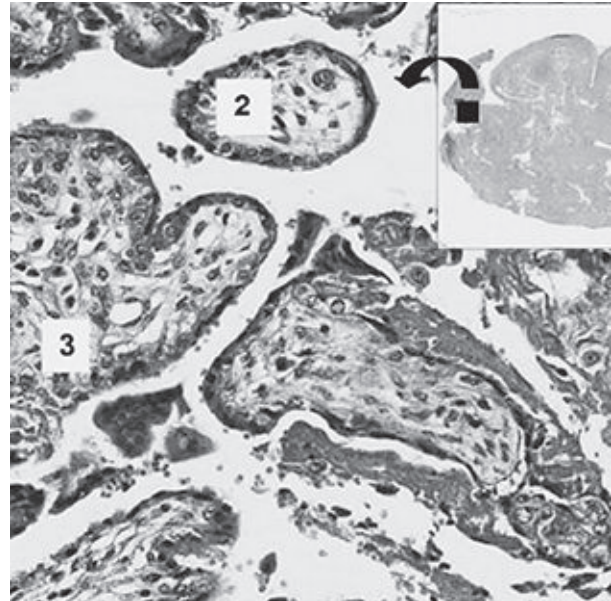


Fig.-4: Picture showing histopathology of placental myometrium invading by trophoblastic tissue.

Her post-operative period was uneventful and on 5th post-operative day she was discharged with advice. Baby was discharged from NICU after 14 days. After three months, a ultra-sonography of lower abdomen was done which reveals no abnormality. Her baby was also healthy and weight was 3.5 kg.

Discussion:

Morbidly adherent placenta is one of the most common cause of obstetric hysterectomy. A nation-wide review of the peri-partum hysterectomies by the UK of obstetric surveillance system found that morbidly adherent placenta was the cause in 38% of case²⁰. It remains the greatest challenge in the modern obstetric²¹. Maternal risk is greatest on attempt to separate the placenta, resulting torrential hemorrhage, DIC, massive blood transfusion, hysterectomy, bladder & uterine trauma, ARDS, acute tubular necrosis, need intensive care and even death²¹. The epidemic of placental invasion is escalating due to rising rate of cesarean section. It has risen to 10 fold in past 50 years²². In the presence of risk factor like a previous cesarean section, history of myomectomy or D&C operation, obstetrician should have a high index of suspicion for the morbid adhesion of placenta.

Identification of patient with risk factor ante-natally is essential for the early diagnosis and management. In our case, morbid adherent placenta at upper segment was diagnosed during laparotomy. In MAP manual removal of the placenta leads to increase the risk of hysterectomy, hemorrhage & blood transfusion. Avoidance of removal of the Placenta may be combined with additional procedure including arterial embolization, treatment with methotrexate, compression sutures & sewing of placental vascular bed²³. An alternative method to leaving the Placenta in situ involve resection of the invaded myometrium together with the Placenta and suturing the myometrial defect. Although randomized trials that compared hysterectomy to this approach are not available, it is apparent that blood loss is significantly less in patient with small defect using this approach. In patient with too large defect to subsequently repair, there are data that en bloc removal of the entire utero-placental defect followed by uterine closure result in reduced blood loss and maintain potential fertility²⁴. This conservative management of myometrial segmental resection and oversewing the myometrium should be practiced more²⁵. Though conservative management and reconstructive surgery are risk for developing post-partum hemorrhage and may need re-laparotomy, In this case we have done it in aim to preserve the fertility as patient has no living child.

Conclusion:

Antenatal diagnosis of morbid adherent placenta is key to save women's life. Early identification of risk factors, accurate diagnosis and treatment in accordance and the resource available are essential and may result in reduced maternal mortality. Taking the limited published data together and the accepted approach of hysterectomy to treat morbid adherent placenta, conservative management should be considered only for carefully selected cases after detailed counselling about the risk, uncertain benefit and efficacy and should be considered where fertility desired.

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