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CASE REPORT OF PLACENTA PERCRETA IN PREVIOUS ONE CAESAREAN DELIVERY WITH SHORT INTERCONCEPTIONAL PERIOD

KEY WORDS: placenta percreta, caesarean hysterectomy, previous cesarean, short interconceptional interval

Dr. Shrinivas Gadappa

Professor and Head, Department of OBGY, Government Medical College, Chh.Sambhajinagar – 431001, India.

Dr. Anurag Ashok Sonawane

Associate Professor, Department of OBGY, Government Medical College, Chh.Sambhajinagar - 431001, India.

Dr. Sakshi Mahatme*

Junior Resident, Department of OBGY, Government Medical College, Chh. Sambhajinagar - 431001, India. *Corresponding Author

ABSTRACT

Placenta accreta spectrum encompasses a range of pathological adherence of placenta and causes significant maternal and neonatal morbidity and mortality. With the increase in the number of caesarean deliveries over the last few decades, there has been an 8-fold increase in the incidence of placenta accreta. The highest risk of placenta accreta spectrum disorders are amongst women whose pregnancy is complicated by placenta previa and with a prior scar on the uterus, due to the abnormal placental implantation on the scar site. Maternal and fetal morbidity and mortality from placenta accreta are considerable and are associated with high demands on health resources. Women who have short interconceptional period of less than 18 months have been linked with an increased risk of adverse perinatal outcomes, including placenta previa. Risk of placenta accreta is exponentially related to the number of previous caesarean deliveries. Here we report a case of placenta percreta in patient with only one prior caesarean delivery with interpregnancy interval (IPI) of less than 6 months which is uncommonly seen which may affect perinatal outcome adversely which was managed successfully with emergency caesarean hysterectomy.

Placenta accreta was first described in the year 1937 by obstetrician Frederick C. Irving and pathologist Arthur T. Hertig.¹ The reported incidence of placenta accreta has increased from approximately 0.8% in 1980s to 3 per 1000 in the last decade, occurring more frequently in future deliveries after caesarean section.² The term placenta accreta spectrum describes aberrant placentation characterized by abnormally implanted, invasive or adherent placenta. This abnormal adherence stems in parts from partial or total absence of the decidua basalis and imperfect development of fibrinoid or Nitabuch layer.³ Over the past 40 years, caesarean delivery rates around the world have risen from less than 10 % to over 30 %, thus simultaneously increasing the rate of placenta accreta spectrum disorders.⁴ The most common risk factor is history of placenta previa in previous pregnancy followed by number of caesarean sections in the past. Along with this, women who have short IPIs of less than 18 months have been linked with an increased risk of adverse perinatal outcomes, including placenta previa.^{5,6}

The need to pay attention to birth interval is evidence based and adverse outcomes of closely spaced births is enormous. Short interconceptional interval may contribute to suboptimal healing of the endometrial-myometrial interface, insufficient decidualization, or weakness of the scar matrix itself, leading to greater risk of uterine rupture, dehiscence, and possibly PAS. We here present case of placenta percreta in case of previous one caesarean section with interconceptional interval of less than 6 months which was managed successfully with multidisciplinary team work with emergency caesarean hysterectomy.

CASE REPORT

A 20-year-old woman, G2P1L1 with previous one caesarean delivery 8 months back referred from a private hospital to Government Medical College, Aurangabad with 4 months of amenorrhoea and ultrasound report was suggestive of Placenta accreta. At the time of presentation patient was vitally stable, laboratory investigation showed hemoglobin of 11.2gm%.

Per abdominal examination revealed uterus of 16-18 weeks of gestational age. Per vaginal examination was not done. Her ultrasound at 18 weeks of gestation was suggestive of

placenta previa with vascularity reaching anteriorly in myometrium possibly placenta accreta and repeat scan at 22 weeks indicated grade 4 placenta previa with myometrial thinning, placental lakes and placental vessels reaching up to serosa suggestive of placenta percreta. MRI scan was done and was consistent with USG findings. (Figure no 1)



Fig 1. MRI showing complete placenta previa with multiple areas of myometrial thinning along the antero-inferior wall of uterus with placental bands and slight loss of clear zone between anterior wall of uterus and posterior wall of bladder called as bladder line s/o placenta percreta

A proposition for continuing the pregnancy till 34 completed weeks of gestation followed by planned caesarean delivery

with obstetric hysterectomy was taken. She and her relatives were explained about the risk and prognosis of continuation of such pregnancy. She was made cognizant of the warning symptoms i.e. pervaginal bleeding, acute pain in abdomen and explained the need to report immediately if the same occurs. Meanwhile she had regular antenatal check-up at GMC, Aurangabad where haematinics were prescribed to maintain her Hb above 10 gm%. On emergency basis protocol was drafted informed to the team members who consisted of senior obstetricians, senior anaesthesiologist, and senior OT staff.

Patient and her relatives were counselled about the risk and prognosis of emergency caesarean hysterectomy including intraoperative and postoperative complications and regarding blood transfusion and its complications and accordingly consent for the procedure obtained. Massive transfusion protocol was triggered.

On opening the abdomen, uterus was visualised with scar thinning with hyper vascular lower segment with minimal normal myometrium, only the serosa was intact seen as a bulge in the lower uterine segment. (**Figure no. 2**)



Figure 2: Hypervascular lower uterine segmen with NORMAL MYOMETRIUM

A classical caesarean section with transverse incision was performed and 2.1 kg female baby was delivered by breech & the uterine incision was closed with placenta in situ.



Figure 3: Hypervascular lower uterine segment

The myometrium was found completely invaded by placenta leaving no choice but to proceed with obstetric hysterectomy. During Obstetric hysterectomy, intentional cystostomy was done as posterior wall of bladder was strongly adherent to the uterus, which was repaired in 2 layers and silicone Foley's catheter was kept for 21 days. An omental graft was kept between the bladder base and vaginal vault for avoiding the risk of VVF. Specimen sent for histopathological examination and report of the same s/o placenta percreta.



INTRAOPERATIVE PHOTO

She received in all 7 units of PRBCs, 6units of FFP and 6 unit of RDP pre and intraoperatively, and 2-unit PRBC postoperatively.

Postoperative period was uneventful. Patient received antibiotic Inj. Piperacillin and tazobactam along with Inj metronidazole. On day 10 stitches were removed, wound was healthy. Silicone Foley's catheter was removed on day 21. Both mother and baby were healthy at discharge. They are presently doing well.

DISCUSSION

The current hypothesis states that a defect of the endometrium-myometrial interface, typically at the site of a prior surgery, leads to a failure of normal decidualization in that area, thus allowing extra villous trophoblastic infiltration and the villous tissue to develop deeply within the myometrium or at times even involving the pelvic organs.⁷ This decidual deficiency thus prevents normal placental separation after delivery which causes severe obstetrical hemorrhage.⁸

Placenta accreta is a life-threatening condition which causes massive haemorrhage necessitating Obstetric hysterectomy in majority cases. Predisposing factors aside from previous caesarean sections include all previous myometrial damage from myomectomy, manual removal of the placenta, complicated uterine curettage, and leiomyomas, septic endometritis, and short interconceptional, multiparity or idiopathic in some cases.⁹

Short IPI may contribute to suboptimal healing of the endometrial-myometrial interface, insufficient decidualization, or weakness of the scar matrix itself, leading to greater risk of uterine rupture, dehiscence, and possibly PAS.¹⁰

For a woman with placenta previa the risk of associated placenta accreta is 3%, 11%, 40%, 60% for the first, second, third, fourth caesarean section respectively.¹¹

Antenatal diagnosis of placenta accreta spectrum is crucial in planning its management and has been shown to reduce maternal morbidity and mortality.¹² With the availability of grey scale USG, MRI and Doppler, prenatal diagnosis of placenta accreta, placental localization and bladder invasion can be ruled out. Moth-eaten" or "Swiss cheese" appearance is seen typically. Turbulent lacunar blood flow is the most common finding of placenta accreta spectrum on colour flow Doppler imaging. The ACOG recommends planned, preterm caesarean section hysterectomy with the placenta left in situ as removal of a placenta accreta spectrum is associated with significant haemorrhagic morbidity. In case of unsuspected placenta accreta spectrum diagnosed after the birth of the baby, the placenta should be left in situ and an emergency hysterectomy performed. Management by a multidisciplinary team and delivery in a tertiary care facility improves outcome and lowers complication rates.

Placenta percreta with bladder invasion may require partial cystectomy. In one review of 54 cases of placenta percreta invading the bladder, partial cystectomy was performed in 24 of the 54 patients.

Although the impact of a morbidly adherent placenta on pregnancy outcomes is well-described, no randomized trials have examined the management of pregnancies complicated by this disorder. As a result, recommendations for its management are based on case series and reports, personal experience, expert opinion.

Maternal mortality for undiagnosed case of placenta accreta is around 7%. The highest risk of placenta accreta spectrum disorders are amongst women whose pregnancy is complicated by placenta previa and with a prior scar on the uterus, due to the abnormal placental implantation on the scar site. Antenatal diagnosis should be done with grey scale USG. MRI should be done in patients in whom the grey scale USG gives inconclusive result. Early planning can ensure optimal outcomes for woman. Counselling allows for women's autonomy in making decisions such as possible termination of the pregnancy, early delivery via caesarean section, or planned hysterectomy. Triggering massive transfusion protocol promptly will prevent morbidity by reducing haemorrhage.

CONCLUSION

Women with short interconceptional period may have increased risk of anemia, suboptimal scar healing of previous caesarean and associated comorbidities & it should be considered as potential risk factor for placenta accreta spectrum.

Optimal management with standardized approach and preparedness with comprehensive multidisciplinary care team accustomed to management of placenta accreta spectrum in established infrastructure is of vital importance. Counselling women regarding risks and effects of the same should be considered during first caesarean delivery which may decrease the risk of placenta accreta spectrum disorders.

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