

A Case Series on Placenta Accreta Spectrum Disorder in DMCH, Bihar

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Received: 06-08-2022 / Revised: 30-09-2022 / Accepted: 15-10-2022

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Conflict of interest: Nil

Abstract

Following the trend of rising caesarean deliveries, the incidence of placenta accreta spectrum (PAS) is quickly rising globally. The diagnosis and treatment of PAS, a diverse illness with a high prevalence of maternal morbidity and mortality, present special difficulties. The biggest obstacles to gaining a thorough grasp of this syndrome up until now were its rarity, the dearth of high-caliber evidence, and the absence of a standardised method for reporting PAS cases for the ultrasonography, clinical, and pathologic diagnoses. The heterogeneity of the available epidemiological data on PAS has made it difficult to study the available management solutions for this ailment. This review's objective is to offer a critical assessment of the current body of knowledge regarding PAS diseases' screening, diagnosis, and treatment choices, with a particular emphasis on the difficulties we anticipate in the near future.

Keywords: Aberrant Placentation, Abnormal Invasive Placenta, Morbidly Adherent Placenta, Placenta Accreta Spectrum.

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Introduction

Abnormally invasive placenta (AIP), commonly known as placenta accreta spectrum disorder (PAS), is a clinical condition in which the placenta does not naturally separate after birth and cannot be forcibly removed without producing significant and sometimes fatal haemorrhage [1,2]. PAS is becoming more common everywhere [3,4]. The main risk factor for PAS in subsequent pregnancies, rising caesarean delivery rates are most likely to blame for this. Due to its strong correlation

with maternal morbidity and death, PAS is one of the most serious pregnancy disorders [5]. When a diagnosis is made prior to birth and the woman is treated by a multidisciplinary team with knowledge of the disorder, maternal and newborn outcomes are typically better [6,7].

As of right now, estimations range from 1.7 to 30 per 10,000 deliveries. The prevalence is rising as a result of rising caesarean sections and ageing mothers, two separate risk factors. In Pennsylvania, severe PPH complicates the

third stage of labour, necessitating extensive life-saving surgical procedures such as hysterectomy, ligation of important pelvic blood arteries, and significant blood transfusions. This study's objective is to examine the causes, treatment options, and prognosis of PAS Disorder in DMCH, Bihar.

Case series

With prior approval from the ethical committee of the institute, all eight cases with a diagnosis of PAS that were treated at the Obstetrics and Gynecology Department of Darbhanga Medical and Hospital, Laheriasarai, Bihar, a tertiary care facility over a 12-month period from January 2021 to December 2021, were thoroughly studied. Clinical suspicion of PAS led to radiographic (US and/or MRI) and histological confirmation of the diagnosis. Data on risk factors such as maternal age, parity, previous caesarean sections, concomitant placenta previa, history of uterine curettage or other uterine surgical operations, as well as other factors, was extracted.

The main method of treatment was a caesarean hysterectomy. At birth, the gestational age, the type of anaesthesia used, and any difficulties like haemorrhage, a urinary tract infection, sepsis, or an ICU stay

were all noted. The quantity of blood loss and the number of blood products utilized within 24 hours following surgery were taken from the operating room notes. The perinatal result was investigated.

Case 1

26years, G4P2L2A1 at 37 weeks 05days GA with history of previous 2LSCS presented with fresh bleeding per vaginum. Immediate resuscitation was started and emergency CS was planned. Per operatively placenta was invading lower uterine segment. After extraction of baby, intractable PPH occurred(2-2.5L blood loss). Hysterectomy was performed. Patient was shifted to ICU. 4 units of whole blood and 2 units of FFP was transfused. Patient recovered well.

Case 2

28 years G4P3L3 at 35 weeks GA with history of previous 3LSCS with suspected placenta increta on sonography, was planned for elective CS. Per operatively, placenta was invading lower segment and prominent vessels seen over uterine surface. About 2L blood loss occurred. Immediate hysterectomy was done. 3 units of whole blood and 3 units FFP transfused. Patient kept in ICU observation and was discharged on D-8.



Figure 1: Photo taken during intraoperative period showing prominent vessels on surface of uterus

Case 3

27Yrs G4P3L3,37 wks 05days GA, PREV 3 LSCS, presented with scar tenderness. On emergency CS, after extraction of the baby placenta was not removed completely. Some

bits of placental tissue was embedded in myometrium. Suturing of bleeding sites followed by bilateral uterine artery ligation done initially but intractable PPH occurred for which hysterectomy was done. Post

operatively pt. developed MODS and unfortunately died on D-3.

Case 4

22 Yrs, G2A1 patient at 28wks 04days GA came with IUD with History of previous abortion followed by D&C 2yrs ago. Expulsion of foetus occurred but placenta was not expelled spontaneously. Uterotonics followed by manual removal of placenta was tried but unsuccessful. USG done which documented placenta accreta. Patient was managed conservatively with methotrexate & folic acid with regular beta hCG monitoring. Patient followed up with beta hCG & USG after 1 month which showed empty uterus with 12mm endometrial thickness & beta hCG was 10mIU/mL.

Case 5

27 yrs G2P1, twin pregnancy with previous 1LSCS at 34wks GA with documented central placenta previa presented with vaginal bleeding. Patient was taken for emergency CS. Peroperatively, placenta percreta was seen. Profuse bleeding started after baby extraction. Hysterectomy and partial cystectomy was done. Patient recovered well in the postoperative period.

Case 6

30 yrs, G3P2L2 previous 2 LSCS with 37wks GA with scar tenderness was taken for emergency CS. Peroperatively after extraction of the baby, placenta did not separate spontaneously. Manual removal was tried but placenta was removed in piecemeal. Intraoperatively, profuse bleeding occurred so immediate hysterectomy done. 3 units of whole blood transfused. Patient was kept in ICU and recovered well.

Case 7

32Yrs G4P3L3 previous 3 LSCS with 36wks04days GA with scar tenderness and vaginal bleeding was taken for emergency CS. Peroperatively placenta was low lying

and adherent. Prominent vessels seen over uterus. Profuse bleeding occurred. Hysterectomy done. 2 units of whole blood and 2 units FFP transfused. Patient recovered well.

Case 8

28Yrs, G2P1L1, previous 1LSCS at 38wks GA with scar tenderness was taken for emergency CS. Peroperatively, after the baby was delivered, placenta did not separate spontaneously. Majority of the placenta separated after manual removal but some parts found adherent so removed in piecemeal. Hemostasis secured by hemostatic sutures and bilateral uterine artery ligated. She developed sepsis in the postoperative period.

Results

The current study reported 8 cases of PAS out of 8550 deliveries with incidence of 0.09%. The increasing rates of the caesarean deliveries over the last few decades accounts for the increasing incidence of PAS. One of the major risk factors of PAS is previous LSCS. In our study, 7 out of 8 patients had a previous history of LSCS. The other major risk factor is placenta praevia. In the current study, 3 cases had low lying placenta and 1 had complete placenta praevia. Previous history of dilatation and curettage is also an important risk factor for PAS which was present in one of the patients in the current study. Apart from these, advanced maternal age and multiparity are also risk factors for PAS. To reduce maternal morbidity and mortality, early diagnosis is warranted, for which high index of suspicion is needed in cases having major risk factors for PAS. Also in such cases, careful evaluation of the placental implantation site should be done at the time of routine ultrasound during the antenatal period. In this study, only 2 out of 8 cases were diagnosed in the antenatal period. Majority of the cases (62.5%) were diagnosed in intrapartum whereas 1 case was

diagnosed in the postpartum period. Elective LSCS was done in only 1 case whereas 6 cases underwent emergency LSCS. PAS is associated with a number of complications of which postpartum haemorrhage is one of the most important. In this study, 100% of the cases had PPH. 7 (87.5%) cases needed major transfusion support whereas 100% patients needed ICU admission. In 6 (75%) cases hysterectomy was done. 2 cases had sepsis in the postoperative period and there was 1 maternal death. In 5 out of 8 cases, baby was admitted in NICU.

Discussion

There has been a noticeable surge in CD incidence over the past ten years, along with some related short- and long-term consequences, including slower healing, increased blood loss, infections, thrombosis, potential bladder or intestine injury, and even hysterectomy [8]. The risk of PAS occurring in subsequent pregnancies is significant, primarily because of the associated maternal and foetal death and morbidity [8]. Despite the disease's clinical relevance, half to two thirds of instances of PAS abnormalities are still undetected before delivery [9-11]. Given the subjective nature of and difficulty in interpreting "typical" findings or signals by two-dimensional US and colour Doppler imaging, indicators of PAS [12] have been shown to have varied sensitivity and specificity in recent work. To define how and when to test and assess women with prior CDs, there are, however, no precise rules in place globally.

The histological relationship between caesarean scar pregnancy (CSP) and PAS diseases has been established in recent investigations [13]. The gestational sac on the scar left by a prior caesarean surgery is known as the CSP. This sort of pathological pregnancy could have major repercussions and difficulties, including excessive bleeding and the need for hysterectomy, if it goes

undiagnosed [14]. Additionally, a placenta previa linked with CSP raises the possibility of placental invasion. Early in the first trimester, CSP can be diagnosed, and in this way, it can be viewed as a surrogate marker for a future excessively invasive placenta [15-18]. A straightforward and repeatable method for determining the link between the ectopic sac, caesarean scar, and anterior uterine wall is the investigation of the gestational-sac implantation site using COS ("cross-over" sign) criteria [19,20]

Patients may have the greatest prognosis if they are sent to the closest "reference centre" with a multidisciplinary team for diagnosis, staging, and appropriate care [21] because to the potentially serious repercussions of a misdiagnosed PAS.

The significance of an accurate diagnosis and associated surgical planning is illustrated by our instance. A desired and satisfactory outcome was made possible by the meticulous planning of the caesarean section at the 34th week, the execution by highly competent operators in an elective regimen (avoiding the urgency), and the support of the critical care unit.

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imaging [12]. However, there are no international standards that clearly outline how and when to screen and assess women with prior CDs.

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Conclusion

High maternal morbidity and death make PAS an obstetrical problem. Prior CS, Placenta previa, prior uterine curettage, accurate diagnosis, scheduled CS hysterectomy, and sufficient transfusion assistance are major risk factors that dramatically reduce maternal morbidity.

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