

## Morbidly Adherent Placenta: Lessons Learnt

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### Abstract

**Aims:** To summarize our experience in the management of patients with morbidly adherent placenta. **Introduction:** MAP is a potentially life threatening hemorrhagic condition responsible for 7% - 10% maternal mortality.

**Materials and Methods:** Retrospective study in which data of twelve patients with clinical diagnosis of morbidly adherent placenta was reviewed from Jan 2020 till march 2020.

**Results:** Out of twelve cases with clinical diagnosis of MAP, placenta previa was present in 10/12 patients with MAP. All patients had history of previous section. Three patients with preoperative diagnosis of MAP on USG/MRI were found to be normal intra-operatively. Nine patients of MAP underwent caesarean hysterectomy due to excessive bleeding during placental separation and were confirmed histo-pathologically (3 accreta vera, 3 increta and 3 percreta).

**Conclusions:** The incidence of placenta accreta is increasing due to higher cesarean section (C/S) rate. Key to successful outcome is awareness, anticipation, preoperative counseling, planning and multidisciplinary approach.

**Keywords:** Placenta Accreta; Morbidly Adherent Placenta; Cesarean Section; Hemorrhage; Maternal Mortality

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### I. Introduction

Placenta accreta is a significant cause of maternal morbidity and mortality. It leads to significant maternal hemorrhage at the time of delivery. Normally, the placenta adheres to decidua basalis layer, allowing for a smooth separation of the placenta from the uterus after delivery. In patients with abnormal placentation, placenta is firmly bound to the defective decidua basalis layer or even to the myometrium, the condition is called as placenta accreta. Varying degrees of placenta accreta are Placenta accreta vera (placenta adheres to myometrium). Placenta increta (placenta invades the myometrium). Placenta percreta (placenta invades through the myometrium to the uterine serosa and may include invasion into other pelvic organs).

Major risk factor for MAP is Placenta previa with a history of previous Caesarean section. Women with a previous Cesarean section (CS) require a higher index of suspicion as there are two problems to exclude: placenta previa and placenta accreta. Placenta previa itself raises the risk for accreta due to implantation over a highly vascular, poorly contractile lower uterine segment and an existing scar in the same area, obviously compounds the risk. Women with history of previous CS and who also have either placenta previa or an anterior placenta in the present pregnancy are at increased risk of placenta accreta and should be managed accordingly. Others risk factors are previous uterine surgery,like previous dilatation and curettage, previous myomectomy, submucous leiomyomata, advanced maternal age, multiparity and tobacco use. This study was conducted with an aim to review the incidence, presentation and management of MAP in our tertiary care institution in year 2020 from January till March and summarize our experiences in the management of such cases with review of literature. The purpose was to learn from our experiences and utilize the lessons learnt for planning future strategies for handling such life threatening situations as and when required.

## **II. Materials And Methods**

This was a retrospective study at a tertiary care centre in data of twelve patients with clinical diagnosis of morbidly adherent placenta were reviewed from January 2020 till March 2020. The individual records of these patients were retrieved from medical record department of the hospital and analysed for age, fertility situation and disease history .

## **III. Results**

9 confirmed cases of morbidly adherent placenta . All patients had history of previous cesarean section. All patients had period of gestation 33 -37 weeks. All underwent cesarean hysterectomy. Only 2 out of 9 had elective cesarean hysterectomy while rest 7 had emergency cesarean hysterectomy .

Seven out of 9 cases had anterior placenta in the lower segment , while one had posterior-lateral and yet another had fundus-posterior placenta intraoperatively.

## **IV. Discussion**

Placenta accreta is the most common reason for emergency peripartum hysterectomy and mortality rate is 7% - 10% [1] Placenta previa, especially with a history of cesarean section, is a major risk factor for placenta accreta [2]. Incidence of morbidly adherent placenta is increasing secondarily to the rise of cesarean section.

Clinical consequences of placenta accreta are uterine rupture, massive hemorrhage at the time of placental separation, infection, hysterectomy & associated comorbidities as ureteral injury and fistula formation (5%), postoperative infection (28%), transfusion (90%) mortality (7.4%) [1].

In patients of previous cesarean section, possibility of MAP should be kept in mind. The risk of placenta previa being adherent (accreta) increases from 3.3% in patients with history of one cesarean section to 11% in patients with history of two cesarean section to 40% with history of three cesarean section. While without placenta previa the risk of placenta accreta is just 0.03% in patients with history of one cesarean section, 0.2% in patients with history of two cesarean section to 0.1% with history of three cesarean section [5]. Thus placenta previa compounds the risk of placenta accreta in patients with history of cesarean section.

Placenta percreta is a catastrophic event. Placenta percreta induced uterine rupture has been reported as early as 9 and 14 wks. It can lead to the injury of adjacent organs, most often the bladder, or surgical injury of pelvic structures due to loss of tissue planes. The maternal mortality reported is 20% and perinatal mortality—30% [6]. In meta-analysis of 54 reported cases of placenta percreta, the diagnosis of MAP was made prenatally by USG or MRI in 33% of the cases. There were 39 urologic complications which included laceration of the bladder (26%), urinary fistula (13%), gross hematuria (9%), ureteral transection (6%), and small capacity bladder (4%). Partial cystectomy was necessary in 24 cases (44%). There were 3 maternal deaths (5.6%) and 14 fetal deaths (25.9%) [7].

Management should involve multidisciplinary team of a gynecologist, a urologist, anaesthetist . Preoperative cystoscopy and placement of ureteric stents may aid in identification and prevention of injury of the ureters. Hemorrhage can be reduced by bilateral internal iliac artery and/or uterine artery ligation/placement of catheters in both internal iliac artery. Hysterectomy should be done by posterior approach dividing uterosacral ligaments and entering vagina posteriorly. Involved portion of bladder is then resected with hysterectomy specimen.

Sensitivity of USG in diagnosing placenta accreta is 93% and Specificity-79% [8]. MRI is no more sensitive than USG for diagnosing placenta accreta. Routine ultrasound scanning at 20 weeks of gestation should include placental localisation and these patients should have follow-up imaging if the placenta covers or overlaps the cervical os at 20 weeks gestation [9].

Those that were managed in emergency presented with vaginal bleeding at 33 - 42 weeks. In order to avoid an emergency cesarean and to minimize complications of prematurity, it is acceptable to schedule cesarean at 34 to 35 weeks of gestation for suspected placenta accreta [10]. Multidisciplinary team & blood bank preparation may help reduce maternal morbidity and mortality. Mean estimated blood loss during surgery is 3 to 5 liters. Blood bank preparations include arrangement of cross matched blood and component therapy. Postoperative complication include DIC, fistula formation, ureteral stricture, urinary retention, infection, Pelvic and renal abscess formation, Renal compromise, transfusion reaction, sepsis, ARDS, multi organ failure. In last case of placenta percreta which presented in shock the team was well prepared in emergency and managed the patient effectively . Counseling was done for increased hemorrhage, massive transfusion and its effects, need for hysterectomy, senior obstetrician managed the case, availability of blood and component therapy and team work helped in saving life. Now we have standard operating protocols in labour ward for management of MAP and a contingency plan for an emergency delivery of the patient. Awareness of the entity, anticipating problem in advance and arranging help is a key to saving life of the mother

Interventional radiology can be life saving for the treatment of massive postpartum hemorrhage, and therefore having this facility available locally is desirable. Since in our set up this facility is not available,

internal iliac artery ligation is done if need arises. Pre-operative placement of arterial catheters in internal iliac artery is done and after delivery balloons are inflated to achieve temporary homeostasis. If successful, uterus can also be preserved in highly selected cases. The place of prophylactic catheter placement for balloon occlusion or in readiness for embolisation if bleeding ensues requires further evaluation [10].

Advantages include avoidance of hysterectomy and preservation of fertility, lower estimated blood loss, reduced blood transfusion, low frequency of complications as post procedure fever and pelvic infection. Disadvantages are iliac artery thrombosis, uterine necrosis, sepsis, multiple organ dysfunction syndrome (MODS). Uterus preserving modalities should be considered only in highly selected cases when blood loss is minimal and there is desire for fertility preservation [11]. There is currently insufficient data to recommend conservative approach routinely. In general, the recommended management of suspected placenta accreta is planned preterm cesarean hysterectomy with the placenta left in situ because attempts at removal of the placenta are associated with significant hemorrhagic morbidity

## V. Conclusion

Placenta accreta mindedness helps in saving maternal lives. Counseling and monitoring of patients at high risk for MAP on basis of history and ultrasound should start early in the antenatal period. Standard operating protocols should be available for handling and management for such life threatening situations as and when required. In cases of MAP, one should resort to hysterectomy SOONER RATHER THAN LATER and intra operatively;

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