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Original Research Article

A prospective study of 20 cases of maternal outcome in morbidly adherent placenta in tertiary care hospital

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ABSTRACT

Background: Morbidly adherent placenta with its variants is one of the most feared complication causing high morbidity and mortality in obstetrics. Aim of this study is to help in identifying high risk pregnancies, planning line of management of morbidly adherent placenta. The objective of the study wad to evaluate the risk factors, different modes of management, maternal outcome in case of morbidly adherent placenta.
Methods: A prospective study for one year was done to describe the incidence, causes, treatment, complications, and maternal morbidity and mortality associated with morbidly adherent placenta.
Results: A total of 20 cases of morbidly adherent placenta were studied over one-year span at our Institute. Most of the women with morbidly adherent placenta were in the age group of 26-30years (55%).The most common aetiology of morbidly adherent placenta was previous caesarean scar with placenta praevia (85%). In majority, placenta accreta found. Total abdominal hysterectomy done in 12 patient and subtotal hysterectomy in 6 cases. Trial haemostasis with uterine sparing in 2 cases out of which one case underwent total hysterectomy due to massive haemorrhage on same day. Associated Bladder repair in adherent placenta with invasion of bladder was needed in 10% cases. There was 1 maternal death noted in this study.
Conclusions: Leading cause of morbidly adherent placenta is previous caesarean section with placenta praevia, high index of suspicion, early antenatal diagnosis, planned surgery at high care centre with multi-disciplinary expertise, anticipation of blood volume transfusion, Delivery of foetus without manipulating placenta are key steps to reduce morbidity and mortality in morbidly adherent placenta. The decision to perform hysterectomy and conservative management to be individualized. Timely decision is the key to get success in morbidly adherent placenta as in other obstetric emergencies.

Keywords: Morbidly adherent placenta, Obstetric hysterectomy, Previous CS, Placenta previa

INTRODUCTION

The incidence of morbidly-adherent placenta (MAP), previously thought to be very uncommon, is rising in contemporary obstetrical practice and obstetricians must be aware of this. Massive obstetric haemorrhage, the principal clinical problem is a potentially life threatening condition associated with high morbidity and mortality of up to 10% of patients.[1-3] Previously thought to be very rare, the incidence of placenta accraeta has increased ten-folds in the past 50 years. At present, frequency has increased one per 2,500 to one per 110 deliveries.[2,3] Rising Caesarean section rate and short interval between caesarean section and conception is a major contributing factor.[4,5] The exact aetiology is unknown, but it has been postulated to the damage of decidua basalis which allows for placental invasion into myometrium. The barrier function of the decidua is absent in this condition, and the invasive trophoblast may invade the myometrium up to varying depths, from the most superficial (Placenta accrete) to deep myometrium (placenta increta) with breaching of uterine serosa (Placenta percraeta) and possibly invasion into adjacent organs.[6-8]

There are several risk factors which include:

- Placenta previa, prior cesarean section, prior myomectomy, asherman syndrome, and maternal age more than 35 years.[6,7]
- The diagnosis of morbidly adherent placenta includes high degree of suspicion especially in placenta previa with or without prior caesarean section[6]. During pregnancy morbidly adherent placenta may be either asymptomatic or may present with antepartum haemorrhage, abdominal pain and acute abdomen, while intrapartum it may present as retained placenta, post-partum haemorrhage or uterine rupture. The highest risk to mother is at the time of placental separation resulting in severe haemorrhage, disseminated intravascular coagulation, massive blood transfusion and sometimes death[7]. Successful Management of this condition requires early antenatal diagnosis (The Gray scale ultrasonography or Color Doppler) and referral to a tertiary care centre where multidisciplinary expertise in anaesthesia, diagnostic radiology, haematology, and blood transfusion services are available.[7,8]
- Different modes of management are practiced namely:

  Conservative treatment with preservation uterus (uterine packing, trial hemostasis by uni or bilateral ligature of uterine, ovarian or internal iliac vessels), subtotal hysterectomy, total abdominal hysterectomy, with or without Bladder repair. The preference of management and outcome varies in different centers.[1,9]

METHODS

A prospective study on 20 patients of morbidly adherent placenta either booked or unbooked over a period ranging for one year (1st July 2014 to 30th June 2015) admitted in civil hospital Ahmedabad was done.

Following definitions were used to classify diagnosis of cases:

- Patients were said to be booked if they had visited a health institute at least twice during their antenatal period.
- Placenta accreta: placenta invades superficial (less than half) myometrium.
- Placenta increta: placenta invades deep (more than half) myometrium.
- Placenta percreta: placenta invades serosa.

By the amount of placental involvement 3 types are described namely

- Focal adherence: when part of the cotyledon is involved.
- Partial adherence: when more than one cotyledon is involved
- Total adherence: when whole placenta is involved.

A structured questionnaire was developed to collect data from various registers for analysis.

RESULTS

A total of 20 patients with adherent placenta were included in the study.

Table 1: Demographic and clinical characteristics (n=20).

Maternal age (%)	20 – 25 yrs 4 (20%)	26 -30 yrs 11 (55%)	30 -35 yrs 5 (25%)
Antenatal care	Booked 4 (20%)	Unbooked 16 (80%)	
Referred from outside	Yes 15 (75%)	No 5 (25%)	

Table 2: Distribution according to etiological factors.

Etiological factor	No. of	Percentage (%)
Pre. Cesarion section	17 Pre. 1 Cs; 6 Pre. 2 Cs;10 Pre. 3 Cs; 1	85
Placenta previa	With pre. Cs; 17 Without pre. Cs; 2	85 10
Pre. myomectomy	1	5

Table 3: Management of morbidly adherent placenta.

Total hysterectomy	13
Sub total hysterectomy	6
Conservative with preservation of uterus	1
Associated bladder repair	2

Most of the women with morbidly adherent placenta were in the age group of 26–30 years (55%). The most common aetiology of morbidly adherent placenta was previous caesarean scar with placenta previa (85%). 4 patients were diagnosed in antenatal period with ultrasound and Doppler scan. These cases were confirmed later on by histopathology specimen of uterus. Remaining 16 patients were diagnosed during surgery and confirmed by histopathology.

Total abdominal hysterectomy done in 12 patient and subtotal hysterectomy in 6 cases. Trial haemostasis with uterine sparing in 2 cases out of which one case underwent total hysterectomy due to massive haemorrhage on same day. Associated Bladder repair in adherent placenta with invasion of bladder was needed in 10% cases. Out of 20 adherent placentas 16 were accreta,

2 percreta and 2 increta was found on histopathology. There was one maternal death noted in this study.

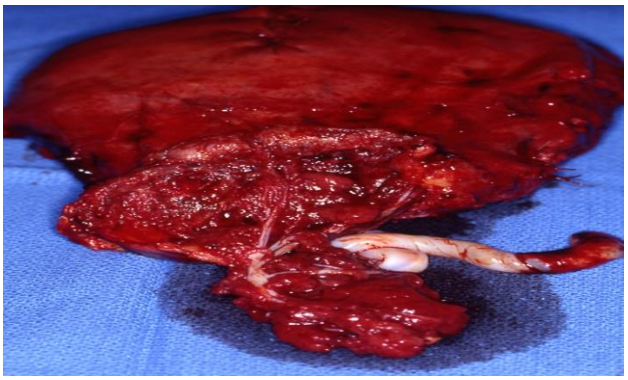

Figure 1: Post hysterectomyspecimen (uterus with placenta).

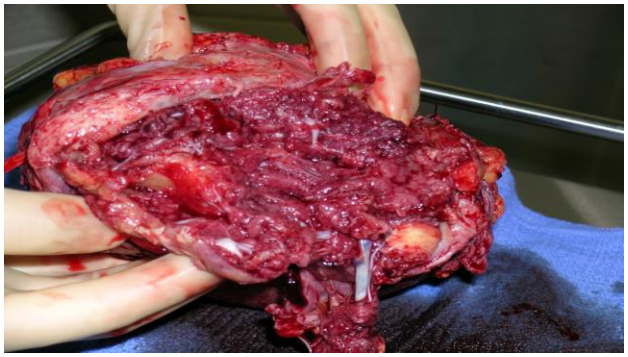

Figure 2: No division plane between uterus and placenta.

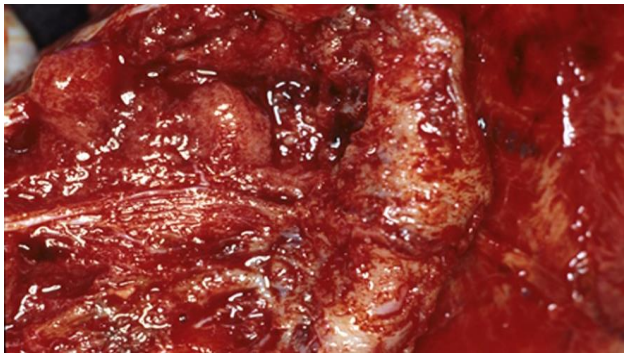

Figure 3: morbidly adherent placenta.

DISCUSSION

This study describes our experience of the measures of reducing morbidity and mortality in cases of morbidly adherent placentas. Successful management of this condition requires antenatal diagnosis and referral to a tertiary care centre where multidisciplinary expertise, blood transfusion facilities and intensive care units are available.[9-11] All caesarean sections performed in women with placenta previa and previous section should be conducted by skilled and experienced obstetrician.[12,13]

Early and proper antenatal diagnosis is the key factor to success.[9] Color flow Doppler is the gold standard in diagnosing morbidly adherent placenta, since such a condition when encountered unexpectedly at delivery, will invariably lead to massive blood loss. After diagnosis the women with adherent placenta should be counselled of merits and demerits of various surgical options. Traditional management is cesarean hysterectomy has reduced the morbidity and mortality to less than 2% as in our case series. We favour hysterectomy for accrete and increta where there is no extrauterine invasion with delivery of foetus through classical, fundal, or high transverse incision avoiding incision of placenta. The placenta may either be removed or left attached to uterus and removed as a part of hysterectomy. The placenta attached with uterus followed by hysterectomy reduces significantly blood loss and morbidity and mortality.[14] Hysterectomy although life-saving if timely attempted but the resultant loss of fertility is devastating if patient is young. Secondly morbidity is high if it is percreta. For this reason, conservative approach has been proposed.[10,11]

Conservative management involves leaving placenta in situ, this may be complemented by bilateral embolization of uterine arteries, parenteral methotrexate or both. Balloon occlusive devices can be placed in both internal iliac arteries before surgery by an interventional radiologist.[2] The placenta left in situ decreases in size on 5th postoperative day and followed up by ultrasound Doppler, no placental tissue left on 20 weeks as described by Edwin. Conservative management of placenta accreta and increta is now an acceptable and reliable alternative to radicle surgery.[1,10,11] This case series clearly describes the high morbidity associated with undiagnosed adherent placentas in antenatal period resulting in massive haemorrhage due to piecemeal removal of placenta, whereas in diagnosed cases placenta was left attached to uterus, planned hysterectomy was done with controlled bleeding thus morbidity is reduced.[11,12]

CONCLUSION

In conclusion, high index of suspicion, early antenatal diagnosis, planned surgery at well-equipped centre with multidisciplinary expertise, and invasive monitoring, anticipation of high volume blood transfusion, delivery of neonate with classical or fundal incision without manipulating placenta are the key steps to reduce morbidity and mortality in morbidly adherent placentas. The decision to perform hysterectomy or conservative management needs to individualized. Good anticipation and timely decision is the key to success as adherent placentas like other obstetric emergencies to be forewarned is to be forearmed.

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