Original Article

Frequency of Morbid Adherence of Placenta

Rahila Farhat Chaudhary

Abstract

Objective: To determine the frequency, causes and outcome of patients with morbidly adherent placenta. **Study Design:** Descriptive case series. **Place and Duration of Study:** The study was conducted at Gynae Unit-I of Aziz Fatima Medical And Dental College from March 2012 to March 2013.

Methodology: One hundred patients with previous uterine operations; like caesarean section, myomectomy, hysterotomy or diagnostic curettage, patients with placenta praevia or those patients with retained placenta removed with difficulty under anesthesia; were included in the study. All the primigravidas and cases with retained placenta due to uterine abnormalities were excluded. The admitted patients meeting the inclusion criteria were registered for the study after taking informed consent. Patients were clinically examined and appropriate investigations were done. All relevant information was recorded on a proforma especially designed for this study. All the data was entered and analysed through SPSS version 10.

Results: Only 6 patients out of 100 selected cases had morbidly adherent placenta, all cases were booked. Five cases were between 25-30 years and one was 20 years of age. Their parity range from 1-6. Five patients had previous history of caesarean section. Placenta was found in lower uterine segment in all cases. One patient presented with preterm labour and one with antepartum haemorrhage. Prior to surgical intervention, proper work up of the patients was done. Colour Doppler of all the patients was done. All the patients had caesarean section done. Three of the latter had placenta accreta, 2 had placenta percreta and one had placenta increta. The placenta was removed piece meal in 4 cases. In one case a conservative approach i.e (segmental resection of the portion of the lower uterine segment where placenta was adherent) was done. In one case, caesarean hysterectomy was done. Blood transfusion was required in all cases ranging from 3-8units. Duration of hospital stay was 5-10 days and maternal mortality was nil.

Conclusion: Morbid Adherence of placenta is an obstetrical emergency, which carries an increased risk of perinatal and maternal mortality and morbidity. Antenatal care needs to be improved and morbid adherence of placenta should be diagnosed at the earliest possible time. Previous caesarean section and placenta previa in current pregnancy were the major risk factors observed in 5(83%) of the cases. Previous history of dilatation and curettage was present in 1(16.6%) case.

Keywords: Placenta praevia, Accreta, Increta, Percreta, Caesarean Section.

Corresponding Author:
Dr. Rahila Farhat Chaudhary
Assistant Professor Gynae & Obst
Aziz Fatimah Medical & Dental College, Faisalabad
Tel. +92300-6622499
E-mail: areebafarhat@yahoo.com

INTRODUCTION

The incidence of all forms of adherent placenta (Placenta accreta, increta) has increased over the last two decades, which is most likely due to increasing caesarean deliveries. Other preexisting

conditions may include a history of instrumentation of the endometrium, Placenta praevia and multiparity. Eighty percent of our womendeliver at home assisted by a variety of health care workers, many of whom are untrained. When complications occur they cannot recognize them. [1] Placental adherence is approximately one in 7000-93,000 births. Maternal death is not an infrequent outcome ranging from 7-10% of reported cases of placental adhesion. Morbid adherence of placenta is the abnormal adherence in whole or in part of placenta to the underlying uterine wall, due to the complete or partial absence of the decidua basalis, particularly of its deep or spongy layer. The distinguishing histological features of various type are mentioned below:-

The Placenta Accreta: Trophoblastic villi are morbidly attached to the myometrium either wholly or partially.

The Placenta Increta: Trophoblastic penetration occurs into the myometrium.

The Placenta Percreta: Trophoblastic penetration reaching the serosa of the uterus with the possible extension into the neighbouring organs. Placenta accreta is very rarely diagnosed before delivery. Haemorrhage may occur in the endometrial cavity during the third trimester or in the case of placenta percreta in the peritoneal cavity. [2] Most cases of placenta percreta that involve the bladder are recognised only at the time of delivery. Gross hematuria is a rare event when the bladder is invaded and occurs in 25% of such cases.[3] Both sonography and MR imaging have been used for the diagnosis, MR imaging provides superior anatomic information and diagnostic accuracy.[4] Evaluation to identify whether placenta percreta is present or not includes ultrasound and magnetic resonance imaging. Grey scale ultrasonography when performed in the first trimester, reveals a low lying uterine sac with a thin myometrium.

Ultrasonographic findings during the second and third trimester include placental lacunae (vascular lakes of various shapes and sizes seen within placental parenchyma.) [5] There is evidence that colour Doppler may increase the diagnostic sensitivity of ultrasononography in cases of abnormal placental implantation. The Reviewed ultrasound criteria may be useful for prenatal diagnosis of morbidly adherent placenta & to differentiate between placenta acreta and percreta. 3D power doppler techniques are an important aid in diagnosis.[6] Antenatal diagnosis of placenta percreta with bladder invasion is essential in multidisciplinary management of potentially catastrophic condition of placenta percreta.[7] Once a rare event that affected 1 in 30,000 pregnant women in 1950 and 1960s,placenta accreta now affects 1 in 25,000 pregnancies according to American college of obstretics and gynaecology.[8] The present study was conducted to find out the frequency, causes and out come of patients with morbidly adherent placenta.

METHODOLOGY

This descriptive case series was carried out in the patients admitted to labour ward of Aziz Fatima Medical and dental College from March 2012 to March 2013.A series of 100 patients with risk factors for morbidly adherent placenta were registered after taking informed consent for participation in the study. All the patients with previous uterine operations like caesarean section, myomectomy, hysterotomy or dialatation and curettage, associated placenta previa, or patients with retained placenta removed with difficulty under anaesthesia were included in the study. All the primigravidas were excluded. Risk factors included maternal age and parity, clinical presentation, gestation age in weeks when morbid adherence of placenta was diagnosed, previous history of surgical procedures undertaken like myomectomy and repair of ruptured uterus. Ultrasound examination for exact placental localization and type of morbid adherence of placenta was done.The outcome in these patients was studied in terms of any immediate post

partum haemorrhage, type of treatment offered, blood transfusions required, intra-operative morbidity and mortality and duration of hospital stay. These informations were recorded on a profroma especially designed for this study. The data was analayzed by using SPSS 10. Descriptive statistics were used to calculate frequency, means and standard deviation (SD). Permission to start the study was taken from institutional ethical review committee.

RESULTS

Out of 100 cases 6 patients were found to have morbid adherence of placenta. Maximum number of patients i.e.5 cases were between 25-30 years and one case was 20 years of age. Analysis of their booking status showed that all the patients had booked themselves in the hospital. Out of these patients one presented at 30 weeks of gestation, one at thirty two weeks and the remaining four at 35 and 36 weeks respectively. The relation to the parity and previous caesarean section is shown in table 1 and 2 respectively. Associated risk factors for morbidly adherent placenta are shown in table 3 and the morbid adherence of placenta found at the time of laprotomy is shown in table 4. In all the cases the placenta was removed piece-meal. In one case segmental resection of lower uterine segment was done. In one case caesarean hysterectomy was done.

In one of the cases the placental plexus had extended into the bladder and the bladder was opened at the time of surgery so the bladder repair was done. In all the cases bilateral internal Iliac ligation was done prophylactically. Blood transfusions were required in all the cases to decrease the morbidity and mortality. During the post-op period, one patient stayed at hospital for 5 days, three for 1 week and two for 10 days. Condition of all patients was satisfactory at the time of discharge.

Table-1

Parity of the Patients

Parity	No. of Cases (n-6)	%
P_4	02	33.3
P_3	02	33.33
P_2	01	16.66
P_1	01	16.66

Table -2

The Number of Previous C.Secs

No. of previous C.Sec	No. of Cases (n-6)	%
4 C.Secs	01	16.66
3 C.Secs	02	33.33
1 C.Secs	02	33.33
No history of C.Sec	01	16.66

Table-3

Associated Risk Factors for Morbidly Adherent placenta

Risk Factors	No. of Cases (n-6)	%
Previous C.Sec	05	83
Placenta Praevia	05	83
Previous D & C	01	16.6
Hysterotomy	-	-
Myomectomy	-	-

Table-4

The Morbid Adherence of Placenta Found at the time of Laparotomy

Placenta adhesion	No. of Cases (n-6)	%
Placenta Accreta	03	50.00
Placenta Increta	01	16.66
Placenta Percreta	02	33.33

DISCUSSION

In some hospitals, the number is as high as 1 in 522. Increasing C.Sec rate increases the chance of morbid adherence of Placenta. In our study the

number of patients with more than two c-sections having Placenta Accreta came out to be 27.27%. The rule of thumb is, if there has been one C.Sec and the placenta sits right on the top of the scar, the risk of the placenta accreta is 25%, if two prev. C.Secs, the risk is close to 50%, if three it is 75% and if four it is closer to 100%.In another study it was seen that risk of morbid adherence of placenta increases with increased maternal age, parity, c.sec rate and placenta previa. IVF is also known to be associated with an increased incidence of morbidly adherent placenta, with an estimated rate of 16 cases in 1000 IVF pregnancies versus 1.2 cases in 1000 spontaneous pregnancies.[9] Whether this results from endometrial changes with IVF treatment protocols (dilatation and curettage before IVF) or the characteristics of the gestational carrier (thin endometrium in a patient with bilateral ovarian agenesis), precaution is required in the management of IVF pregnancies if defective decidualization is expected. Since morbidly adherent placenta is associated with significant maternal or fetal mortality or morbidity, screening for and anticipation of this condition is essential. Abnormal vascularization is observed at the placental and myometrial or tissue interface in morbidly adherent placenta.[11] Obstetric hysterectomy can save many lives yet in patients with low parity conservative management like intra-uterine packing, repair of uterine defect and segmental resection and internal iliac ligation can save the uterus. Conservative management without separation of the placenta at delivery has been shown to decrease the blood loss and improve the maternal outcome.[10] However, there are potential complications of secondary hemorrhage and infection.[12,13]

In conservatively managed morbidly adherent placenta, this sign may indicate a safe time for removal of the retained placental tissue when there is a concern for arising complications (eg, infection). Alternatively, arterial embolization and/or ligation could be considered for preservation of subsequent fertility, and ultimately hysterectomy if conservative management fails.13 Conservative management of adherent placenta may thus fail and it increases the maternal mortality, but is still an alternative to hysterectomy when focal defects are present, blood loss is not excessive and preservation of fertility is required. There were no maternal deaths reported from the study of Ota Y, et al in 1999 showing efficient antenatal care and careful monitoring of high risk pregnancies. Maternal mortality was found to be nil in our study, supporting the data of Ota Y et al.

CONCLUSIONS

Morbid adherence of placenta is an obstretical emergency, which carries the increased risk of perinatal and maternal mortality and morbidity. Antenatal care needs to be improved and morbid adherence of placenta should be diagnosed at the earliest possible time. Previous C. Section and placenta praevia in the current pregnancy were the major risk factors observed in 5 (83%) of the cases. Previous history of D&C was present in 1 (16.6%) of the case. Maternal mortality rate was found to be nil in this study, most likely due to early detection and prompt management of this condition.

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AUTHOR

- **Dr. Rahila Farhat Chaudhary**
  Assistant Professor Gynae & Obst
  Aziz Fatima Medical & Dental College
  Faisalabad

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