Obstetrical Hysterectomy In Patients Having Morbidly Adherent Placenta With Previous Cesarean Delivery

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ABSTRACT

Objective *To find out the frequency of obstetrical hysterectomy in patients having morbidly adherent placenta with previous cesarean delivery.*

Study design *Cross sectional study.*

Place & Duration of study *Department of Obstetrics and Gynaecology, Jinnah Postgraduate Medical Centre (JPMC) Karachi, from January 2019 to December, 2019.*

Methodology *All women irrespective of age admitted with morbidly adherent placenta diagnosed on Doppler ultrasound were enrolled. Brief history and detailed physical examination were done. Women with previous cesarean section > 28 weeks gestation with morbidly adherent placenta were included. Primigravida and women with previous all vaginal deliveries, pre eclampsia, diabetes mellitus and those with chronic illnesses were excluded. Patients were followed up from admission till discharge from hospital after surgery. Morbidly adherent placenta was classified on the basis of per operative findings and confirmed by histopathology. Data were collected on pre structured questionnaire.*

Results *Total of 72 women were included. Mean age of patients was 30.83 ± 4.44 year, mean gestational age 34.72 ± 2.91 weeks, mean parity 2.81 ± 1.28 and mean previous numbers of cesarean section 2.41 ± 1.07. Eight (11.11%) patients diagnosed as having placenta increta, 45 (62.5%) placenta accreta and 19 (26.39%) placenta percreta. Thirty-four (47%) patients had obstetrical hysterectomy while 38 (53%) patients were managed by conservative surgery. Gravadity, parity, duration of hospital stay and previous number of cesarean section were significantly high in patients who had obstetrical hysterectomy. One (1.4%) patient expired due to disseminated intravascular coagulation.*

Conclusions *High maternal morbidity was associated with morbidly adherent placenta in women who underwent previous cesarean section. Obstetrical hysterectomy was required in 47% women. Reduction in the rate of cesarean section is essential for prevention of morbidly adherent placenta.*

Key words *Obstetrical hysterectomy, Morbidly adherent placenta, Postpartum hemorrhage, Previous cesarean section, Placenta percreta.*

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INTRODUCTION:

A rising cesarean section rate across the globe has resulted in early and late maternal complications.[1] Morbidly adherent placenta (MAP) is one of the life threatening conditions reported with placenta previa in women having previous cesarean delivery and its incidence is also on the rise.[2,3] In this condition because of absent or faulty decidua basalis, placenta abnormally adheres to the uterine wall and is described as morbidly adherent placenta.[4]

MAP is classified as placenta accret, placenta increta and placenta percreta.[5]

Previous cesarean deliveries as well as placenta previa are major determinant of morbidly adherent placenta along with previous uterine surgeries and multipartiy.[6] Morbidly adherent placenta can lead to massive obstetric hemorrhage which is an obstetric management challenge.[7] About 60% maternal morbidity and 7-10% maternal mortality is attributed to morbidly adherent placenta.[8-10] Major maternal morbidities comprising of coagulopathy, severe hemorrhage, infections, sepsis, bladder injury, ureteric injury, multiple blood transfusion and hysterectomy also occur.[11]

Management of MAP commonly includes three options, a hysterectomy, leaving placenta in situ and removal of whole placenta with resection of invaded uterine tissue followed by restoration of uterine anatomy.[12] Obstetrical hysterectomy is most risky, life saving dramatic operation in modern obstetrics, hence determinant of major obstetric morbidity.[13] Most of the morbidity is attributed to the indication and underlying disorder in addition to the procedure itself. Increased prevalence of obstetrical hysterectomy with morbidly adherent placenta is well reported.[14] This study aimed to determine the frequency of obstetrical hysterectomy in cases of MAP with previous cesarean section.

METHODOLOGY:

This cross sectional study was conducted at the Department of Obstetrics and Gynaecology, Jinnah Postgraduate Medical Centre Karachi, from January 2019 to December 2019. Women, irrespective of age who were admitted with the diagnosis of morbidly adherent placenta on the basis of Doppler ultrasound were consecutively enrolled after taking informed consent. A brief history was obtained followed by detailed physical examination. Women with previous cesarean section at > 28 weeks gestation with morbidly adherent placenta diagnosed by Doppler ultrasound were included. Whereas primigrivida, women with history of previous all vaginal deliveries, pre eclampsia, diabetes mellitus, chronic respiratory, liver and cardiac diseases, were excluded. Obstetrical hysterectomy was referred to the hysterectomy performed in cases of morbidly adherent placenta due to intractable hemorrhage.

Patients were followed up from admission, during surgery till discharge from hospital. MAP was classified on the basis of per operative findings and confirmed by histopathology. Patients were divided in two groups; those who had hysterectomy and who did not. Patients' data including maternal age, gestational age, parity, previous cesarean section, type of MAP namely placenta accreta, increta, percreta, obstetrical hysterectomy and duration of hospital stay were noted. Data analysis were done by using statistical package for social sciences (SPSS) version 25. Mean and standard deviation were computed for quantitative variable and frequency and percentage were calculated for qualitative variables. Independent t-test was used to compare mean difference of both groups. Chi square test was applied to check associations. P value <0.05 were considered as significant.

RESULTS:

Seventy two female patients were included in current study. Mean age of patients was 30.83+4.4 year and mean weight, gestational age, gravidity and parity were 69.30±7.85 kg, 34.72±2.91 weeks, 4.47±1.48, and 2.81±1.28. The mean hospital stay was 15.20±10.40 days while mean previous numbers of cesarean sections were 2.41±1.07. Types of MAP is given in table II. Obstetrical hysterectomy was performed in 34 (47%) patients and 38 (53%) managed with conservative surgery.

The age of the patients was comparatively high among those who underwent obstetrical hysterectomy but the difference was insignificant. Weight was also comparatively more among patients with obstetric hysterectomy but it was also insignificant. Gestational age was almost the same among patients with or without obstetric hysterectomy. Further, gravidity (p=0.025), parity

Table I: Type of Morbidly Adherent Placenta and Mortality

Variables	Type	n (%)
Type of Morbidly Adherent Placenta	Increta	8 (11.11)
	Accreta	45 (62.5)
	Percreta	19 (26.39)
Mortality	Yes	1 (1.4)
	No	71 (98.6)

Table II: Comparison of Mean Age, Weight, Gestational Age, Gravidity, Parity, Hospital Stay, and Previous Cesarean Section According To Obstetric Hysterectomy

Variables	Obstetric Hysterectomy		p-Value
	Yes (n±SD)	No (n±SD)	
Age (years)	31.32±4.25	30.39±4.61	0.379
Weight (Kg)	70.29±8.79	68.42±6.89	0.316
Gestational Age (Weeks)	34.67±2.72	34.76±3.11	0.901
Gravidity (n)	4.88±1.53	4.10±1.35	0.025*
Parity (n)	3.17±1.16	2.50±1.31	0.024*
Duration of Hospital Stay (Days)	23.02±9.98	8.21±3.47	0.000*
Number of Previous Cesarean Sections (n)	2.70±1.05	2.15±1.02	0.029*

Independent Student t Test, *Significant

Table III: Association of Obstetric Hysterectomy with Morbidly Adherent Placenta Type and Mortality

Variables		Obstetric Hysterectomy n (%)		p-Value
		Yes	No	
Type of Morbidly adherent Placenta	Accreta	9 (25)	36 (75)	0.000*
	Percreta/Increta	27 (100)	0	
Mortality	Yes	1 (2.9)	0 (0)	0.472
	No	33 (97.1)	38 (100)	

(p=0.024), hospital stay duration (p=0.000), and previous number of cesarean section (p=0.029) were found significantly high among patients who had obstetric hysterectomy. The results also showed significant association of obstetric hysterectomy with the type of morbidly adherent placenta (table III).

DISCUSSION:

Although obstetrical hysterectomy is vital procedure considered imperative in the control of life threatening postpartum hemorrhage, but is associated with significant maternal morbidity and mortality mainly because of the concomitant predisposing factors.[15] In patients with morbidly adherent placenta excessive bleeding can ensue while separating placenta from the uterine wall, hence obstetrical hysterectomy is inevitably performed as a life saving procedure.[16] Whereas in cases with placenta acreta conservative management with balloon tamponade, removal of placenta with resection of adjoining uterine tissue followed by restoration of anatomy is a possibility.[14] Morbidly adherent placenta occurs at the peak of childbearing age, and in index study the mean age of the women was 30.83 ± 4.44 year which is concurrent with the findings in other study.[6] Similarly mean parity of patients is similar to other studies.[6,14]

In our study obstetrical hysterectomy was done in 34 (47%) patients however in 38 (53%) women uterus was saved successfully by employing conservative measures including balloon temponade, wedge resection of uterus and application of haemostatic sutures. Hence in our study more than 50% cases of morbidly adherent placenta were managed favorably by conservative surgical measures.

Increasing gravidity, parity and number of previous cesarean sections were significantly associated with obstetrical hysterectomy in our study. Patients who had obstetrical hysterectomy suffer from prolonged hospital stay as compared to patients who underwent conservative management. One maternal death (1.4%) due to disseminated intravascular coagulation was observed in patients who had obstetrical hysterectomy in our study which is considerably less than reported in literature.[17] The marked difference and better outcome is because of the availability of blood, blood products, timely decision, presence of skilled surgeons, multidisciplinary approach and good postoperative care.

The limitation of this study was a single center data on limited number of patients over short period of time. However a study at national level may provide more strong evidence based data on outcome of morbidly adherent placenta. This will also reflect standard of obstetrical facilities available to women from across Pakistan. This may help in developing more stringent measures to reduce cesarean section rate and improve care of women with morbidly adherent placenta.

CONCLUSIONS:

Obstetric hemorrhage is devastating as well as life threatening condition significantly associated with morbidly adherent placenta. Rising cesarean section rate consequently increases complications like morbidly adherent placenta and eventually frequency of obstetrical hysterectomy. In this study nearly half of the women uterus was saved which is an important observation.

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