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ORIGINAL ARTICLE

Frequency of Obstetrical Hysterectomy in Morbidly Adherent Placenta in Women with Previous Cesarean Section in Tertiary Care Hospital

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ABSTRACT

Objective: To determine the frequency of obstetrical hysterectomy in the morbidly adherent placenta in women with previous cesarean sections in tertiary care hospital.

Study design: A cross-sectional study

Place and Duration: Gynecology and obstetrics department of Liaquat university hospital Hyderabad from 5th November 2020 to 5th May 2021

Methodology: This study comprised 62 women who had placentas that were identified as morbidly adherent by Doppler ultrasound. Repeat ultrasound scans were used to monitor cases with grossly adherent placentas. The condition of the mother and fetus was routinely evaluated in the hospital, where blood was cross-matched for transfusion. All information was entered into a pre-made proforma.

Results: The women were 30.68 ±4.70 years of age on average. When a placenta was morbidly adherent and in a woman who had previously had a caesarean section, 7.41% (17/62) of those women underwent an obstetrical hysterectomy. These women spent an average of 4.92 ±2.65 days in the hospital.

Conclusion: - In 7.41% of cases, obstetrical hysterectomy was performed on women who had previously undergone caesarean section because of a morbidly attached placenta. These findings suggest that a morbidly adhered placenta can seriously interfere with a female's ability to procreate. It is crucial to make a well-informed decision about having a C-section in the first place, and following previous C-sections, vaginal birth should be given some thought.

Keywords: caesarean section, morbidly adherent placenta, hysterectomy

INTRODUCTION

In most nations, the prevalence of caesarean sections (CS) is rising. However, additional research is required to fully assess the long-term maternal morbidity and obstetric destiny of women who have previously given birth by caesarean section [1]. The term "placenta accreta" or "morbidly adherent placenta" refers to the placenta's aberrant adhesion to the uterine wall as a result of defective or nonexistent decidua basalis [2]. A serious obstetric issue is managing a placenta that is morbidly adherent [3].

Currently, there are three options for treating placenta accreta: (1) perform a hysterectomy; (2) leave the placenta in place; and (3) resect the invading tissues while removing the entire placenta to restore uterine anatomy [4]. Massive obstetric haemorrhage (OH) and placenta previa and accreta are two obstetric disorders that are intimately related to one another [5].

The surgical removal of a pregnant or recently pregnant uterus is known as an obstetric hysterectomy (OH) [6]. One indicator of obstetric morbidity is obstetric hysterectomy. The removal of the uterus during or after a caesarean section, right after a vaginal delivery, or even during the puerperium is seen to be among the riskiest and most dramatic surgeries in modern obstetrics [7]. This is done to lower maternal morbidity and death. In high-income nations and low-income countries, respectively, there seems to be an increase in the number of obstetric hysterectomy procedures performed for intractable obstetric bleeding [8].

The incidence varies according to the clinical setting and healthcare system. It's crucial to identify the causes of peripartum hysterectomy. The majority of researchers have concentrated on peripartum risk factors like uterine atony, uterine rupture, and placenta previa. [9] According to the study, 18,838 births were made and 19 OHs were performed, yielding a prevalence rate of 1.0 per 1000 deliveries. Since the indication for OH increased considerably from 20% (2/10) to 77.8% (7/9) (P 0.05), 14 (73.7%) of these 19 cases of OH were carried out with a history of caesarean and placenta accreta [10].

The aim of this study is to determine the frequency of obstetrical hysterectomy in the morbidly adherent placenta in women with previous cesarean sections in our population.

METHODOLOGY

This cross-sectional study was conducted, in the Gynecology and obstetrics department of Liaquat university hospital Hyderabad from 5th November 2020 to 5th May 2021. The non-probability consecutive sampling technique was used. The sample size calculation is based on a previous study [11] in which the author reported that placenta accreta as the indication for OH has increased significantly from 20% (2/10) to 77.8% (7/9). So P=20% margin of error= 10% (because of low rate MAP) with a 95% confidence interval, 62 cases of morbidly adherent placenta were included in this study.

In this study, pregnant women who had previously undergone caesarean sections, were between the ages of 18 and 40 years, had gestations lasting 24 weeks or longer, and had Gravida 2 or higher, as determined by Doppler ultrasound, were included. Primigravida, expectant mothers who had already given birth vaginally, and expectant mothers who had gestational diabetes were excluded from the study.

Patients who met the inclusion and exclusion criteria for this study gave their informed consent. Repeat ultrasound scans were used to monitor cases with grossly adherent placentas. Aloka SSD 280 LS with a 3.5 MHZ linear probe and Toshiba Sonolayer SAL 38B with an electronic convex 3.5 MHZ probe were the ultrasound scanners used. As soon as MAP was detected, patients were admitted to the hospital at 24 weeks of pregnancy or later. The condition of the mother and fetus was routinely evaluated in the hospital, where blood was cross-matched for transfusion if needed.

A pre-designed proforma was used to record patient information, such as the patient's age, gestational age, parity, previous caesarean sections, type of MAP (placenta previa, accreta, increta, or percreta), obstetric hysterectomy, and length of hospital stay.

Statistical programmes for social science version 17 was used to analyse the data (SPSS Inc., Chicago, IL). For continuous variables including maternal age, gestational age, weight, parity, and length of hospital stay, mean and standard deviation were calculated. For previous caesarean sections, MAP (placenta previa, accreta, increta, or percreta), and obstetric hysterectomy, frequency and percentage were calculated. Through stratification,

effect modifiers like age, parity, prior caesarean sections, and MAP type were controlled. Chi-square analysis post-stratification was used. P –value <0.05 was considered significant.

RESULTS

This study comprised 62 women who had placentas that were identified as morbidly adherent by Doppler ultrasound. The women were 30.68 ±4.70 years of age on average. Table 1 displays further patient demographic information. There were 74.19% of women had undergone a previous caesarean section, 16.13% had two, and 9.68% had three. A total of 40.3% had accreta, 222.58% had increta, and 37.1% had percreta in terms of the type of morbidly attached placenta.

Table 1 also shows that 7.41% (17/62) of women with prior caesarean sections experienced obstetrical hysterectomy due to a morbidly attached placenta. These women spent an average of 4.92 days in the hospital. When stratification was done, it was found that there was no statistically significant difference in the rate of obstetrical hysterectomy between age groups in women who had previously undergone caesarean sections and had a morbidly adherent placenta (As shown in table 2). The rate of obstetric hysterectomy was likewise not statistically significant with respect to parity, prior Caesarean section, and the kind of attached placenta.

Table 1: Descriptive statistics of study participants n=62

Mean age (Years)	30.68 ±4.70
Mean gestational age (Weeks)	33.50± 4.55
Mean weight (Kg)	70.85 ±12.15
Mean height (Cm)	156.75 ±5.39
Mean parity	2.61± 0.64
Mean duration of hospital stay (Days)	4.92 ±2.65
Number of previous caesarian sections	
One	46 (74.19%)
Two	10 (16.13%)
More than two	6 (9.68%)
Morbidity adherent placenta	
Percreta	23 (37.10%)
Accreta	25 (40.32%)
Increta	14 (22.58%)
Frequency of obstetrical hysterectomy in morbidly adherent placenta	
Yes	17 (27.42%)
No	45 (72.58%)

Table 2: Frequency of obstetrical hysterectomy in the morbidly adherent placenta in women with previous cesarean section by various factors

Parameters	Obstetrical hysterectomy		Total	P-value
Age in years	Yes	No		0.898
≤30	8 (26.7%)	2 (73.3%)	30	
>30	9 (28.1%)	23 (71.9%)	32	
Parity				
Two	6 (20.7%)	23 (79.3%)	29	0.504
Three	9 (3.1%)	19 (76.9%)	28	
Four	2 (40%)	3 (60%)	5	
Previous Cesarean sections				
One	12 (6.1%)	34 (73.9%)	46	0.914
Two	3 (30%)	7 (70%)	10	
More than two	2 (33.3%)	4 (66.7%)	6	
Types of adherent placenta				
Accreta	5 (20%)	20 (80%)	25	0.515
Increta	4 (28.6%)	10 (71.4%)	14	
Percreta	8 (34.8%)	15 (65.2%)	23	

DISCUSSION

A morbidly adherent placenta is one that adheres abnormally to the neighbouring uterine wall. Since it causes severe haemorrhage both during and after delivery, it poses a life-threatening condition [12]. With a rise in C-sections, a serious complication called the morbidly adherent placenta is emerging. It is observed in n 1:2500 deliveries. Women who have had two prior caesarean sections, placenta previa, and a history of endometrial lining injury are also at higher risk [13].

According to the extent of placental involvement and the severity of chorionic villi invasion, the morbidly adherent placenta is divided into three types: accreta, increta, and percreta. This classification is based on the serosal surface involvement of nearby organs including the colon and urine bladder as well as the decidua basalis' penetration into the placenta [14].

A specialized team must be included in the treatment of a morbidly adherent placenta in order for it to be successfully managed. Special focus must be placed on antenatal identification of the problem and preparation for surgical management under qualified supervision. For these patients, the most qualified staff should be accessible [15]. In a local investigation, the incidence of a morbidly adherent placenta in a uterus with scarring was determined to be 1.83 per 1000 deliveries, which was lower than the rate of 1/274.128 deliveries that had been reported in a prior study. A total of 78% of these individuals received hysterectomies. In research, 6% of instances had a placenta that was morbidly adherent. [16] 70% of attached placenta instances resulted in peripartum hysterectomy, and 80% of cases resulted in severe postpartum bleeding [17]. According to a local study, attached placentas required a hysterectomy in 6.05% of instances while postpartum haemorrhage occurred in 28.4% of cases. [18] Another local investigation found that the attached placenta in scarred uterus resulted in a hysterectomy in 28.57% of cases and postpartum haemorrhage in 71.42% of cases [19].

The average age of the women in this study was 30.68 4.70 years. The patients in Mamluk et al study [20] had a mean age of 29.34 5.58 years. The patients in Shahid et al study [21] had a mean age of 30.59 years (4.62, range 20-45 years) and a median age of 26-35 years.

Overall 74.19% of the women in this study had already undergone one caesarean section, 16.13% had already undergone two, and 9.68% had already undergone three. There were three different types of the morbidly adherent placenta: accreta (40.3%), increta (222.58%), and percreta (37.1%). In the Shahid et al study [21], there were 16 (6.5%) patients with the accreta type of morbidly adherent placenta, 10 (4.1%) patients with the increta type, and 9 (3.7%) patients with the percreta type.

Uterine procedures, prior caesarean sections, IVF pregnancies, and growing mother age are risk factors for poor placental adhesion. A lower rate of morbidly adherent placentas will undoubtedly result from avoiding these risk factors [22]. Desai et al. reported that 90% of the research group in their study had undergone one to three previous caesarean sections, whereas the overall prevalence of morbidly adherent placenta in our study was 14.3%. Memon et al study [23] found that 89.74% of patients admitted with placenta previa frequently had a severely adherent placenta. Placenta previa was linked to caesarean sections, according to research by Clark et al.

With more caesarean sections performed, there was a commensurate rise in occurrences of the improperly attached placenta. [24] According to an unsimilar study, 39% of women who had previously undergone two caesarean sections showed signs of placenta accreta [25].

In the current study, 7.41% of women who had previously undergone a caesarean section experienced the frequency of obstetrical hysterectomy in cases of the morbidly attached placenta. In research by Mamluk et al., 14.3% of women who had a previous caesarean section had a morbidly adherent placenta in this pregnancy [20].

More occurrences of placenta previa and improperly attached placenta are emerging as a result of the increase in caesarean section rates. According to Chaudhary et al. [26], 27.27% of patients who underwent more than two C-sections had the placenta accreta. Another finding is that the frequency of caesarean procedures gradually increases the degree of aberrant placental adhesion. The same results were confirmed by another study. A total of 18, 838 deliveries and 19 OHs were recorded in the study by Xiao-Yu Pan et al., indicating a prevalence rate of 1.0 per 1000 deliveries. As the indication for OH has dramatically

grown from 20% (2/10), 14 (73.7%) of these 19 cases of OH were carried out with a history of caesarean and placenta accreta.

The information that is now available suggests that an increase in the rate of caesarean sections is causing an increase in the incidence of aberrant placentation. In order to lower the incidence of morbidly adherent placenta, efforts should be made to lower the main caesarean section rate. The incidence of placenta previa, placenta accreta, and maternal death is anticipated to grow proportionately as the number of caesarean sections rises [27].

Due to poor counselling, financial difficulties, a lack of antenatal care at the community level, and a lack of access to qualified professionals, many patients in Pakistan with severe obstetric illnesses frequently experience serious, life-threatening haemorrhage. Small clinic staff are unable to recognize and prepare for this major cause of maternal mortality [28]. A high index of suspicion is necessary to handle significant haemorrhage brought on by placental problems and to prevent major obstetric complications. Significant efforts should be made to lower the number of caesarean sections, achieve the international rate objective, and lower the rate of morbidly adherent placentas in order to reduce maternal mortality and morbidity [29].

CONCLUSION

The frequency of obstetrical hysterectomy in the morbidly adherent placenta in women with previous cesarean sections was observed in 7.41%. These results indicate that morbidly adherent placenta can play havoc with the reproductive career of females. It is very important to decide for a C-section in the first place very wisely and in cases of those with previous one section vaginal birth after C-section should be considered.

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