OPEN ACCESS
Freely Available Online

JOURNAL OF WOMAN'S REPRODUCTIVE HEALTH
ISSN NO: 2381-862X

Research Article

DOI : 10.14302/issn.2381-862X.jwrh-17-1758

Placenta Previa with History of Previous Caesarean Delivery – an Obstetrician's Nightmare

Mazumder U[1], Rouf S[1], Sarkar S[2*]

1. Department of Obstetrics and Gynaecology, Dhaka Medical College, Dhaka , Bangladesh,

2. Head Department of Neurosurgery, Shaheed Suhrawardy Medical College, Dhaka, Bangladesh

Abstract

Background:

The nature of placenta previa can be unpredictable and harsh on the mother and baby. These complications are often unpredictable, unpreventable and often leave the labour ward team in a dilemma. . This Obstetricians' nightmare is fortunately a rare complication. The frequency of placenta previa at the time of delivery average 1/200 births i.e. 0.5%. Placenta previa is still an important cause of maternal and fetal death in our country. The risk factors are Advanced Maternal age, Multi parity , Previous Cesarean Section, Multiple gestation, Previous Abortions, Previous intrauterine surgery, placenta previa in previous pregnancy, Smoking.

Objective:

Identification of risk factors, the feto-maternal outcome and complications of patients having placenta previa with previous caesarean section.

Methodology:

This cross sectional study was conducted from July 2012 to June 2015 in Obstetrics and Gynaecology department, Dhaka Medical College hospital. 100 patients of placenta previa were included in this study. Non-probability purposive sampling method was used for selection of patients.

Results:

In this study, Socio-demographic profiles, Identification of risk factors, the feto-maternal outcome and complications of patients having placenta previa were assessed. The frequency of placenta previa associated with previous cesarean section was 61%. In demographic profiles of the patients in this study - with a history of previous caesarean section, 78.7% patients were in the age group 26-35. Multiparity was predominant on scarred uterus group (63.9%). Here, demonstrated that > 2 previous history of caesarean section was associated with 80.3% of placenta previa. Regarding maternal outcome, complications like massive haemorrhage, ureteral injury, bladder injury, wound infection, DIC, maternal and perinatal mortality were more in the scarred patients than in the unscarred patients. In our study, 29.5% of morbid adhesion of placenta observed in scarred uterus.

Conclusions:

There is significant association of placenta previa with previous cesarean delivery. So, Careful monitoring of high risk pregnancies is of utmost importance. Avoidance of unnecessary caesarean sections and early week's pregnancy terminations can minimize the Obstetricians' nightmare.

Corresponding author: Dr Saumitra Sarkar MS , Associate Professor and Head Department of Neurosurgery Shaheed Suhrawardy Medical College Dhaka, Bangladesh , EMAIL: saumitra_nsurg@yahoo.com

Key words: Placenta previa, Postpartum haemorrhage, maternal outcome, Scarred and uuscarred uteru, Caesarean section, Obstetricians' nightmare

Received: Sep 06,2017; **Accepted**: Oct 22,2017; **Published:** Oct 29,2017

Introduction

The nature of placenta previa can be unpredictable and harsh on the mother and baby. These complications are often unpredictable, unpreventable and often leave the labour ward team in a dilemma. Nobody likes to be in the 'red' whether it is the bank account or in exam result. Similarly in obstetrics, doctors do not enjoy seeing abnormal vaginal bleeding in the antenatal period. Nerve wrecking decisions have to be taken depending on the severity. This Obstetricians' nightmare is fortunately a rare complication. 2 -5% of all pregnancies, approximately one-third are due to placenta previa. The frequency of placenta previa at the time of delivery average 1/200 births i.e. 0.5%. Placenta previa is still an important cause of maternal and fetal death in our country. The risk factors are Advanced Maternal age, Multiparity , Previous Cesarean Section, Multiple gestation, Previous Abortions, Previous intrauterine surgery, PP (placenta previa) in previous pregnancy, Smoking.

The Aim of the Present Study:

Identification of risk factors, the feto-maternal outcome and complications of patients having placenta previa with previous caesarean section.

Materials & Method

This cross sectional study was conducted from July 2012 to June 2015 in Obstetrics and Gynaecology department, Dhaka Medical College hospital. 100 patients of placenta previa were included in this study. It was non-probability purposive sampling method.

The diagnosis of placenta previa for this study was based on sonographic diagnosis during the third trimester at 28 wks gestation or more. Furthermore the diagnosis was confirmed by direct inspection of placental location at the time of caesarean section. The exclusion criteria were incomplete medical records, uncertain gestational age, and placental abruption.

After selection of patients, two groups were made.

Group A - Patients of placenta previa with history of previous caesarean delivery (Scarred Uterus)

Group B (Control)-Patients of placenta previa without history of previous caesarean delivery (Unscarred Uterus)-

Discussion

Placenta praevia is a major cause of morbidity and mortality in both the developed and developing countries like Bangladesh. The present study showed a strong association of placenta praevia with cesarean section. The frequency of placenta praevia with previous cesarean section came out 61% which is very high (Table 1), that is clearly consistent with other renowned studies regarding this topic. [1]

Similar results were also obtained in a study during the period of 1977-1983 in Loss Angeles hospital series [2]. These investigators found the incidence of placenta praevia to be 9.8 per 1000 among women with previous cesarean delivery and 2.6 per 1000 among women without such a history.

If we look at the demographic profiles of the patients in this study - with a history of previous caesarean section, 78.7% patients were in the age group 26-35. Similar results were found by Tuzović et al. [3]. Sclerotic changes in the intramyometrial arteries with increasing age may contribute to placenta previa by reducing blood supply in the placenta. Moreover Hasegawa et al[4]. have mentioned that advanced maternal age is an independent risk factor of massive hemorrhage during cesarean section in women with placenta previa.

Multiparity was predominant on scarred uterus group (63.9%). It has been mentioned as a risk factor by previous studies [5][3]. No significant associations of placenta previa with socio-economic status or religion have been found in this study. Usta et al [6] have demonstrated parallel results.

In addition our study has also demonstrated that previous history of abortions was associated with placenta previa. 54.1% cases of the scarred group & 48.7% of the unscarred group had history of abortion previously. Johnson et al [7]) and Hendricks et al[8] also found similar results.

Regarding maternal outcome, complications like massive haemorrhage, ureteral injury, bladder injury were more in the scarred patients than in the unscarred patients. In our study, 54.1% were P. accreta type. Another study carried out in Jordan University of science and technology shows that placenta praevia is higher among gravida >4, para >3 and previous caesarean

Result:

Table-1: Incidence of placenta previa (n=100)			
Stages	**Frequency**	**Percentage**	**P value**
Group A (Scarred Uterus)	61	61%	<0.05
Group B (Unscarred Uterus)	39	39%	
Total	100	100%	

Table-2: Socio-demographic profile of two groups (n=100)			
Parameters	**Group A (Scarred Uterus) (n=61) No. (%)**	**Group (Unscarred Uterus) (n=39) No. (%)**	**p value**
Age group (years)			
16-25	11(18.0%)	11(28.2%)	
26-35	48(78.7%)	27(69.2%)	0.992^{ns}
36-45	02(3.3%)	01(2.6%)	
Mean±SD	28.16±3.96	28.15±6.12	
Parity			
Nulliparous	00(00%)	07(17.9%)	
1-4 para	39(63.9%)	22(56.4%)	0.164^{ns}
>5 para	22(36.1%)	10(25.6%)	
Socioeconomic status			
Low	28(45.9%)	17(17.9%)	
Middle	22(36.1%)	12(25.6%)	0.463^{ns}
Upper middle	11(57.4%)	10(56.4%)	
Educational status			
Illiterate	5(8.2%)	2(5.1%)	
Primary	17(27.9%)	14(35.9%)	0.597^{ns}
SSC	21(34.4%)	14(35.9%)	
HSC	17(27.9%)	7(17.9%)	
Graduate	1(1.6%)	2(5.1%)	

Table-3: Obstetric Profile (n=100)			
Parameters	**Group A (Scarred Uterus) (n=61) No. (%)**	**Group B (Unscarred) (n=39) No. (%)**	**P value**
Antenatal Check Up Regular	32 (52.5%)	22 (56.4%)	0.699^{NS}
Irregular	29 (47.5%)	17 (43.6%)	
Gestational weeks			0.313^{ns}
<30	3(4.9%)	5(12.8%)	
31-34	11(18.0%)	5(12.8%)	
35-37	28(45.9%)	21(53.8%)	
<37	19(31.1%)	8(20.5%)	
Mean±SD	35.87±2.55	35.21±3.08	
Location of Placenta			0.699^{NS}
Anterior	32 (52.5%)	22 (56.4%)	
posterior	29 (47.5%)	17 (43.6%)	
Total	61 (100%)	39 (100%)	

Table-4: Identified Risk factors for scarred uterus (n=61)			
Number of caesarean section	**Group A (Scarred Uterus) (n=61) No. (%)**	**Percentage (%)**	**P value**
Previous One	12	19.7%	<0.05
Previous Two	33	54.1%	
Previous Three	16	26.2%	

Table-5: Identified Risk factors (n=100)			
Parameters	**Group A (Scarred Uterus) (n=61) No. (%)**	**Group B (Unscarred) (n=39) No. (%)**	**P value**
Previous abortion (Spontaneous/ Induced)			NS
Present	12	19	
Absent	33	5	
H/O previous Placenta Previa			NS
Present	12	19	
Absent	33	5	

Table-6: Maternal complications & outcome (n=100)

Parameters	Group A (Scarred) (n=61) No. (%)	Group B (Unscarred) (n=39) No. (%)	p value
Massive obstetric haemorrhage	42(68.9%)	23(59.0%)	0.312 ns
Bladder injury	27(44.3%)	14(35.9%)	0.407 ns
Ureteral injury	3(4.9%)	1(2.6%)	0.558 ns

Table-7: Maternal complications & outcome in scarred uterus (n=61)

Parameter	Group A (Scarred Uterus) (n=61) No. (%)	Percentage (%)	P value
P. Accreta	12	19.7%	<0.05
P. Increta	33	54.1%	
P. Percreta	16	26.2%	
Total	61	100%	

Table-8: Comparison of Foetal outcomes in two groups (n=100)

Foetal outcome	Group A (Scarred Uterus) (n=61) No. (%)	Group B (Unscarred Uterus) (n=39) No. (%)	p value
Preterm	23(37.7%)	20(51.3%)	0.181 ns
Low birth weight	24(39.3%)	19(48.7%)	0.256 ns

section and no increased in incidence of placenta praevia with increasing maternal age and previous abortion [9]

Conclusion

The nature of placenta previa can be unpredictable and harsh on the mother and baby. It is concluded that there is significant association of placenta previa with previous cesarean delivery. Also It demonstrates the feto-maternal outcome and complications associated with placeta previa.

So, Careful monitoring of high risk pregnancies is of utmost importance. Avoidance of unnecessary caesarean sections and early week's pregnancy terminations can minimize the Obstetricians' nightmare.

References:

1. Dashe JS, McIntire DD, Ramus RM, Santos-Ramos R, Twickler DM (2002) Persistence of placenta previa according to gestational age at ultrasound detection. Obstet Gynecol 99: 692-697.
2. Clark SL, Koonings PP, Phelan JP (1985) Placenta previa/accreta and prior cesarean section. Obstet Gynecol 66: 89-92.
3. Tuzović L, Djelmis J, Ilijić M. Obstetric risk factors associated with placenta previa development: case-control study. Croatian Medical Journal. 2003 Dec; 44 (6): 728-33
4. Hasegawa J, Matsuoka R, Ichizuka K, Mimura T, Sekizawa A, Farina A, Okai T. Predisposing factors for massive hemorrhage during Cesarean section in patients with placenta previa. Ultrasound Obstet Gynecol. 2009 Jul; 34 (1): 80-4.15. Usta IM, Hobeika EM, Musa AA, Gabriel GE, Nassar AH. Placenta previa-accreta: risk factors and complications. Am J Obstet Gynecol. 2005 Sep; 193 (3 Pt 2): 1045-9.
5. Gilliam M, Rosenberg D, Davis F. The likelihood of placenta previa with greater number of cesarean deliveries and higher parity. ObstetGynecol 2002; 99: 976-80.
6. Usta IM, Hobeika EM, Musa AA, Gabriel GE, Nassar AH. Placenta previa-accreta: risk factors and complications. Am J Obstet Gynecol. 2005 Sep; 193 (3 Pt 2): 1045-9.
7. Johnson LG, Mueller BA, Daling JR. The relationship of placenta previa and history of induced abortion. Int J Gynaecol Obstet. 2003 May; 81(2): 191-8.
8. Hendricks MS, Chow YH, Bhagavath B, Singh K. Previous cesarean section and abortion as risk factors for developing placenta previa. J Obstet Gynecol Res. 1999 Apr; 25 (2): 137-42.
9. Zaideh SM, Abu-Heija AT, El-Jallad MF (1998) Placenta praevia and accreta: analysis of a two-year experience. Gynecol Obstet Invest 46:96-98.