Original Article

Morbidity with Placenta Previa

Samina Kausar, Bushra Zahoor, Rubina Ali

Abstract

Introduction: Placenta previa is a rare obstetric catastrophe associated with high maternal morbidity and mortality. This condition is multifactorial and can lead to life threatening conditions like postpartum hemorrhage, obstetrical hysterectomy and placenta accreta. A concerted effort should be made towards careful evaluation, timely delivery and provision of skillful management to reduce the associated morbidity. In low socio-economic background and poor settings, these complications may even lead to maternal death. **Objective:** To determine the frequency of maternal morbidity in placenta previa in terms of placenta accreta, obstretical hysterectomy and postpartum hemorrhage in patients with placenta previa. **Study Design:** It is a descriptive case series study **Setting:** Department of obstetrics and gynaecology, Punjab Medical College and affiliated hospitals, Faisalabad. **Duration of Study with dates:** The study was carried out over a period of six months from 01-04-2011 to 01-10-2011. **Subjects & Methods: A t**otal 215 cases were included in the study. The patients with diagnosed placenta previa or those with painless vaginal bleeding subsequently diagnosed on ultrasonography to have placenta previa were included in the study. Majority of patients were delivered by caesarean section. Active management of third stage was done to prevent primary postpartum haemorrhage (PPH). In cases of PPH, conservative management was done first in the form of intramuscular syntometrine (Oxytocin 5 IU/ergometrine 0.5mg) and intravenous infusion of syntocinon (40 IU in 500ml 0.9% saline over 4-6 hours). In cases of failed medical management of PPH and morbidly adherent placenta (placenta accreta) obstretical hysterectomy was carried out. **Results:** Mean age of the patients was 28.14 ± 5.57 years. Distribution of cases by gestational age shows that the majority of patients 147 (68.36%) were between 32-37 weeks of gestation and 25(11.62%) patients were <32 weeks while 43 (20%) were >37 weeks. Mean gestational age was 34.60 ± 2.95 weeks. Parity distribution was as follows: 31 (14.40%) patients had parity 0-3, 89 (41.39%) patients had parity 4-6 and 95 (44.18%) had parity > 6 with mean parity of 5.46± 1.82. Postpartum hemorrhage developed in 61(28.4%) of patients. Placenta accreta was present in 18 (8.37%) patients. Obstetrical hysterectomy was done in 13 (6.04%) of patients and none of the patients expired. **Conclusion:** Placenta previa usually leads to life threatening complications. Close attention should be paid to massive hemorrhage. Adequate blood transfusions and prompt intervention to deliver by cesarean section and anticipating the risk of placenta accreta and necessity of obstetrical hysterectomy can reduce the maternal morbidity. **Key Words:** Placenta previa, Postpartum hemorrhage, placenta accreta, obstetrical hysterectomy.

INTRODUCTION

Placenta previa is defined as a placenta that is wholly or partially attached to the lower uterine segment. It occurs in 0.4%-0.8% of pregnancies[1]. The prevalence of placenta previa in Pakistan is reported to be 0.5%. The maternal mortality rate secondary to placenta previa is 0.03% due either to hemorrhage or complication of cesarean delivery [2]. Placenta previa increases perinatal and maternal morbidity and mortality [3]. Maternal risks with placenta previa include life threatening hemorrhage, anesthetic and surgical complications due to emergency cesarean delivery with sub optimal preparation for surgery. Post partum hemorrhage, cesarean hysterectomy, post partum sepsis, air embolism and abnormal degree of placental adherence can often occur [4]. Hemorrhage complicates 3% of pregnancies and one third of it is caused by

placenta previa[5]. Repeated bleeding episodes may produce anemia and need multiple blood transfusions and prolonged hospitalization. The incidence of placenta previa is increased with previous cesarean section i.e. 1.87% with previous one cesarean section, 2.4% for two cesarean section, 2.8% for three and 10% for four or more caesarean sections[2]. The risk of placenta accreta, increta and percreta increases with number of previous cesarean sections in women with placenta previa[6]. Incidence of placenta accreta in women with placenta previa is 9.3%. Placenta accreta is a significant condition with high potential for hysterectomy. It accounts for 50% of cases[5] of hysterectomy. Incidence of hysterectomy following cesarean section for placenta previa is 5.3% (relative risk compared with those undergoing cesarean section without placenta previa is 33) [7].

Post partum hemorrhage is a significant complication of placenta previa. In one study mild to moderate post partum hemorrhage was seen in 30% patients and severe hemorrhage in 10% of cases with placenta previa [2]. All these complications may result in maternal death.

SUBJECTS AND METHODS

This descriptive case series study was done on 215 patients. All the patients with diagnosed placenta previa or presenting with painless vaginal bleeding after 28 weeks gestation and diagnosed subsequently on ultrsound as having placenta previa were included after taking informed consent. Whereas the patients with antepartum hemorrhage due to causes other than placenta previa like placental abruption, vasa previa, carcinoma cervix and other local lesions and those with pregnancy induced hypertension, pre eclampsia and twin gestation were excluded.

The demographic, obstetrical histories, amount and duration of blood loss, duration of gestation were recorded on a specially designed proforma. General physical and abdominal examination was performed. Pelvic examination was restricted. The first step for patients who presented with vaginal bleeding was to stabilize their condition. Decision to deliver would depend upon gestational age, severity of hemorrhage and feto-maternal condition.

In patients with heavy vaginal bleeding, an emergency cesarean was performed by senior most duty registrar after resuscitation irrespective of gestational age, type of placenta previa or absence of fetal heart sound.

In those with major degree placenta previa and mild bleeding before term, the patient was admitted and managed expectantly. Feto-maternal monitoring was carried out and elective cesarean section was performed on list at 38 weeks of gestation by the senior. Whereas the patient with mild bleeding and minor degree of placenta previa at term were induced with oxytocin and amniotomy was done. Before surgery, informed consent was taken and two units of blood were arranged. Active management of third stage was done. The observations were made for placenta accreta, obstretical hysterectomy and postpartum hemorrhage. These observations were recorded on a proforma.

Data was analysed by using SPSS version 10.0. Frequency and percentage was computed for categorical variables like obstetrical hysterectomy, placenta accreta and PPH. Mean and standard deviation was calculated for quantitative variables e.g age, parity, gestational age (in weeks).

RESULTS

A total of 215 patients having placenta previa were included in this study during six months study period from 01-4-2011 to 01-10-2011 in the department of obstetrics and gynaecology, Punjab Medical College and affiliated hospitals, Faisalabad.

Regarding age distribution, the majority of the patients, 98 (44.18%) were above 30 years and only 21 (9.76%) were less than 20 years of age with mean age of 28.14± 5.57 years (Table-1).

It was observed that most of the patients 147 (68.3%) presented at gestational age between 32-37 weeks. Only 25 (11.62%) patients presented at less than 32 weeks. While 43 (20%) of patients presented at >37 weeks. The mean gestational age was 34.60 ± 2.95 weeks (Table-2).

Parity distribution was as follows: 31(14.40%) patients had parity between 0-3, 89(41.39%) patients had parity ranging 4-6 and 95(44.18%) patients had parity of > 6. The mean parity was 5.46 ± 1.82 (Table-3).

Post partum hemorrhage developed in 61(28.40%) patients (Table-4). Obstetrical hysterectomy was carried out in 13 (6.04%) of patients (Table-4). Placenta accreta was found in 18(8.37%) of patients (Table 4) and none of the patients expired. (Table 4).

Table-1
Distribution of cases by age

Age (Year)	Number	Percentage
<20	21	9.76
20-24	42	19.53
25-29	54	26.51
>30	98	44.18
Total	**215**	**100.0**
Mean±SD	**28.14±5.57**	

Table-2
Distribution of cases by gestational age

Gestational Age (Weeks)	Number	Percentage
<32	25	11.62
32-37	147	68.36
>37	43	20
Total	**215**	**100.0**
Mean±SD	**34.60±2.95**	

Table-3
Distribution of cases by parity

Parity	Number	Percentage
0-3	31	14.40
4-6	89	41.39
>6	95	44.18
Total	**215**	**100.0**
Mean±SD	**5.46±1.82**	

Table-4
Distribution of cases according to complications

Complication		Number	Percentage
PostPartum Haemorrhage	Yes	61	28.40
	No	154	71.60
Obstetrical hystrectomy Yes		13	6.05
No		202	93.95
Placenta accrete	Yes	18	8.37
	No	197	91.63
Mortality	Yes	0	0
	No	215	100

DISCUSSION

The common placental abnormalities include placenta previa, placental abruption, morbidly adherent placenta (accreta, increta, percreta) and retained placenta. These abnormalities accounted for 36% of pregnancy related deaths due to hemorrhage. Increasing maternal age is a well known risk factor for placenta previa. It has been found that women who are 35 years of age or greater are at increased risk of placenta previa[8]. Ageing of vasculature of uterus is considered to be related to increased frequency of placenta praevia in aging and multiparous women. This results in hypertrophy of placenta and enlargement which leads to possibility of extension into the lower part of uterus. A few authors have mentioned that a longer gap between pregnancies is also a probable cause of placenta praevia. This may be attributed to scarred and poor vasculature of uterus due to ageing process[9]. Our study shows that frequency of placenta previa increases with advanced maternal age which is consistent with the study done by Cieminski A[10]. The incidence of placenta previa in women with previous deliveries was significantly higher compared to the group of primiparas and increased as the number of prior deliveries increased[10]. This present study shows that highest frequency was seen in those who were para 6 or above that is in accordance with a study by Tuzoic [11] which showed that 95% of cases of placenta previa were multiparous.

In the present study, the incidence of placenta accreta was found to be 18(8.37%). This is comparable to 9.8% as shown by a study conducted by Wu et al [12]. This result is also in accord to the study conducted by Farhat et al [13] who found it to be 6% in cases of patients with placenta previa.

In my study, post partum hemorrhage was found in 61 (28.40%) of patients with placenta previa. The results are similar to a study conducted at Bhawal Victoria hospital where mild to moderate PPH was seen in 30% of cases and severe hemorrhage in 10% of the cases with placenta previa[14]. Emergency obstetrical hysterectomy (EOH) is one of the life saving procedure performed after vaginal delivery or caesarean birth or in the immediate postpartum period in cases of intractable haemorrhage due to uterine atony, rupture uterus and placental disorders and it is usually reserved for the situations where conservative measures fail to control the hemorrhage [15]. In past the most common indications of

EOH was atony and uterine rupture. Recent reports show that abnormal placental adherence/placenta previa is emerging as the major indication for EOH and is most likely related to increase in number of caesarean delivery observed over the past two decade[16]. In our study, the frequency of obstretical hysterectomy was 6.04% which is very close to the study done by Farhat et al[13] and Oppenheimer et al[7]. Their results showed that the risk of obstetrical hystrectomy was 5% and 5.3 respectively.

CONCLUSION

This study concludes that efforts should be made to reduce the rates of operative deliveries, because there is a greater likelihood of placenta praevia in scarred uterus in a subsequent pregnancy. The risk of placenta accreta, post partum hemorrhage and obstetrical hysterectomy are increased in placenta previa. Evaluation of risk factors before and during pregnancy, timely diagnosis and intervention and appropriate medical and surgical measures can be life saving

REFERENCES

1. Hassan S. An analysis of fetal and maternal out-come in patients with placenta previa. Ann King Edward Med Coll 2006; 12:386-9.
2. Kouser S, Sateen A, Younas S, Begum A. Placenta previa and correlation with scarred uterus. Ann King Edward Med Call 2006; 12:458-60.
3. Tuzovic L. Complete versus incomplete placenta previa and obstretic outcome.Int J Obstet Gynecol 2006; 93:110-7
4. Konje J C, Taylor D J. Bleeding in Late Pregnancy. In James D K, Weiner C P, Steer P J, Gonik B. High risk pregnancy management options. 3rd edition Philadelphia: Saunders, 2006:1261-6.
5. Harrington D, Black RS. Massive or recurrent ante partum hemorrhage. Current Obstet Gynecol 2005; 15:267-71.
6. Sakoranbut E, Leeman L, Fontaine P. Late pregnancy bleeding. Am Fam physicians 2007; 75:1199-206
7. Oppenheimer L; Society of obstetricians and gynaecologists of Canada. Diagnosis and management of placenta previa.J Obstet Gynaecol Can 2007; 29:261-73
8. Hung TH, Hsieh CC, Hsu JJ, Chiu TH, Lo LM, Hsieh TT. Risk factors for placenta previa in an Asian population. Int J of Gynecol and Obstet 2007; 97: 26–30
9. Khursheed F, Shaikh F, Das CM, Shaikh RB. Plancenta praevia: an analysis of risk factors. Med Channel. 2010; 16:417-9.
10. Cieminski A, Dlugolecki F. Relationship between placenta previa and maternal age, parity and prior caesarean deliveries. Ginekol Pol. 2005; 76:284-9.
11. Tuzovic L, Djelmis J, Ilijic M. Obstretic Risk Factors Associated with PlacentaPrevia Development: Case-Control Study. Croation Med J 2003; 44:728-33
12. Wu S, Kocherginsky M, Hibbard JU. Abnormal placentation: Twenty-year analysis. Am J Obstet Gynecol 2005; 192:1458–61.
13. Nasreen F. Incidence, causes and outcome of placenta previa. J Post grad Med Inst 2003; 17:99-104
14. Kouser S, Zareen A, Younas S, Begum A. Placenta previa and correlation with scarred uterus. Ann King Edward Med Uni. 2006; 12:458-60
15. Najam R, Bansal P, Sharma R, Agarwal D. Emergency obstetric hysterectomy: a retrospective study at a tertiary care hospital. J Clin Diagn Res. 2010; 4:2864-8.
16. Kashani E, Azarhoush R. Peripartum hysterectomy for primary postpartum hemorrhage: 10 years evaluation. Euro J of Exper Biol. 2012; 2:32-6

AUTHORS

- **Dr. Samina Kausar**
  Senior Registrar
  Gynae & Obst Unit-II
  DHQ Hospital / Punjab Medical College Faisalabad
- **Dr. Bushra Zahoor**
  WMO Gynae & Obst Unit-II
  DHQ Hospital / Punjab Medical College Faisalabad
- **Dr. Rubina Ali**
  Associate Professor & Head of Gynae & Obs-II
  DHQ Hospital / Punjab Medical College Faisalabad