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Research Article

PLACENTA PREVIA: RISK FACTORS AND MATERNAL OUTCOME - AN EIGHTEEN MONTHS PROSPECTIVE STUDY

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A B S T R A C T

Aims and Objectives: To evaluate demographic profile, various risk factors and maternal outcome in patients with placenta previa.

Material and Methods: The present study was done on prospective basis on 100 patients of placenta previa admitted in Department of Obstetrics and Gynaecology, Govt. Medical College and Rajindra Hospital, Patiala from 1st January 2013 to 30th June, 2014.

Results: Mean age of patients was 26.39±3.5years. 83% were multigravida, 78% patients belonged to rural area and majority patients were unbooked (86%). Major group of unbooked cases (68%) belonged to rural areas, 78% belonged to low socio economic status and 35% of the patients were illiterate. 91% patients were diagnosed as placenta previa on ultrasonography and major group of patients (86%) were major degree placenta previa. Malpresentation were noted in 26% patients, 61% patients had emergency cesarean section. 69% patients required blood transfusion. 21% patients had history of caesarean section in previous deliveries. History of dilatation and curettage was present in 25% patients, placenta previa in previous pregnancy, twin gestation and history of myomectomy were seen in 1% patients. Maternal intraoperative complications noted were placenta accreta requiring cesarean hysterectomy (5%), haemorrhagic shock (8%), classical cesarean (1%), broad ligament hematoma (1%), bladder trauma (2%). Postoperative complications noted were postpartum haemmorrhage (14%), near missed cases (8%), ICU admissions (3%), wound infection (3%), wound gaping requiring resuturing (1%), puerperal pyrexia (3%) and prolonged stay in hospital (>9 days) in 62% patients. Maternal mortality was 1%.

Conclusion: Patient with anti partum haemorrhage should be considered as very high risk and timely management should be given at tertiary care hospital well-equipped and round the clock availability of blood and blood products. Family planning should be strongly emphasized and considering high perinatal mortality, neonatal care units should be besides labour ward.

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INTRODUCTION

Healthy mother and child are bedrock of health and prosperous communities and nation. The period of intrauterine growth and development is one the most vulnerable periods in the human life cycle.[1] Antepartum hemorrhage continues to be a major cause of maternal and perinatal morbidity and mortality even in modern day obstetrics.[2]

Antepartum haemorrhage or Vaginal bleeding in late pregnancy is defined as the bleeding from or into the genital tract after the period of viability (24 weeks in developing countries and 20 weeks in developed countries) but before the birth of baby.[3]

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When the placenta is implanted partially or completely over the lower uterine segment (over and adjacent to the internal os) it is called placenta preiva.[3]

Bleeding from placenta previa is one of the most acute and life threatening emergencies in obstetrics practice.[4] The potential maternal and neonatal morbidity and mortality associated with this condition have generated a lot of concern among practising clinicians. [5]

Improvements in diagnostic accuracy and enhancement in planned intervention strategies have been brought about by the introduction and use of ultrasonography and magnetic resonance imaging in obstetric practice.[5]

Both placenta previa accreta and percreta rise in frequency with the number of previous deliveries by cesarean section.[6]

The haemorrhage at the time of cesarean section can be rapid, massive and unrelenting.[6]

Hence early diagnosis of placenta previa percreta is important for appropriate counseling and surgical planning.[7]

Through antenatal booking early diagnosis of placenta previa, antenatal care and elective surgical intervention greatly reduces maternal and fetal complication.[8]

Management of the patient with APH must be in hospital with adequate facilities for transfusion, cesarean delivery neonatal resuscitation and intensive care.[9]

Incidence: 0.5 - 1% amongst hospital deliveries.[3]

Although around 5% of women have ultrasound evidence of low placenta at 20 weeks, only 10% of this 5% (i.e. 0.5% overall) actually have a placenta previa at delivery.[10]

It correlates with the concept of a dynamic placenta that mobilizes itself from the lower uterine segment synchronous with the formation of upper segment.[10]

Associated Risk Factors for Placenta Previa

The exact etiology of placenta previa is not known, however following are considered as high risk factors for development of placenta previa :-

1. Ethnicity - Asian women have excess risk of placenta previa compared with white women.
2. Advancing maternal age
3. Multiparity
4. Prior cesarean delivery, Myomectomy and Curettage
5. Multifetal gestation
6. Placenta previa in previous pregnancies
7. Cigarette smoking
8. Assisted Reproductive Technique (Following IVF/ICSI)[9]

This study was aimed to determining the risk factors along with maternal effects of placenta previa in a tertiary care hospital. Findings arising from this study may be used to guage the severity of this problem so that a management and preventive protocol can be established to avert possible fatal maternal and perinatal outcome.

MATERIAL AND METHODS

An eighteen months prospective study was conducted on 100 patients of placenta previa admitted in labour room of Rajindra Hospital, Patiala from 1st Jan, 2013 to 30th June 2014 after taking an informed consent. A detailed history, thorough general physical and systemic examination was done.

Fetal well being and placental localization was done by ultrasonography wherever feasible. Apart from ultrasonography in some cases, double setup examination was done by a senior gynaecologist in the presence anaesthetist in operation theatre. Management was planned according to the clinical condition of the patient, degree of haemorrhage, duration of pregnancy and viability of fetus.
Placenta was visualized for localization, any retroplacental clot or any anomaly at cesarean section.
Maternal morbidities were recorded. All the complications during antenatal, intrapartum and post operative period were noted. All the information was recorded, compiled and analyzed statistically.

RESULTS

Table 1 Demographic Profile of Patients With Placenta Previa

Age (in years)	No. of Patients	%age
20-23	22	22
24-27	43	43
28-31	25	25
32-35	9	9
36-40	1	1
Mean±SD	26.39±3.5	
Gravidity		
1	17	17
2	33	33
3	26	26
≥ 4	24	24
Booked/Unbooked		
Booked	14	14
Unbooked	86	86
Area		
Rural	78	78
Urban	22	22
Socio-economic Status		
Low Class	78	78
Middle Class	21	21
Upper Class	1	1
Literacy Status		
Illiterate	35	35
≤ 12th Class	56	56
Graduate and Post Graduate	9	9

Table 2 Distribution of patients according to method of diagnosis

Method of Diagnosis	No. of Patients	%age
USG and/or Clinical	91	91
Intra operative finding/during delivery	9	9
Total	**100**	**100**

Table 3 Distribution of patients according to mode of delivery

Mode of Delivery	No. of patients	%age	No. of patients who underwent double setup examination
Emergency Cesarean Section	61	61%	5
Elective Cesarean Section	35	35%	2
Vaginal Delivery	4	4%	4

Table 4 Distribution of patients according to degree of Placenta previa

Degree of Placenta of Previa	No. of Patients	%age
Major	86	86
Minor	14	14
Total	**100**	**100**

No. of patients (n=100)	Type of Placenta Previa				
	Minor Degree		Major Degree		
	I	IIa	IIb	III	IV
%age	6	8	7	11	68

Table 5 Distribution of patients according to fetal presentation

Presentation		No. of Patients	%age
Cephalic		74	74
Malpresentations (n=26)	Transverse Lie	4	4
	Oblique Lie	5	5
	Breech	17	17
	Total	**100**	**100**

Table 6 Distribution of patients according to risk factors

Risk Factors		No. of Patients	%age
Previous Cesarean Sections (n=21)	Previous 1	17	17
	Previous 2	3	3
	Previous 3	1	1
H/o Dilatation and Curettage, Dilatation and Evacuation		25	25
Placenta Previa in Previous Pregnancy		1	1
Twin Gestation		1	1
H/o Myomectomy		1	1
Assisted Reproductive Technique		0	0
Maternal Smoking		0	0
Maternal Alcohol Consumption		0	0
Any Uterine Anomalies		0	0
Total		**49**	**49**

Table 7 Distribution of patients according to intraoperative complications

Intraoperative Complications	No. of Patients	%age
Placenta Accreta	5	5
Placenta Percreta	0	0
Haemorrhagic and Hypovolemic Shock	8	8
Cesarean Hysterectomy	5	5
Classical Cesarean	1	1
Broad Ligament Hematoma	1	1
Bladder Trauma	2	2
Total	**22**	**22**

Table 8 Distribution of patients according to postoperative morbidity and mortality

Postoperative Complications	No. of Patients	%age
Post Partal Haemorrhage	14	14
ICU admissions	3	3
No. of Near Missed Cases	8	8
Maternal Mortality	1	1
Wound Infection	3	3
Wound Gaping requiring resuturing	1	1
Puerperal Pyrexia	3	3
Prolonged Stay in Hospital (>9 days)	62	62
Total	**100**	**100**

Table 9 Distribution of patients according to Blood transfusion required

No. Units of Blood Transfused	No. of Patients	%age
No Transfusion	31	31
1-3	63	63
4-6	3	3
>6	3	3
Total	**100**	**100**
Mean±SD	**1.89±2.00**	

A total of 100 patients presenting with placenta previa were included in the study after obtaining informed consent. Table 1 shows that the majority of patients (43%) were in the age group of 24-27 years, about 83% being multigravida, 86% were unbooked cases and majority of patients (78%) belonged to rural areas and low socioeconomic status. 35% patients were illiterate as shown in table 1. As evident by table 2, placenta previa was diagnosed in majority of patients (91%) by ultrasonography and 9% patients were diagnosed during delivery/intraoperative findings.

Table 3 shows us that emergency cesarean section was required in 61% of patients and while elective cesarean performed in 35% of patients. Only 4% of patients had vaginal delivery after double set up examination in operation theatre.

As evident by table 4, 86% of cases were major degree placenta previa. Table 5 shows malpresentations were present in 26% patients. Table 6 shows that 21% patients had history of cesearean sections in previous deliveries and 25% patients had history of dilatation and curettage, 1% patients had history of placenta previa in previous pregnancy, twin gestation and history of myomectomy each.

As evident by table 7 there were several intraoperative/intrapartum morbidities in the patients like placenta accreta requiring cesarean hysterectomy (5%), classical cesarean (1%), haemorrhagic and hypovolemic shock (8%), broad ligament hematoma (1%) and bladder trauma (2%).

Table 8 shows, 14% of the patients had post partal haemorrhage, out of which 6% were managed conservatively while 8% had severe haemorrhagic shock where intensive management was required. Out of these, 3% patients required admission in ICU. Other post-operative complications were wound infection (3%), wound gaping requiring resuturing (1%), puerperal pyrexia (3%) and prolonged stay in hospital (>9days) was noted in 62% patients.

Table 9 shows that majority of patients (69%) required 1 to 3 units of blood transfusion (packed red blood cells transfusion).

DISCUSSION

Placenta previa is one of the dreaded complications in obstetrics due to its associated adverse maternal and perinatal outcome. Total of 100 patients having placenta previa were included in the study. Risk factors associated with placenta previa were evaluated and maternal outcome was studied. Present study shows 43% patients belonged to 24-27 years of age and hence age distribution is comparable with Jillani *et al*[12] (2010), Anzaku and Musa[13] (2012), Bashir *et al*[14] (2012) and Ojha[15] (2012).

In present study 73% patients were found to be multigravida which is also comparable to studies especially Tuzovic *et al*[16] (2003), Saeed *et al*[17] (2009), Raheel *et al*[18] (2010) and Anzaku and Musa[13] (2012).

The present study is comparable with Khusheed *et al*[19] (2010) in aspect of previous one and two caesarean sections as risk factors.

Jillani *et al*[12] (2010) had 1.72% cases and the present study had 1% cases previous placenta previa. Present study has history of D & C in 25% patients which is comparable with

Enoila *et al*[20] (2002) which had 25% and Anzaku and Musa[13] (2012) which had 20.4% cases of history of D &C. The present study had 1% cases of myomectomy and is comparable with Enoila *et al*[20] (2002) which had 1.5% cases. Present study had 1% cases of twin gestation and is comparable with Nasreen *et al*[21] (2003) which had 2% cases.

Malpresentations were common in present study and which was also comparable with Chan *et al*[22] (1999), Nasreen *et al*[21] (2003) and Leung *et al*[23] (2005).

In present study 69% of the patients required blood transfusion which was comparable with Saeed *et al*[17] (2009). Majority of patients (86%) were major degree placenta previa which was comparable with the study done by Bhat *et al*[24] (2003), Akram *et al*[25] (2009) and Jillani *et al*[16] (2010).

Our 61% of the patients had emergency cesarean section, 35% had elective cesarean, while 4% were normal vaginal deliveries which is comparable with Akram *et al*[25] (2009). Various complications noted in our study i.e. bladder trauma, post partum haemorrhage, intensive care unit admissions, haemorrhagic shock, cesarean hysterectomy, placenta accreta, wound infection are comparable with studies done by Akram *et al*[25] (2009), Saeed *et al*[17] (2009), Siddiqui *et al*[26] (2009), Jillani *et al*[12] (2010), Anzaku and Musa *et al*[13] (2012) and Rizwan *et al*[4] (2013) with small variations of percentages in every study.

CONCLUSIONS

Placenta previa is a serious condition which increases the maternal and fetal morbidity and mortality. All the risk factors such as history of previous cesarean section, multiparity, advanced maternal age, dilatation and curettage, uterine anomalies or related surgeries, history of previous placenta previa should not only raise high suspicion of placenta previa but also morbidly adherent varieties of placenta (placenta accreta and percreta). An advanced radiological facility, round the clock availability of blood and blood products, pediatric and NICU facilities, good referral system and availability of senior and experienced doctors is the need of hour. Above all, women empowerment by reducing illiteracy and poverty will go a long way in prevention and managing the cases and consequences associated with placenta previa.

Bibliography

1. Mallapur AA, Hiremath L, Kulkarni K. Obstetrical and Neonatal Outcome of Pregnancy among the Normal and High Risk Women. Bombay Hospital Journal 2011; 53(3):618-21.
2. Sheikh F, Khokhar SA, Sirichand P, Shaikh RB. A study of antepartum hemorrhage: maternal and perinatal outcome. Gynae & Obstetrics 2011; 16(2):268-71.
3. Dutta DC. Antepartum Haemorrhage. In: Textbook of Obstetrics. 7th edn. New Central Book Agency (P) Ltd. 2004; 241-250.
4. Rizwan N, Ishtiaque M, Qazi RA, Dars S. Risk factors and maternal outcome in major degree placenta previa, a retrospective study. Pensee Journal 2013; 75(9):96-8.
5. Archibong EI, Ahmed el SM. Risk factors, maternal and neonatal outcome in major placenta previa: a prospective study. Ann Saudi Med. 2001; 21(3-4):245-7.
6. Baskett TF, Calder AA, Arulkumaran S. Antepartum Haemorrhage. In: Munro Kerr's Operative Obstetrics Centenary edition 11th. Saunders 2008; 209-20.
7. Yeniel AO, Ergenoglu M, Zeybek B, Keradadas N, Akercan F. Placenta previa percreta. *Ege Journal of Medicine* 2010; 49(2):123-27.
8. Raheel R, Tabassum R, Bhutto A, Riaz H, Hanif R. Fetal outcome in cases of placenta previa - a retrospective study. Gynaecology and Obstetrics 2010; 256-59.
9. Navti OB and Konje JC. Bleeding in Late Pregnancy. In: High Risk Pregnancy: Management Options, James DK, Steer PJ, Weiner CP, Gonik B eds. 4th edn. 2011; 58:1037-51.
10. Lodhi SK, Khanum Z, Watoo TH. Placenta previa: the role of ultrasound in assessment during third trimester. *J Pak Med Assoc*. 2004; 54(2):81-3.
11. Yang Q, Wu Wen S, Caughey S, Krewski D, Sun L, Walker MC. Placenta previa: its relationship with race and the country of origin among Asian women. Acta Obstet Gynecol Scand. 2008; 87(6):612-6.
12. Jillani K, Shaikh F, Siddiqui SM, Siddiqui MA. Repeated cesarean sections: a risk factor for rising rate of placenta previa. Gynaecology & Obstetrics 2010; 409-12.
13. Anzaku AS, Musa J. Placenta praevia: incidence, risk factors, maternal and fetal outcomes in a Nigerian teaching hospital. *Jos Journal of Medicine* 2012;6(1):42-46.
14. Bashir A, Jadoon HN, Abbasi. Frequency of placenta previa in women with history of previous caesarean and normal vaginal deliveries. *J Ayub Med Coll Abbottabad* 2012;24(3-4):151-53.
15. Ojha N. Obstetric factors and pregnancy outcome in placenta previa. *Journal of Institute of Medicine*, 2012; 34(2):38-41.
16. Tuzovic L, Djelmis J, Ilijic M. Obstetric risk factors associated with placenta previa development: case-control study. Croat Med J. 2003;44(6):728-33.
17. Saeed Z, Ikram M, Tazian S. Placenta previa; etiology and fetomaternal outcome. Professional Med J 2009; 16(1):139-44.
18. Raheel R, Tabassum R, Bhutto A, Riaz H, Hanif R. Fetal outcome in cases of placenta previa - a retrospective study. Gynaecology and Obstetrics 2010; 256-59.
19. Khursheed F, Shaikh F, Das CM, Shaikh RB. Placenta praevia: an analysis of risk factors. Gynaecology & Obstetrics 2010;16 (3):417-19.
20. Eniola AO, Bako AU, Selo-Ojeme DO. Risk factors for placenta praevia in southern Nigeria. East Afr Med J. 2002;79(10):535-8.
21. Nasreen F. Incidence, Causes and outcome of placenta previa. *Journal of Postgraduate Medical Institute* 2003; 17(1):99-104.
22. Chan CW, William WK. Antepartum hemorrhage of unknown origin-what is its clinical significance? Acta Obstet Gynecol Scand 1999;78(3):186-90.

23. Leung TY, Chan LW, Tam WH, Leung TN, Lau TK. Risk and prediction of preterm delivery in pregnancies complicated by antepartum hemorrhage of unknown origin before 34 weeks. Gynecol Obstet Invest. 2001;52(4):227-31.
24. Bhat SM, Hamdi IM, Bhat SK. Placenta previa in a referral hospital in Oman. *Saudi Med J.* 2004;25(6):728-31.
25. Akram H, Bukhari AA, Din ANU. Multiple caesarean sections - an association with increasing frequency of placenta praevia. Biomedica 2009;25:28-31.
26. Siddiqui SA, Tariq G, Soomro N, Sheikh A, Shabih-ul-Hasnain F, Memon KA. Perinatal outcome and near-miss morbidity between placenta previa versus abruptio placentae. *J Coll Physicians Surg Pak*. 2011;21(2):79-83.

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