Original Article

One Year Review of Maternal Mortality and Morbidity Associated with Placenta Previa in a Tertiary Care Hospital

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Abstract

Placenta previa is a condition of pregnancy in which placenta is attached to the lower segment of the uterus, partially or completely covering the internalos. It is one of the leading causes of major obstetric haemorrhage, which is the most common cause of maternal morbidity and mortality.

Objective: 1) To identify the risk factors associated with placenta previa. 2) To review the maternal mortality and morbidity associated with placenta previa.

Study Design: Case series descriptive study.

Settings: Study was conducted in Department of Obstetrics and Gynecology Unit – III Fatima Memorial Hospital Lahore.

Duration of Study: One year (2011) and 52 patients were included in study.

Inclusion Criteria: Patients with all types of placenta previa at 30 wks onwards were included in the study.

Results: Mostly patients were between 26-30 yrs of age (55.7%). Presentation at 34 to 36 weeks (46.15%), 61.5% patients presented with history of previous surgery as previous lower segment caesarean section and D&C.

Conclusion: Incidence of placenta previa is rising with previous surgeries with subsequent increase in associated morbidity i.e. incidence of caesarean hysterectomy, need for blood transfusions and bladder injury.

Keywords: Placenta previa, maternal morbidity and mortality, haemorrhage, LSCS (lower segment caesarean section).

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Introduction

The placenta is an organ which provides the fetus with oxygen and nutrients and takes away wastes such as carbon dioxide via the umbilical cord. It is said to be previa if it is abnormally implanted over or near the internal cervical os. It remains one of the leading causes of major obstetric haemorrhage which is the most common cause of maternal mortality and morbidity and is a risk factor for various maternal complications.[1]

Overall prevalence rate for placenta previa is about 4 per 1000 live births[2] and varies with parity. For nulliparous it is 0.2% while for grand multiparous it is 5%. Incidence of hysterectomy after caesarean section

for placenta previa is 5.3%.[3] Perinatal mortality rates are 3 to 4 times higher than in normal pregnancies.[4,5]

Risk factors for placenta previa include prior caesarean delivery, pregnancy termination, intrauterine surgery, smoking, multifetal gestation, increasing parity and maternal age.[6]

The usual presentation is painless vaginal bleeding. Transvaginal ultrasound is preferred method for accurate localization of a low lying placenta and 60% of women who undergo transabdominal ultrasound may have re-classification of placental position when they undergo transvaginal ultrasound.[7-10] It has positive predictive value of 93.3% making it gold standard for diagnosis of placenta previa.[11]

The maternal complications of placenta previa include major haemorrhage, shock and DIC, renal failure, placenta previaaccreta, anaemia, infection and maternal mortality while the fetal complications include prematurity and risk of fetal anaemia.

Placenta previa can have serious consequences most important one being abnormal placental growth into the uterus which can result in morbidly adherent placenta which maybe placenta accreta, increta or percreta and is associated with severe maternal morbidity. Its increased incidence in recent years is due to increase in the caesarean section rates.[12,13] With one previous caesarean section risk of placenta accrete is 25% while for previous two caesarean sections it is 40%[14,15].

Hence placenta previa is one of the leading causes of major maternal mortality and morbidity and requires proper clinical and ultrasound diagnosis to decrease incidence of major maternal as well as fetal complications.

Results

A total no of 52 patients were enrolled in this study. 29 (55.7%) patients were between 26 – 30 years of age, 9 (17.3%) were between 20 – 25 years, 13 (25%) were between 31 – 35 years and 1 (1.9%) patient > 35 years.

Table 1: Patients according to their age group.

Age (in Years)	No. of Patients	%
20 – 25	9	17.3
26 – 30	29	55.7
31 – 35	13	25
> 35	1	1.9
Total	52	100

Patient included in study was diagnosed an ultrasound examination at 30 wks and onward most of the presented patients were between 34 – 36 week of gestation, 24 (46.15%) patients.

Table 2: Duration of pregnancy.

Duration (in Weeks)	No. of Patients	%
30 – 33	6	11.5
34 – 36	24	46.15
> 36	22	42.30
Total	52	100

Previous surgeries are major risk factors for placenta previa and its sub types. In this study 32 (61.5%) patients were with history of previous surgeries such as caesarean section and D&C.

Table 3: Showing history of previous surgeries.

Previous Surgery (C/S and or D&C)	No. of Patients	%
Yes	32	61.5
No	20	38.46
Total	52	100

Table 4: Complications.

Complications	No. of Patients	%
Cesarean Hysterectomy	17	32.69
Blood transfusions (> 10)	19	36.53
Maternal deaths	1	1.99
Bladder injury	13	25
No complication	27	51.92
Total	52	100

Haemorrhage is major threat in cases of placenta previaantenatally, at the time of operation as well as in the post operative period. In this study need for blood transfusion was in 19 (36.53%) patients – 18 patients required more than 10 units of blood. Seventeen (32.69%) patients ended up in caesarean hysterectomy. There was one maternal death due to intractable post partum haemorrhage.

Intra-operative injuries to bladder during dissection of adhesions noted in 13 (25%) patients that was repaired during surgery and recovered smoothly in postoperative period. Twenty seven (51.92%) patients with placenta previa experienced no complication.

Discussion

Of the profound alteration in the practices of obstetrics over the past century, one of the most apparent observation is the progressive increase in the frequency of caesarean delivery. The rise in repeat caesarean delivery has been associated with an increase in severe complications of caesarean birth, particular complication is placenta previa and accreta. In this study 61.5% patients which presented with placenta previa had history of previous surgery such as caesarean section and D&C.

Maternal morbidity and mortality associated with placenta previa is due to hemorrhage, operative injuries and hazards of blood transfusion.

Placenta previa is growing cause of postpartum hemorrhage. Hemorrhage continuous to be the second leading cause of maternal death and increase cause of emergency hysterectomy. In this study there was one maternal death due to PPH and 32.69% patients ended up in caesarean hysterectomy.

Principle in such cases should always be to limit hemorrhage as quickly as possible and to perform definitive surgery before patient develop complications as circulatory instability and coagulopathy. A large part of mortality and morbidity in these situations is related to unnecessary delay in decision of caesarean hysterectomy compounded by fruit less attempts to preserve the uterus.

Recognition of the problem and decisive surgical action, combined aggressive resuscitation along with use of blood products is required to deal with massive hemorrhage due to previa.

Conclusion

Maternal prognosis with placenta previa is good when managed properly. This is done by managing patients in tertiary care hospitals, hospitalizing those at risk who are exhibiting symptoms and signs, appropriate

ultrasound diagnosis and subsequent counseling, prehand arrangement of blood and blood products and performing delivery by caesarean section. There should be effort to decrease the rising caesarean section rate and all patients with history of previous one caesarean section should be encouraged for VBAC.

The approach to management should be multidisciplinary in collaboratin with obstetrician, surgeon, anaesthetist and hematologist to decrease maternal mortality and morbidity and to achieve best outcome.

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