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Factors and fates of placenta previa

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Abstract

Background: *Placenta previa is a serious health issue where placenta is implanted in the lower uterine segment, overlying or approaching internal cervical os. Objectives of this study is to find out the risk factors, maternal and neonatal outcome of patients of placenta previa, who underwent caesarean section in a tertiary care Hospital in one year.****Method and Materials:****It was a hospital based descriptive study where among the antenatal patients admitted in one year, 119 were diagnosed as placentaprevia at or after admission, out of them 64 underwent caesarean section, other 55 patients were managed conservatively. Women who underwent caesarean section were analyzed with respect to their age, parity, gestational age, known risk factors, maternal and neonatal complications. Collected data were managed manually. Results were compared with previous similar studies. A conclusion was drawn at the end of the study*. ***Results****:53% patients were between age group 20-24 years, 61% patients were multiparous, previous history of abortion/D&C/MR present in 33%. Previous history of caesarean section in 26.5%, multiple pregnancy 11% cases.Regarding presentation, antepartum hemorrhage was the common presentation 66%, severe anemia in 14%, among the complications, hypovoluimic shock o8%, multiple units of blood transfusion needed in 25%, post partum hemorrhage 22%, emergency peripartum hysterectomy needed in 03% case and maternal death was reported 02%, regarding neonatal complications, Apgar score < 7 reported in 22%, still born 05%, early neonatal death reported in 14% neonates.* ***Conclusion:*** *Improving the general condition of the women by antenatal care, early diagnosis of placenta previaby routine second trimester Ultrasonogram, careful vigilance and timely delivery can reduce the maternal and neonatal morbidity and mortality*.

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I. Introduction

Placenta previa is a condition where placenta unfortunately situated completely or partially in the lower uterine segment, completely or partially covers the internal os. It is an life threatening obstetric emergency and is associated with significant maternal and neonatal morbidity and mortality. Due to increase rate of primary caesarean section, incidence of placenta previa is increasing, however maternal mortality is decreased due to early diagnosis by Ultrasonogram, availability of blood transfusion facilities and improved surgical techniqueand safe anaesthesia. But still it is a risk factor for severe post partum hemorrhage, preterm deliveries and caesarean hysterectomy. Placenta previa is of four types. Type 1- Placenta situated in the lower segment, Type 2- placenta situated near the internal cervical os, Type 3- placenta partially covers the internal os, Type 4- placenta completely covers the internalos. Type 1 and 2 anterior are minor placenta previa and Type 2 posterior and Type 3 and 4 are called major placenta previa. Mode of delivery in major placenta previa are always caesarean section and in minor variety vaginal delivery can be attempted but if bleeding caesarean section is usually needed.

Ultrasonogram can detect placenta previaprior to any episode of bleeding. Butclinicalsuspicion always be raised in women with late pregnancy painless vaginal bleeding with high presenting part or abnormal lie irrespective of previous Ultrasonogramimaging.[1] Itis a burning health issue and one of the major cause of antepartum hemorrhage with high maternal and perinatal morbidity and mortality which complicates 2- 5% of pregnancies.[2] Advancing maternal age increase the risk. It is 1 in 1500 for women 19 years or younger and 1 in 100 in women more than 35 years.[3] Prior caesarean delivery increase the likelihood, incidence increases from 1.9% with 2 and 4.1% with 3 or more caesarean deliveries.[4] Placenta previa has common associationwith multiparity, multiple pregnancy, previous uterine curettage, previous caesarean section and chronic hypertension.[5] Other risk factors include cigarette smoking , previous history of abortion and assisted reproduction.[6] There are significant health problems like obstetric hemorrhage which needs blood transfusion,

preterm deliveries, caesarean section and for associated placenta accreta which can causeintractablepost partum hemorrhage with an incidence of 5.3%[7] may need peripartum hysterectomy that ends the obstetric future of a women and needs prolong hospitalization.

There is three to four fold increase in neonatal mortality compared to normal pregnancy.[8] Preterm delivery is one of the major cause of neonatal death even with the expectant management of placenta previa.[9] Babies develop respiratory distress syndrome and need NICU admission. When mothers life is not at risk , expectant management will improve the neonatal outcome.[10,11] Management of placenta previa depends on clinical presentation, health status of mother and baby, gestational age and types of placenta previa.

Aim of our study is to see the risk factors, maternal and neonatal outcome of patients who underwent caesarean section for placenta previa admitted in a tertiary hospital in one year.

II. Methodology

This is a hospital based descriptive study at ChattogramMaa O Shishu Hospital Medical College from January 2019 to December 2019. During this period total 7152 antenatal patients were admitted. Among them 119 were diagnosed as placenta previa. Out of 119 patients, 64 underwent caesarean section. Present study was done on 64 patients who underwent caesarean section for placenta previa. After taking informed written consent, age, parity, gestational age, associated risk factors, maternal complications and neonatal outcome were taken as study variables. Data were collected in a pre tested semi structured questionnaire. Confidentiality was maintained. Ethical clearances for the proposed study was obtained from the Ethical Review Board ChattogramMaa-O-Shishu Hospital Medical College.

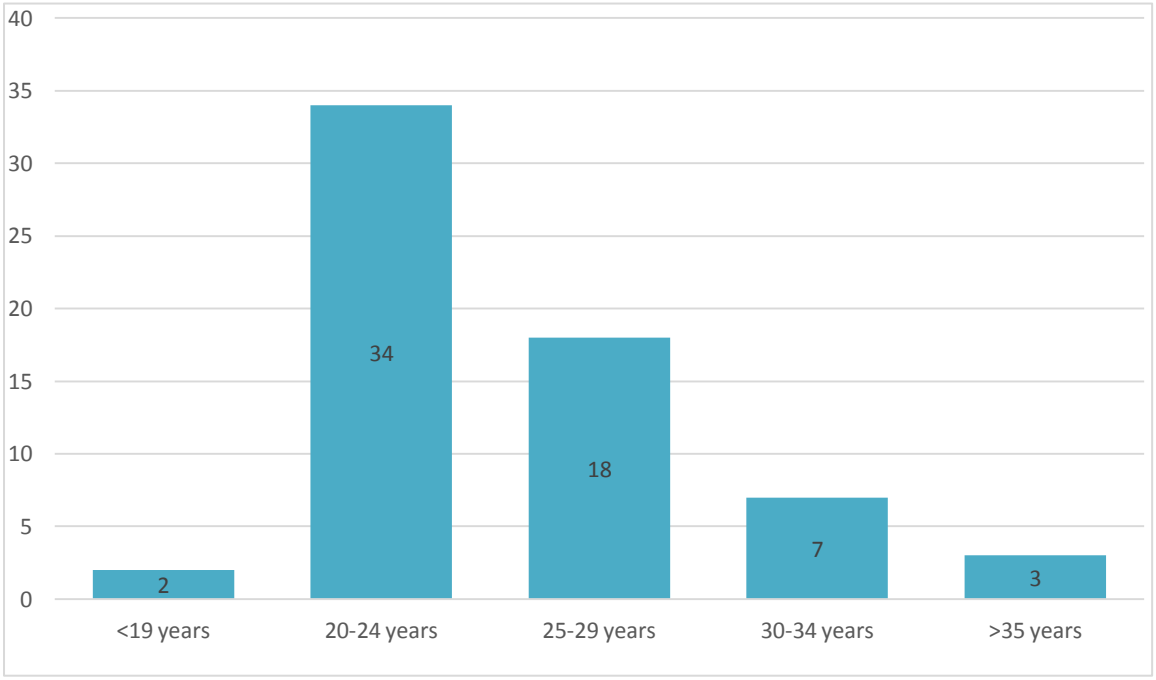

Figure 01: Age group of the study patients

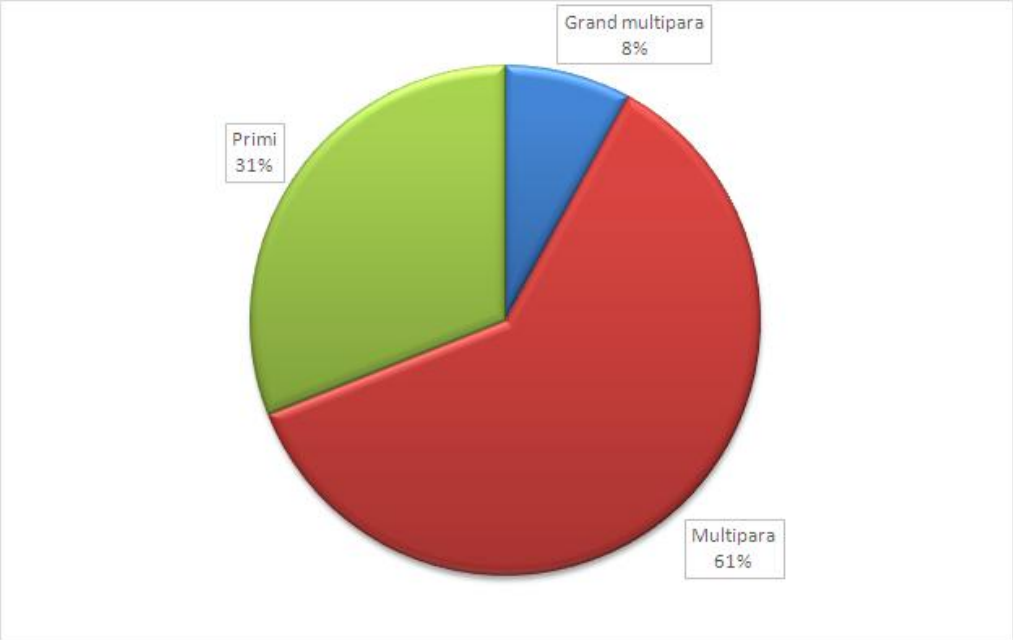

Figure 02: Distribution of placenta previa cases according to parity

Table 01. Risk factors of placenta previa

Risk factors	Number	Percentages (%)
Multiparity	39	61 %
Abortion/D&C/MR	21	33 %
Previous History of LSCS	17	27 %
Multiple Pregnancy	07	11 %
Previous H/O placenta previa	05	08 %
Myomectomy	02	03 %
None	08	13 %

Table 02. Associated maternal conditions

Maternal conditions	Number	Percentages (%)
Antepartum hemorrhage	42	66 %
Need of blood transfusion	12	19 %
Severe anemia	09	14 %
Transverse lie	05	08 %
Breech presentation	04	06 %
Pregnancy induced Hypertension	02	03 %
Intra uterine death (IUD)	01	02 %
None	11	17 %

Table 03. Maternal complications (Intra and post operative)

Complications	Number	Percentages
Caesarean section	64	100 %
Need of blood transfusion > 3 units	16	25 %
Post partum hemorrhage	14	22 %
Hypovolumic shock	05	08 %
Wound infection	03	05 %
Peripartum hysterectomy	02	03 %
Maternal death	01	02 %

Table 04. Neonatal outcome

Neonatal outcome	Number	Percentages (%)
Alive and healthy	43	67 %
Low birth weight	25	39 %
Prematurity	23	36 %
Apgar score <7 in 5 minutes	14	22 %
NICU admission	14	22 %
Early neonatal death	09	14 %
Still born	03	05 %

III. Results

Among 64 patients, 02(03%) were at age group <19 years, 34(53%) were at age group 20-24 years, 18(28%) were between 25-29 years, 07(11%) were 30-34 years and 03(05%) >35 years. Regarding parity 20(31%) were primi and multi para(para 2-3) were 39(61%) and grand multi para(>= 4) were 05(08%). History of abortion /D&C/MR was present in 21(33%), previous history of Caesarean section in 17(26.5%), placenta previa in previous pregnancy in 05(08%), Multiple pregnancy 07(11%) cases. The most common antepartum presentation was antepartum hemorrhage 42(66%), severe anemia 09(14%) cases.Regarding maternal complications, multiple blood transfusion needed in 16(25%), post partum hemorrhage 14(22%), hypovolemic shock 05(08%), emergency peripartum hysterectomy needed in 02(03%), wound infection 03(05%), and 01(02%) maternal death was reported. Among 64neonates , Apgar score <7 was reported in 14(22%) , 03(05%) babies were still born, NICU admission needed in 14(22%) neonates and among them 09(14%) reported as early neonatal death and 43(67%) neonates were born healthy.

IV. Discussion

Placenta previa can present with sudden heavy bleeding which needs immediate management and warrant termination of pregnancy by caesarean section irrespective of gestational age Regarding age of the patients majority 34(53%)were between 20-24 years,second common age group between 25-29 were 18 (28%) and this was comparable with study of shruthiprasanth[13] . Regarding parity 39(61%) were multipara, which was comparable with Shruthi et al[13] and 21(33%) were primipara. Regarding risk factors, history of abortion /D&C/MR were present in 21 (33%) patients, which was much lower in study of PushpaYadava and Shinde V [12,14]. To reduce this risk factor we should encourage medical management of abortion and post abortion care. Previous caesarean section was present among 17(26.5%) patients which was much lower than the study by PushpaYadava42(47%)[12], this can reduce this risk can be reduced by restricting caesarean section without appropriate medical indication and on demand caesarean section. Multiple pregnancy present in 07 (11%) cases, 05 (08%) patients had placenta previa in their previous pregnancy, history of myomectomy in 2 (3%) cases, and in 08 (12.5%) patients no known risk factors were present. Regarding presentation or antepartum complications most common was antepartum haemorrhage 42 (66%), study by pushpa et al showed this 52.27% [12]which was lower than our study, severe anaemia present in 09(14%) patients which was near to study by pushpa yadava,[12]antenataly blood transfusion needed in 12 (19%) patients. 11 (17%) patients were asymptomatic and were diagnosedsonographically and came for elective caesarean section. Among the intra partum and post partumcomplications 05(08%) were in hypovolemic shock, post partumhaemorrhage were reported in 14 (22%) patients, Study of Pushpa et al it was 17.04% [12]which was most common in central placenta previa and anterior placenta previa, 16(25%) patients needed > 3 units of blood transfusionand according to Pushpayadava it was 36.%.[12] Emergency peripartum hysterectomy needed in 2 (3%) patients due to placenta accreta, and 1 (1.5%) maternal death was reported during the one year study period which was due to intractable post partumhaemorrhage. Regarding neonatal outcome still born was reported in 03 (5%) cases, according to Sarojini it was 7.5%. [15]Apgar score <7 present in 14 (22%) neonates all of them required NICU admission, study of Sarojini[15] showed apgar score <7 12.3% and NICU admission was 30.2%[15] which was much higher than present study, and early neonatal death were reported in 09 (14%) neonates comparable to Sarojini 14.2%[15]which was due to extreme prematurity and low birth weight. 43 (67%) neonates were alive and healthy.

V. Conclusion

Increasing caesarean rate, advancing maternal age, prior abortion, multiple pregnancy increase the incidence of placenta previa. So proper counseling and restricting caesarean section without appropriate obstetric or medical indications, proper counselling before caesarean section on maternal request and medical management of abortion can lower the incidence of placenta previa and placenta accreta. By proper antenatal care we can improve the general condition of the mother and doing second trimester Ultrasonogram we can predict and thereby take appropriate measures to reduce the maternal and neonatal morbidity and mortality.

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