



A CLINICAL STUDY OF EVALUATE THE CASES OF THIRD TRIMESTER BLEEDING PER VAGINA

Obstetrics & Gynaecology

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ABSTRACT

Aims and Objectives: To find out the incidence of third trimester bleeding in our institution. To evaluate the patients with full medical, surgical and obstetrical history clinical examination, relevant investigations and obstetrical management. Maternal and perinatal outcome. Evaluation of preventive measures to reduce the complications of third trimester bleeding and to improve perinatal and maternal outcome.

Materials and methods: The present study was conducted among the patients admitted in the Department of Obstetrics and Gynaecology of DARBHANGA MEDICAL COLLEGE AND HOSPITAL, LAHERIASARAI, BIHAR. During this study from December 2018 to November 2020 a total number of 9334 mother were delivered among which 112 were diagnosed as having third trimester bleeding per vagina.

Result: Perinatal and maternal mortality much higher in the third trimester bleeding per vagina cases. Majority of perinatal mortality occurs in abruptio placentae (47.5%) and only one maternal death occurred in abruptio placentae. 62.29% of cases were major degree of placenta praevia of which dangerous type II posterior variety was found in 19.67% cases.

Conclusion: Blood transfusion facility and round the clock operative facility are very much needed. All efforts are to be made for motivating the mother for acceptance of family planning and to reduce unwanted pregnancy and to encourage small-family norms. The transportation system should be improved for referral of the patients to the next level of care. Liberal and judicious use of caesarean section is also important to achieve the goal of better maternal and perinatal outcome. Finally, the provision of a well equipped neonatal care unit should be available throughout the country.

KEYWORDS

Third Trimester Bleeding Per Vagina, Blood Transfusion, Maternal, Perinatal.

INTRODUCTION

Motherhood is the dream of every woman. Without motherhood the life of a woman is incomplete. But the dream turns into nightmare when the life of the expectant mother is in danger due to pregnancy related complications. In India, every year more than 1,00,000 mother die¹ due to pregnancy related causes. Most of these deaths are preventable. The commonest single preventable cause of maternal mortality is obstetric haemorrhage which constitute 29%, of which commonest is postpartum haemorrhage, next to it is third trimester bleeding per vagina or antepartum Haemorrhage.

Haemorrhage in third trimester is one of the grave complications of pregnancy that has a major impact on fetal and maternal outcome and it is a challenging problem to any obstetrician. It is one of the commonest clinical events where traditional pregnancy turn into a high risk situation for the mother as well as fetus. The obstetrician is invariably at a dilemma regarding the future plan of management. During the last few years it has taken on a new dimension as a result of newer diagnostic and operative facilities, increased family planning acceptances, better antenatal care and availability of sophisticated neonatal care unit. With these measures incidence of third trimester vaginal bleeding in India varies from 0.59 to 2.04% (Bhat 1985).³

In most instances haemorrhage in third trimester or antepartum haemorrhage is defined as haemorrhage from or into the genital tract after 28th weeks of pregnancy but before the complete delivery of baby⁴.

The two main types of haemorrhage which occur during third trimester of pregnancy, are 'placenta praevia' (unavoidable haemorrhage) and 'Accidental haemorrhage' (Abruptio placentae). In both cases bleeding is due to premature detachment of placenta, in the former the placenta is situated partially or completely over the lower uterine segment and in the later placenta occupies normal position 'Abruptio placentae' was suggested by Delee (1907).⁵

Haemorrhage can also occur from the edge of a normally situated placenta- 'Marginal Haemorrhage'. It was formerly referred to as revealed accidental haemorrhage. Marginal haemorrhage falls into 'indeterminate' group of third trimester bleeding per vagina which constitutes 25% of antepartum haemorrhage. Ruptured vasa praevia is another cause though very rare.

Extra placental causes constitute 5% of all third trimester bleeding per vagina which include cervical polyp, carcinoma cervix, varicose vein, local trauma and excessive show⁵.

In placenta praevia, the placenta is located over or very near the internal os at lower uterine segment. According to Jauniaux and Campbell⁶, there are four types or degrees of placenta praevia.

Type I (low lying): The major part of placenta is attached to the upper segment and only the lower margin is close to internal os (within 5 cm).

Type II (Marginal): The placenta reaches the margin of the internal os but does not cover it.

Type III (Incomplete or partial central): The placenta covers the internal os partially (covers the internal os when closed but does not entirely do so when fully dilated).

Type IV (central or total): The placenta completely covers the internal os even after it is fully dilated.

As per definitions placenta praevia were previously based on grading noted during vaginal examinations performed or at the time of delivery or on the visual observation of placenta-cervix relationship during caesarean section. Despite the apparent precision of these definitions, prenatal and intrapartum differentiation between partial, marginal and low lying placenta is difficult. Soft tissue radiography was done previously to note the placenta-cervix relationship. Today with the use of transabdominal, transperineal and transvaginal ultrasonography, it is possible to define precisely the relationship between the lower border of placenta and the internal cervical os, Prenatal diagnosis by ultrasonography improves perinatal salvage (Lee and colleagues, 2000).⁷

In the majority, the placenta lies either in the anterior or posterior wall, the latter is more common. Type III and IV constitutes about one-third of the cases. For clinical purpose, the types are graded into mild degree (Type I and II anterior) and major degree (Type II posterior, III and IV).

Type II posterior placenta praevia is called dangerous placenta praevia (Stallworthy, 1951)⁸ as it disfavours engagement of the head due to

diminished A-P diameter of pelvis and interferes with fetoplacental circulation as labour progresses.

The classic symptom of placenta praevia is sudden onset, painless, apparently causeless and recurrent bleeding. In about one third of cases, there is a history of "warning haemorrhage" which is usually slight and is rarely fatal. Type I and Type II placenta praevia may not bleed until the onset of labour. Fifty percent of patients with type IV have episodic bleeding before 30 weeks of gestation. Approximately 90 percent of placenta praevia experience at least one episode of bleeding.

AIMS AND OBJECTIVES

The fundamental areas of concern in this study are as follows-

1. To find out the incidence of third trimester bleeding in our institution.
2. To evaluate the patients with full medical, surgical and obstetrical history clinical examination, relevant investigations and obstetrical management.
3. Maternal and perinatal outcome.
4. Evaluation of preventive measures to reduce the complications of third trimester bleeding and to improve perinatal and maternal outcome.

MATERIALS AND METHODS

The present study was conducted among the patients admitted in the Department of Obstetrics and Gynaecology of DARBHANGA MEDICAL COLLEGE AND HOSPITAL, LAHERIASARAI, BIHAR. During this study from December 2018 to November 2020 a total number of 9334 mother were delivered among which 112 were diagnosed as having third trimester bleeding per vagina.

Material of study-

Materials of study comprised of pregnant woman admitted in the Dept. of obstetrics and Gynaecology in the said period with history of vaginal bleeding after 28 weeks of gestation.

All booked and unbooked cases of third trimester bleeding per vagina were included in this study. Those who remained asymptomatic throughout pregnancy but low lying placenta or abruption of placenta were revealed only by ultrasonography or during caesarean section done for other indications were excluded in this study. Patients presenting with bleeding before 28th week of gestation and those with bleeding later due to initiation of labour with excessive show were excluded from the study.

Parturient mothers after birth of the baby were followed carefully for any further complication. The condition of the fetus in utero and babies from the time of birth to the first seven days of their life were studied.

RESULT AND DISCUSSION

After completion of present clinical study of third trimester bleeding per vagina from various aspects. We now evaluate this obstetric problem keeping in mind to search out the facts and factors that can help us to improve maternal and perinatal outcome, and to decrease maternal and perinatal morbidity and mortality.

In our study the different causes of third trimester bleeding per vagina is comparable to study in different hospital. In some study of the above table (e.g. Eden hospital and JIPMER) shows that there is increased association of undetermined haemorrhage. Study of Macaffee⁹ (1951) showed unclassified haemorrhage as a major cause. This may be due to better understanding of the placental pathology and position in third trimester bleeding in recent obstetric practice, which helps clinical diagnosis more accurately.

In the present study majority of women belongs to 26 to 30 years of age. In 1952 O' Donel Brownes showed average age incidence of abruptio placentae was 34.3 years. Probably early age of marriage and reproductivity is responsible for this lower age incidence in this country. But in study of Brazzaville University Hospital Center¹⁰ (1998 to 2002) 54.6% of women with placenta praevia were 26-35 years old. This incidence is comparable to present study.

Incidence of different causes of third trimester bleeding per vagina was almost similar to the other studies. Relationship of third trimester bleeding with age and parity and risk factors was evaluated and it was found that prevalence rate was higher among the older age groups and

multipara. The highest age of this study series was 39 years and the parity was 6th gravida.

Rose and Chapman (1986)¹¹ reported that risk of placenta praevia increased with increasing age and parity which is comparable to the present study.

Present study shows prevalence of third trimester bleeding was more common among muslims, probably due to the high parity.

Prevalence of third trimester bleeding was more in lower economic status persons, probably due to their high parity.

Incidence of unbooked cases were more than the booked cases. Large number of cases were admitted through emergency and came from the rural areas. In 1985, WHO reported that approx 45 percent patients in India get antenatal care only.

Little is known about the aetiology of the third trimester bleeding, specially abruptio placentae and bleeding due to undetermined origin. But many factors predispose the bleeding in later part of pregnancy. In present study previous history of caesarean section 18.03% in and uterine curettage following induced and spontaneous abortion 8.20% in the patients of placenta praevia. There is a strong association between previous caesarean section and abortion and risk of developing placenta praevia (Nielsen T et al. 1989)¹². In present study we got one case of placenta praevia with the history of myomectomy. It may also be a contributing factor for placenta praevia. PPH was more common in placenta praevia than the other and sometime required hysterectomy. In our study one case of placenta praevia required total hysterectomy due to severe PPH. There was no significant association between such complications and abruptio placentae found in present study.

On analysing the duration of gestation with the first episode of bleeding 32.78% cases of placenta praevia reported between 28 to 32 weeks, 50.81% between 33 to 36 weeks and 14.75% between 37 to 40 weeks of gestation. According to Crenshaw et al (1973)¹³ one third of the patients with their first episode of bleeding below 30 weeks of gestation, one third from 30 to 35 weeks and one third 36 weeks or more weeks. Peak incidence of abruptio placentae in present study was between 33 to 40 weeks.

In placenta praevia shock is usually proportionate to the amount of blood loss, whereas shock in abruptio placentae may be out of proportionate to the amount of blood loss per vagina. In the present study only two patients (1.78%) admitted with severe degree of shock of which one is a case of abruptio placentae and other one is central placenta praevia. Mild to moderate amount of shock present in 26 patients (23.21%) and majority of patients (75%) have no evidence of shock. But in Menon's study¹⁴ of 1157 cases of placenta praevia showed 58% of patients attended with evidence of shock.

In the present study 11(17.46%) patients found breech presentation, 1(1.59%) transverse lie, 2(3.17%) oblique lie and unstable lie in two (3.17%) patients of placenta praevia. Women with placenta praevia have a higher risk of fetal malpresentation.

Twin gestation is associated with large placental site and increase incidence of placenta praevia confirmed by Strong and Brar (1989)¹⁵. In the present study 2 cases of twin pregnancy associated with placenta praevia.

A trauma to the abdomen is a dramatic but infrequent cause of abruptio (Pearlman MD et al. 2000)¹⁶. In the present study one patient gave history of trauma over the abdomen due to direct fall on the floor of bathroom.

Regarding placenta praevia cases our aim was to postpone termination by expectant management until 37 weeks, except in cases of repeated bleeding or severe haemorrhage causing maternal haemodynamic instability or fetal distress. Most of the cases of undetermined origin were continued up to 37 weeks. Mode of termination differs in different types of bleeding cases. Majority of placenta praevia (86.88%) cases were terminated by caesarean section, abruptio cases were terminated vaginally (spontaneous vaginal delivery 22.5% and ARM followed by oxytocin drip 37.5%). More than half of the patients of undetermined origin delivered vaginally. As a whole caesarean section rate in third

trimester bleeding per vagina was 73 (65.18%) in comparison to the 21.03% in general caesarean section rate in this institution during the study period.

In one case of placenta praevia total hysterectomy was performed. This case presented at 30th week of gestation and she was fourth gravida with a history of first pregnancy delivered vaginally and next two pregnancy were delivered by caesarean section. Two hours later reopening of abdomen done for severe atonic PPH and total hysterectomy performed.

On evaluating major complications of the mothers post partum haemorrhage was found in 11 (9.82%) cases. Ten patients were treated conservatively. Basu (1969) reported post partum haemorrhage in 25% cases of abruptio placentae. The incidence of placenta praevia was significantly increased in those with a previous caesarean section (1.31%) than the unscarred uterus and along with increased incidence of placenta accreta and percreta also increased (To WW et al. 1995)¹⁷. Adherent placenta was found in three cases in present study all of which were placenta praevia and were post caesarean pregnancy.

Puerperal infection was found in 9 (8.03%) cases out of which majorities (5 cases) are from placenta praevia. Greater the degree of placental separation more changes of coagulation defect. Overall coagulation defect develops in 4-10% cases of abruption. But it can occur up to 30% cases of abruption, which severe enough to cause fetal death (Pritchard 1967)¹⁸. In present study one patient of abruptio developed coagulation failure. Patient delivered vaginally at 35 weeks and treated with 16 units of FFP but died ultimately inspite of all efforts.

Increased rate of low Apgar scores recorded in abruptio placentae. In the present study 25% abruptio placentae have mild asphyxia, 15% have severe asphyxia and still born 22.5% and in the patient of abruptio- perinatal mortality 47.5%. In the study of Dafallah SE et al found¹⁹ perinatal mortality 20.2% in cases of abruptio. Increase rate of low Apgar score also recorded in fetus born of women with placenta praevia also (Brenner, 1978). In the present study mild asphyxia present in 6.35% (4), severe asphyxia 4.76% (3), and 4.76% (3) were still born in placenta praevia. In the present study perinatal mortality in placenta praevia was 14.28%.

In present study intra uterine growth retardation present in 21%(21) among the 100 live born babies and 56.26% (63) was term baby and preterm baby was 45.53% (51). In this study nearly 90% of baby born was less 2.5 kg. found.

According to the study of Li YN (1992)²⁰ found that in placenta praevia 12.6% suffered from intra uterine growth retardation, 53% with birth weight less than normal fetus.

Khosla (1989) reported in his study that incidence of term baby 52.8% in relation to antepartum haemorrhage. Spinillo A (1994) reported in their study that third trimester bleeding should be considered a strong risk factor for short term neonatal morbidity and neurodevelopmental abnormalities, in two years follow up which was increased. In the present study only first seven days follow up was made and found that sepsis occur in 8%, convulsion 2%, Respiratory distress syndrome 4%, Jaundice 5% and diarrhoea developed in 1% babies.

Crane JM et al (1999)²¹ found in their study that neonatal complication of placenta praevia included preterm birth, congenital anomalies, respiratory distress syndrome and anaemia.

Table 1: Past Uterine Operation And Past Obstetric History In Relation To Present Study Cases

Past obstetric history and uterine operation		Placenta praevia (n=61)	Abruptio placentae (n=40)	Undetermined (n=7)	Others (n=4)
Caesarean section		11 (18.03%)	3 (7.5%)	0	02 (50%)
Ante Partum Haemorrhage		2 (3.27%)	0	0	01 (25%)
Myomectomy		1 (1.63%)	0	0	0
Intrauterine Foetal Death		1 (1.63%)	2 (5%)	0	0
Abortion Induced and Spontaneous	Required Uterine Curettage	5 (8.20%)	2 (5%)	0	0

	Not Required uterine Curettage	1 (1.63%)	0	0	0
Manual Removal of placenta		1 (1.63%)	0	0	0

Table 2: Time Of Initial Bleeding According To The Cause

Weeks of gestation	Placenta praevia (n=61)	Abruptio placentae (n=40)	Undetermined group (n=7)	Others (n=4)	Total (n=112)
28-32 weeks	20 (32.78%)	9 (22.5%)	1 (14.28%)	0	30 (26.79%)
33-36 weeks	31 (50.81%)	18 (45%)	1 (14.28%)	1 (25%)	51 (45.53%)
37-40 weeks	9 (14.75%)	11 (27.5%)	5 (71.43%)	2 (50%)	27 (24.11%)
Above 40 weeks	1 (1.64%)	2 (5%)	0	1 (25%)	4 (3.57%)
Total	61	40	7	4	112 (100.00%)

Table 3: Mode Of Treatment Given To The Different Types Of Third Trimester Bleeding P/v Cases

Treatment given	Placenta praevia (n=61)	Abruptio placentae (n=40)	Undetermined (n=7)	Others (n=4)
Spontaneous	3 (4.91%)	9 (22.5%)	1 (14.28%)	3 (75%)
Vaginal delivery	4 (6.56%)	15 (37.5%)	4 (57.14%)	0
ARM Oxytocin drip	0	0	0	0
Internal version	0	0	0	0
Forceps/Ventouse	0	0	0	0
Caesarean section	53 (86.88%)	16 (40%)	2 (28.57%)	1 (25%)
Hysterectomy	1 (1.64%)	0	0	0
Total	61	40	07	04

Table 4: Study Of The Condition Of Fetal Heart Sound At The Time Of Admission

Causes of third Trimester Bleeding per vagina								
Fetal Heart Sound	Placenta praevia		Abruptio placentae		Undetermined origin		Others	
	No of fetus (n=63)	%	No of fetus (n=40)	%	No of fetus (n=7)	%	No of fetus (n=4)	%
Normal Fetal Heart Sound	56	88.89 %	19	47.5%	6	85.71%	2	50%
Evidence of fetal distress	4	6.35%	12	30.00%	1	14.28%	0	0
Absent fetal Heart sound	3	4.76%	9	22.5%	0	0	2	50%
Total	63		40		7		4	

CONCLUSION

Vaginal bleeding during third trimester of pregnancy is a grave complication, it may turn the dream of motherhood into a nightmare. Even with the modern developments in the field of obstetrics and neonatal care, it still continues to be a significant cause of maternal and perinatal morbidity and mortality. Though placenta praevia and abruptio placentae are the major cause but undetermined and other causes also contribute good percentage.

Introduction of ultrasonography for the diagnosis of placenta praevia and fetal maturity revolutionised the total diagnostic procedure. Ultrasonography almost accurately diagnoses fetal maturity and site of placental implantation. The increased trends of caesarean section and also induced abortion may increase the incidence of placenta praevia. With good antenatal care incidence of placenta praevia cannot be reduced but there has a possibility of controlling PIH early incidence of abruptio placentae can be reduced.

Analysing the incidence of third trimester bleeding per vagina, we

observe that it is comparable with that in other parts of the globe. Placental abruption appeared to carry a poorer prognosis for the fetus and neonate when compared to placenta praevia. It is also evident that maternal and perinatal morbidity increases when there is lack of antenatal care, with too frequent and increased number of pregnancy and preexisting maternal anaemia. Delayed hospitalisation of the patients is also responsible for threatening the life of the mother and baby.

Maternal and perinatal outcome can be improved by improvement of health care facilities, which include educating the pregnant mother about the importance of antenatal care and easy accessibility to quality antenatal services would go a long way in bringing down the perinatal morbidity and mortality associated with third trimester bleeding. It also includes availability of trained doctor, trained midwives in the remote areas, country wide availability of first referral units, furnished with basic requirements of emergency obstetric care like ultrasonography. Blood transfusion facility and round the clock operative facility are very much needed. All efforts are to be made for motivating the mother for acceptance of family planning and to reduce unwanted pregnancy and to encourage small-family norms. The transportation system should be improved for referral of the patients to the next level of care. Liberal and judicious use of caesarean section is also important to achieve the goal of better maternal and perinatal outcome. Finally, the provision of a well-equipped neonatal care unit should be available throughout the country.

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