

# International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614  
ISSN (E): 2522-6622  
© Gynaecology Journal  
www.gynaecologyjournal.com  
2018; 2(4): 85-88  
Received: 18-05-2018  
Accepted: 19-06-2018

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## Clinical profile of ante partum hemorrhage cases at a Tertiary care hospital

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### Abstract

The etiology of placenta praevia remains obscure to a great extent. It results from the implantation of the fertilized ovum low in the uterine cavity. Two forms of implantation have been described. The primary isthmal, which is rare, the secondary isthmal implantation in which the placenta in its development comes to extend into the isthmus and is more frequent. Total number of cases with placenta praevia were 162 giving the incidence of placenta praevia 1.40% (n=11,549). placenta praevia contributed 50.15% of cases i.e., 162 cases of 323. Total number of cases with placental abruption were 133 giving the incidence of placental abruption 1.15%. Analysing contribution of placental abruption towards total of APH (n=323) placental abruption has contributed 41.17%. Thus of two condition placenta praevia was more compared to placental abruption.

**Keywords:** Placenta Praevia, Placental Abruption, Ante Partum Hemorrhage

### Introduction

The incidence of placenta praevia varies from one series to another, ranging from 0.29 to 1.24%. The variation is mostly due to the lack of precision in definition and identification of cases. The incidence of the different types of praevia are approximately as follows <sup>[1]</sup>

Total placenta praevia	23.0% - 31.3%
Partial placenta Praevia	20.6% to 33.0%
Low lying placenta	27.0% to 54.9 %

Eastern Europe studies showed abortions are more frequent in pregnancies with low placenta implantations (0.4 % to 0.6% of all live births). The risk of placenta praevia in grand multipara is 5 % whereas in nulliparas is 0.2% with a recurrence rate of about 4-8% <sup>[2]</sup>

Placenta praevia is a significant cause of premature delivery <sup>[2,21]</sup> and maternal morbidity. Perinatal mortality rates reported were as high as 81 per 1000 live birth in earlier days. RDS was seen in 22% of the newborns. Today placenta praevia is seldom responsible for maternal mortality but the maternal morbidity <sup>[21]</sup> is striking especially in patients who had one or more prior caesarean section.

The etiology of placenta praevia remains obscure to a great extent. It results from the implantation of the fertilized ovum low in the uterine cavity. Two forms of implantation have been described. The primary isthmal<sup>3</sup>, which is rare, the secondary isthmal implantation in which the placenta in its development comes to extend into the isthmus and is more frequent.

Ananth (2006)<sup>[4]</sup> concluded that along with increase in age and parity (3+) the decrease in spacing between pregnancies is also taken as a separate confounding factor for placenta praevia. Allen VM (2006)<sup>[5]</sup> searched article in Cochrane Library and Medline from 1990-2005 related to ICSI, IVF, GIFT, ZIFT was excluded. Observed that the perinatal mortality was significantly higher in study group, than in spontaneous conception. He also mentioned the increased risk for prematurity, low birth weight, gestational hypertension and placenta praevia.

In the study group, perinatal mortality in assisted conception twin pregnancies appears to be lower than in the spontaneously conceived twin pregnancies; Due to the above mentioned factors close surveillance is mandatory.

Jaswal A Manaktala (2006)<sup>[6]</sup> concluded that there is an increase in duration of prolongation of pregnancy with encirclage and perinatal outcome is better with increased weight at birth and better APGAR. Jaswal has encouraged further work in order to prove its value in women of

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placenta praevia.

Gobman (2007) [7] analyzed the pregnancy outcome in women with placenta praevia in relation to the number of previous sections in 19 academic centres over 4 years. His study consisted of 868 women, of which 488 cases had no previous sections, 252 cases with 1 previous sections. He conducted that women with increasing number of previous sections were associated with increased maternal morbidity but not with increased perinatal morbidity.

Vaginal bleeding any time in third trimester of pregnancy is a serious concern both for patients and her obstetrician. This vaginal bleeding may be due to several causes but by and large the two main causes are placenta previa and placental abruption. In both of these spectrum of vaginal bleeding may range from slight to catastrophic hemorrhage, the latter with severe and dangerous consequences both for pregnant mother and fetus over the years rising rates of Cesarean section and abortions have increased incidence of placenta previa and its complications. Advances in the diagnostic modalities have resulted in early and increased diagnosis of asymptomatic placenta previa and placental abruption with this in mind and to understand these this study was undertaken.

### Methodology

This study has been conducted in the Department of Obstetrics and Gynecology, at tertiary referral hospital. Antenatal cases that were enrolled for this study included:

All Pregnant women with gestation more than 28 weeks and having bleeding per vaginam

All pregnant women > 28 weeks who were asymptomatic but ultrasound showing placenta previa or placental abruption were also included in this study Booked / unbooked / referred cases were included.

Each case on inclusion into this study was given a code number. At delivery the newborn was also given the same code no to

facilitate the follow up of newborn through the perinatal period. The detailed history of each case was taken followed by through clinical examination clinical data of each case was recorded on a performed Proforma in serial manner.

Each case was subjected to routine investigation like hemoglobin, blood grouping Rh typing, Urine routine / Microscopy, bleeding time, Clotting time, Ultrasonography special investigation were done as per the merits of the case like renal function test, prothrombin time, serum fibrinogen etc and these were also recorded on the performa.

Clinical diagnosis was confirmed by USG, Clinical progress, mode of delivery, complications, blood transfusion etc., recorded.

The collected data then was analyzed.

### Results:

**Table 1:** Distribution of cases of placental Abruption and placenta praevia in relation to age

Age in years	placenta praevia		Placenta abruption	
	No.cases	Percentage (n=162)	No.cases	Percentage(n=133)
<19	26	16.04%	31	23.30%
20-24	30	18.5%	48	36.09%
25-29	36	22.22%	40	30.07%
30-34	39	24.07%	12	9.02%
>35	31	19.6%	2	1.52%
Total	162	100%	133	100%

It is seen from the above table that maximum number of cases of placenta praevia. Were in age group 20-29 years i.e.66 cases (30+36) minimum number of cases <19 years i.e. 26.In placental Abruption lowest incidence found in age group >35 years, i.e. 2 cases, others were 31 cases in <20 years, 40 cases in 25 -29 years, and 12 cases in 30-40 years age group.

**Table 2:** Breakup of cases of placenta praevia and placental abruption in relation to parity.

Parity	placenta praevia		Placenta abruption	
	No.cases	Percentage (n=162)	No.cases	Percentage(n=133)
Primigravida	30	18.51%	43	32.35%
Para 1	37	22.83%	25	18.79%
Para 2	46	28.39%	34	25.56%
Para 3	35	21.63%	27	20.30%
≥ Para 4	14	8.64%	4	3.00%
Total	162	100%	133	100%

It is seen from the above the table that maximum number of cases of placenta praevia were multigravida i.e.132.It is seen from the above table that maximum number of cases of placental abruption were in primigravide i.e. 43 cases other were 25 cases in para 2 group, 34 cases in para3, 27 cases in para 4 group.

**Table 3:** Type of placenta praevia.

Type	No. of cases of placenta praevia	Percentage (n=162)
I	58	35.80%
II Anterior	52	32.09%
II Posterior	25	15.43%
III	14	8.64%
IV	13	8.04%
Total	162	100%

Out of 162 cases of placenta praevia 110 women had minor placenta praevia (I, II Anterior) 52 women had major placenta praevia.

**Table 4:** Risk factor for placenta praevia.

Risk factor	No. of cases	Percentage (n=162)
Previous LSCS	35	21.64%
Previous MTP	14	8.64%
Previous D&C	6	3.70%
Twin gestation	2	1.23%
Multiparity	132	81.48%
Previous myomectomy	4	2.46%
No risk factor	25	15.43%

Total is more 162 because more than one risk factor were there in one patient.

Multiparity was found to be commonest risk factor and twin gestation was the least common factor. It is also seen from the above table that 59 cases has one or more prior operative intervention on the uterus i., 36.44%.

**Table 5:** Symptomatic Asymptomatic placenta praevia.

Cases of placenta praevia	No. of cases	Percentage (n=162)
With Symptoms	108	66.66%
Without Symptoms (Diagnosed on routine USG)	54	33.44%
Total	162	100%

Of 162 women with placenta praevia 108 cases presented with bleeding patients and 54 of the remaining women were diagnosed to have placenta praevia on routine USG.

**Table 6:** Gestational age at the first episode of bleeding p/v

Gestations in weeks	20-30	30-34	34-38	Total (n=108)
No. of cases	30	42	36	108
Percentage (n-108)	27.77%	38.88%	33.35%	100%

The largest number of cases of placenta praevia presented with first episode of bleeding p/v during 30-34 weeks of gestation accounting for 38.88% of total cases. 27.77% and 33.35% of total cases presented during 28 to 30 weeks and 34 to 38 weeks respectively.

**Table 7:** Breakup of cases of placenta praevia by management of admission.

Management	No. of cases	Percentage (n=108)
Active	20	18.52%
Expectant	88	81.48%
Total	108	100%

Out of 108 women active management was carried out in 20 women, whereas expectant or Mac Cafee management was given in 88 women.

**Table 8:** Mode of Delivery in cases of placenta praevia.

Mode of delivery	No. of cases placenta praevia		Total	Percentage (n=162)
	Minor	Major		
Vaginal	68	--	68	41.97%
LSCS	42	52	94	58.03%
Total			162	100%

Cesarean section rate in this cohort of case of placenta praevia was 58.03% and vaginal delivery rate was 41.97%.

## Discussion

Total numbers of deliveries were 11,549 out of which 343 cases presented with APH giving incidence of 2.79%.

The study focused on the two major components of APH. The data and analysis of the collected data was done under heading.

### A. Placenta praevia

### B. Placental Abruption

Total number of cases with placenta praevia were 162 giving the incidence of placenta praevia 1.40% (n=11,549). placenta praevia contributed 50.15% of cases i.e., 162 cases of 323.

Total number of cases with placental abruption were 133 giving the incidence of placental abruption 1.15%. Analysing contribution of placental abruption towards total of APH (n=323) placental abruption has contributed 41.17%.

Thus of two condition placenta praevia was more compared to placental abruption.

Booked and unbooked cases in placenta praevia were 90 (55.66%) and 72(44.44%) respectively Booked and unbooked

cases in placental abruption were 17 (12.78%) and 106 (87.22%) respectively.

Incidence of abruption was higher among multigravida in this study 67.65% (18.79+25.56% 2030%+3%). Incidence of placental abruption was also higher among multigravida in the study done by Kramer *et al.* (1997) <sup>[8]</sup> i.e 52.9% and Anant *et al.* <sup>[9]</sup> (1995) i.e 57.17%.

This study and other studies as mentioned above found higher incidence of placental abruption in multigravida than primigravida.

In this study 35.33% of cases had placental abruption during 28-32 weeks of gestation 44.36% during 33-36 weeks gestation, 20.31% in >37 week gestation which is closely correlated with the study done by matsanseng *et al.* 227 (2006) i.e 41.6% of cases had abruption between 28-32 weeks, 40.2 % during 33-36 weeks of gestation, 15 during >37 weeks of gestation.

In this study 84.96% of women presented with vaginal bleeding which is closely correlated with the study done by Hurd *et al.* 228 (1983) <sup>[10]</sup> i.e 78% and park *et al.* 229 (1959) i.e 53.15%.

In this study the incidence of hypertensive disorder of pregnancy was 46.62% which is closely correlated with the study done by choudhary *et al.* <sup>[11]</sup> 230 (1974) i.e 43.3% and Odenaal *et al.* 231 (1978) i.e 34.0%.

In this study the incidence of PROM in cases of placental abruption was 7.52% which is closely correlates with study done by Gonen *et al.* <sup>[12]</sup> (1989) i.e 5.6% Major *et al.* 233(1994) i.e 5%.

An attempt was made as far as possible to deliver a patient with placental abruption vaginally. This is because many of the patients with abruption are at high risk for anaesthesia and for development of post operative complications. In addition majority of patients had intra uterine fetal demise.

In this study incidence of vaginal delivery was higher i.e 78.94% when compared to the study done by voigt *et al.* 225 (1990) i.e 53.9 9% and sholl *et al.* 234 (1987) 46.36%.

In this study incidences of LSCS in case of placental abruption was lower i.e 21.06% when compared to study done by Voigt *et al.* <sup>[13]</sup> (1990) i.e. 48.1% and sholl *et al.* <sup>[14]</sup> (1987) i.e 53.64%.

This can be explained by liberal use of LSCS delivery in western countries because of good neonatal care facilities.

## Conclusion

In this study, it was observed that the incidence of APH was 2.79% placenta praevia has contributed to 1.40% of case of APH and placental abruption has contributed to 1.15% of cases of APH.

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