Original Research Paper

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ANTEPARTUM HAEMORRHAGE – STUDY AND ANALYSIS OF OBSTETRIC AND FETAL OUTCOMES

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ABSTRACT

Background: Antepartum hemorrhage (APH) is an obstetrical emergency and is one of the leading causes of maternal and perinatal mortality and morbidity. Incidence varies from 2-5% of all deliveries. It contributes to 15-20% of all maternal deaths in India. Such obstetric emergency if handled carefully with identification of risk factors and timely management of cases can reduce chances of maternal and perinatal complications. **Methods:** The present study is an observational study focusing on antepartum haemorrhage and its maternal and perinatal outcomes in a tertiary care centre over 2 years, conducted in Dept. of Obstetrics and Gynecology of Dr. D. Y. Patil Medical College, Hospital and Research Centre, Pimpri, Pune. A predesigned semi-structured, patient-friendly questionnaire was prepared based on the review of literature on Antepartum hemorrhage. **Results:** All 23 cases of Placenta Previa were delivered by Caesarean Section. Abruptio Placentae had 29 cases delivered by vaginal delivery & 24 cases delivered by C-Section. Our findings were statistically significant (p=0.000 which is <0.05). We found anaemia in 53 cases of ante partum haemorrhage had to be corrected. (p=0.006).There was significant association between type of correction (oral iron , IV iron , PCV and FFP) needed & it's distribution in APH subtype (p=0.014). We found only 1 case of placenta previa out of 80 cases where hysterectomy was done, and there was only 1 case with maternal mortality. This might be due to better and timely management of the chain of events that leads to maternal morbidity and mortality. Low birth weight , Low APGAR score , NICU admission and few intrauterine deaths were common in all 3 groups of APH with Abruptio Placentae contributed maximum. **Conclusions:** This current study attempts to identify the complications of antepartum haemorrhage and its possible management favourable to mother and baby outcomes in a tertiary care center, even for the referred cases.

KEYWORDS

APH, Anaemia, Fetomaternal outcome, Placenta previa, Abruptio placenta

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Introduction

Antepartum Haemorrhage (APH) is an important condition complicating 2-5% of pregnancies. Antepartum Haemorrhage (APH) is defined as any vaginal bleed from the female genital tract occurring during pregnancy from the time of potential foetal viability to delivery of the baby.[1,2]

APH is associated with multifetal gestation, malpresentation, preterm labor, pre-eclampsia, eclampsia, hydramnios and chorioamnionitis. Maternal complications due to APH are: postpartum hemorrhage (PPH), shock, sepsis and disseminated intravascular coagulation (DIC). . Also there are dire consequences for mother ranging from increased anxiety to severe haemorrhage requiring intensive care .[1] APH predisposes foetus at risk for pre-term delivery, low birth weight & increased perinatal mortality. Antepartum haemorrhage is associated with grave feto-maternal outcomes and timely management is crucial.

Our study aims to study and analysefeto-maternal outcomes of antepartum haemorrhage and also improve it's obstetrics consequences .

Aims and Objectives

To study the Obstetric and Perinatal outcome in antepartum haemorrhagein a tertiary care hospital.

Registration	APH subtype		
	Placenta Praevia	Abruptio placenta	Indeterminate etiology
Un registered	1	3	0
Registered at an urban centre	16	24	1
Registered rural centre	6	26	3
Total	23	53	4

Chi square test (Likelihood ratio =5.84 ; P Value=0.211)

Table 2: Co-morbidityDistribution (multiple co-morbidities possible in combination)

Co-morbidity	Frequency	Percent
Diabetes Mellitus	12	15.0
Hypertension	30	37.5
Anemia	20	25.0
No significant co-morbidity	34	42.5

Table 3 :APH Mode of delivery

APH types	Vaginal delivery	Caesarean Section
Placenta Praevia	0	23(28.75%)
Abruptio Placentae	29(36.25%)	24(30%)
Indeterminate	2(2.5%)	2(2.5%)
Total	31	49

Chi square test (likelihood ratio=16.3; p=0.000)
There is significant association between APH subtype and mode of delivery.

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Table 4: Anaemia Correction Requirement

APH Subtype	Anaemia Correction	
	Yes	No
Placenta Praevia	9	14
Abruptio Placentae	41	12
Indeterminate Etiology	3	1
Total	53	27

P value =0.006 Significant

Table 5: Blood Loss correction based on APH subtype

Blood loss correction	APH subtype		
	Placenta Praevia	Abruptio Placenta	Indeterminate Etiology
Oral Iron	14	10	1
Packed cell volume (PCV)	3	21	2
Both PCV & FFP	2	11	1
Injectable iron	4	11	0
Total	23	53	4

There was significant association between type of correction needed & it's distribution in APH subtype (p=0.014)

Fig 1 : Puerperal Pyrexia

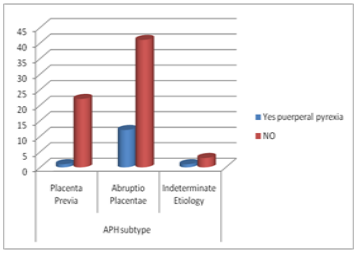

Table 6:ICU admission

Need for ICU	APH Subtype		
	Placenta Praevia	Abruptio placenta	Indeterminate etiology
YES	3	5	0
NO	20	48	4
Total	23	53	4

In our study we found that ICU was required by 8 cases, of these 8 cases 3(1 had placenta accreta and also underwent obstetric hysterectomy for the same, the other two presented in a state of haemorrhagic shock) were of placenta praevia& 5 belonged to abruption placentae group (1 had multiorgan failure and irreversible shock and died due to same, 1 presented with features of HELLP syndrome and also had ARF, 2 xsanguinated due to haemorrhagic shock and DIC, 2 were also the cases of eclampsia and had uncontrolled hypertension).

There was no significant association between ICU requirement and subtype of APH (p=0.583).

Table 7 :Need for Hysterectomy

Need for Hysterectomy	APH subtype		
	Placenta Praevia	Abruptio Placentae	Indeterminate Etiology
Yes	1	0	0
No	22	53	4
Total	23	53	4

There was a significant difference between the three groups in terms of mean weight of baby (p=0.002).

Table 8Foetal Outcome

Foetal outcome	APH subtype			Total
	Placenta praevia	Abruption Placenta	Indeterminate etiology	
IUD	5	32	3	40
Shifted to NICU	14	9	1	24
NICU not required	4	12	0	16
Total	23	53	4	80

P value=0.001

Discussion

APH remains a major cause of both obstetric and perinatal mortality and morbidity worldwide more so in developing countries.

In the present study, Placenta Praevia had 23 cases (28.7%) and mean age was 35.6 weeks (SD=5.26) ; Abruptio Placentae had 53 cases(66.2%) and 4(5%) cases were of Indeterminate etiology. Similarly Sharmila G & Prasanna also reported that maximum number of patients belonged to 20-30 years of age. al.[3,4]

In our study, we found most of the patient in lower (36 cases) to lower middle class (37 cases). One possible reason could be due to high migrant worker population in vicinity of our centre. Similarly these findings have been reported by other Indian studies as well.[2-5]

In our study all 23 cases(100%) of Placenta Praevia were delivered by C-Section. Abruptio Placentae had 29 cases(36.2%) delivered by vaginal delivery & 24 (30%)cases delivered by C-Section. Our findings were statistically significant (p=0.000 which is <0.05), so we can conclude that there is significant association between APH subtype and mode of delivery. Similar findings were noted by few Asian studies . [5,6]

Madan et al found in their study that, patients with placental abruption were 8 times more likely to get admitted to ICU (adjusted OR: 8.09, 95% CI: 8.28–9.57). placenta praevia has the risk 3 times (adjusted OR: 3.03, 95% CI: 2.69–3.39).Our findings were also consistent with such studies.[7,8]

In our study we found only 1(1.2%) case of placenta praevia out of 80 cases where hysterectomy was done. The case of placenta accrete and had PPH. In the study conducted by Ahmed et al, the rate of obstetrics hysterectomies was 15.1%.[8]Low incidence of hysterectomy in our study is due to timely management and availability of new uterotonic drugs & blood products.

In our study we found that 25 patients were given oral iron for correction, 26 (32.5%)patient required packed cell volume for their blood loss, 14 cases(17.5%) needed both FFP & PCV for their blood loss correction, amounting to massive transfusion . While 15 cases(18.75%) were given parentral iron for their blood loss. There was significant association between type of correction needed & it's distribution in APH subtype (p=0.014). The need of blood transfusion was more in APH cases , findings were in accordance with other parallel studies.[6,9]

In our study, we found mean weight of babies born to mothers having placenta praevia to be 2.15kg, while abruption placenta group had mean weight of baby to be 1.55kg and mean weight of 1.33kg in ante partum haemorrhage group due to Indeterminate etiology. (p=0.002) Similar findings were noted by Singhal et al and Wasnik et al.[6,7]

In our study, we found total 40(50%) Intra uterine death, out of total 40; 5(6.2%),32(40%) & 3(3.7%) cases were of placenta praevia, abruption and Indeterminate etiology respectively and also preterm and perinatal hypoxia contributing to perinatal mortality. 24(30%) cases were shifted to NICU (perinatal morbidity), majority were shifted for preterm and low birth weight. Major neonatal morbidity was due to low birth weight related to preterm (15%) and NICU admissions (6%) due to birth asphyxia.[10]

In the study done by Ahmed et al,from the total no. of babies, 13.2% (n=7) were delivered fresh stillborn babies. Of the surviving babies (n=45), 20% (n=9) required admission to NICU.[8] In the study by Devramani et al, the percentage of Perinatal mobidity and perinatal deaths was 28%.[11] Findings of these studies were consistent with present study.

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Takai et al, found in their study that the fetal outcome was generally better in placenta praevia group (P = 0.001).Having more babies who had good Apgar scores of 7–10, while in the abruptio placentae group 136 out of 150 were either asphyxiated or stillborn.Theses findings were in accordance with our studies.[8,9,11]

In the present study there was only 1 case of maternal mortality (1.2%), patient was a case of abruption associated with severe preeclampsia, with previous lscs, with infection. Patient was brought in a state of shock and baby died in utero. Patient also had DIC, multi organ failure and sepsis and passed away within 2 days of delivery.

Most of Indian studies reported cause of death in APH was uncontrolled PPH leading to coagulation disorder, even in our study.[9,10]

Conclusion

This current study attempts to identify the complications of antepartum haemorrhage and its possible management favourable to mother and baby outcomes in a tertiary care center, even for the referred cases.

We concluded by this study that, proper antenatal and intrapartum care, early diagnosis of APH, availability of blood and blood products and their timely usage decreases the feto-maternal morbidity and mortality due to antepartum hemorrhage.

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