

Antepartum hemorrhage and its maternal and perinatal outcome at tertiary care hospital

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Abstract

Antepartum hemorrhage (APH) is outlined as harm from or into the venereal tract when the amount of viability till delivery of the fetus. Etiology includes gestation, disorder, native causes, general causes, and upset origin. The objective of this study was to spot factors related to APH and to quantitate maternal morbidity, mortality, and perinatal outcome in patients with APH at a tertiary care center in India. The study was a retrospective data-based study and patient data was obtained from delivery records of one hundred girls presenting at age of twenty-eight weeks and higher than with APH. All patients with injury per duct once twenty-eight weeks of gestation were enclosed within the study and were classified as – maternity (PP), Abruptio Placenta (AP), or unknown causes. Out of the total of one hundred cases of APH, maternity contributed to 80%, abruptio placenta 19% with 1% unknown causes. Overall maternal mortality was 9%, perinatal mortality was 39%. The prevalence of low birth weight and preterm babies was high. APH may be a major explanation for maternal and perinatal morbidity and mortality that can be prevented by early registration, regular prenatal care, early detection of high-risk cases, and early referral to a higher center. smart facilities for cesarian, the availableness of blood banks, and a multidisciplinary approach with a decent NICU will improve the maternal and perinatal outcome of APH. The results of this study were found in smart agreement with previous studies.

Keywords: Antepartum hemorrhage, Abruptio placenta, APH, Placenta previa.

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Introduction

Antepartum hemorrhage (APH) is outlined as hemorrhage from or into the reproductive organ tract when the amount of viability till delivery of vertebrate. the planet Health Authority defines prenatal hemorrhage as hemorrhage when the 28 week of physiological condition.[1] On a median two to 5% of all pregnancies are difficult by prenatal hemorrhage.[1,2]

Medical specialty hemorrhage accounts for 22- 25% of maternal mortality and amongst these prenatal hemorrhage is that the commonest reason behind morbidity and mortality accounting for half these deaths.[2] Etiology includes pregnancy, upset, native causes, , upset originand general causes. Placenta previa refers to a placenta settled partly or utterly inside the lower female internal reproductive organ phase. Incidence is 4-5 per a thousand pregnancies. [2,3]

Placenta previa is classified as:

- Type one or Low lying: Encroaches lower female internal reproductive organ phase however doesn't reach internal os
- Type two or Marginal: Reaches margin of the interior ostthough doesn't cowl it.
- Type three or Partial: partly covers the interior os.
- Type four or Total or Central: utterly covers the interior os.

The etiology of pregnancy remains polemical. thegreatest important theories concentrate on mucous membrane injuryinside the corpus and defective genetic science or placental mechanism. In human being, the blastula is embedded in the interior the substance of mucosa hence abnormalities of mucous membrane biological procedure delayed biological procedure, and previous trauma to the mucosa appear to influence the placing of implantation, so causative to the likelihood of pregnancy.[4,5]

A number of studies have recognized its association with[6,9].

- Advanced maternal age (>40 years)
- Multiparity
- Previous pregnancy
- Lacking mucosa recognitions to presence or history of female internal reproductive organ scar (previous cesarean delivery, physiological condition termination followed by curettage), inflammation, manual removal of placenta, or submucous fibroid

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- Multiple pregnancies
- Smoking

Placental disruption is that the separation of the placenta whichever partly or completely from its implantation website before delivery. it's began by hemorrhage into the epithelium basalis which ends up in retroplacental intumescence. The development of impaired membrane invasion with resultant atherosclerosis is expounded and inflammation or infection may additionally be contributing.[1]

Risk factors for placental interruption embody advanced maternal age, multiparity, low body mass index (BMI), interruption in a very

previous physiological condition, pre-eclampsia, polyhydramnios, intrauterine infection, premature, break of membranes, abdominal trauma, smoking, drug misuse (cocaine and amphetamines), physiological condition following assisted procreative techniques and maternal thrombophilias.[9]

The objective of this study was to spot factors related to prenatal hemorrhage and to quantitate maternal morbidity, mortality, and perinatal outcome in patients with APH at a tertiary care center in Jaipur, India.

Methods

A retrospective experimental study was assigned at the Institute for Medical Sciences and Research Centre, Jaipur National University, Jaipur. Patient info was obtained from delivery records of 100 women presenting at fertilization age of 28 weeks and on top of antenatal harm. All patients with hemorrhage per vaginum at 28 weeks of gestation were enrolled within the study. The study was made on the basis of history, clinical examination, and ultrasound findings, and cases were categorized as - maternity (PP), Abruptio Placenta (AP), or alternative causes. The analysis was done by Microsoft excel 2013.

Results

100 patients with APH were analyzed including 80% cases of PP, 20% cases of AP. The majority of patients were within the age bracket of 26-30 years (Table 1). In patients with PP, 51% were Primigravida whereas AP was additional common in multigravida with 45% (11 out of 20) seen in gravida four (Table 1). The rural background was predominant with 92% of APH patients having a primary residence in the country. only 10% of PP patients and none of AP patients were from the populated area. 61% of APH patients were unreserved (57.5 % cases of pregnancy and 100 percent cases of abruptio placenta) (Table 1).

Table 1: Demographic distribution of cases (n=100)

		No of patients	
		Placenta previa	Abruptio placenta
Age distribution	<20 years	0	
	21-25 years	2	
	26-30 years	72	
	31-35 years	21	
	>35 years	5	
Gravida distribution	Primi	51	4
	Gravida 2	21	4
	Gravida 3	5	1
	Gravida 4	2	10
	Gravida 5 or more	2	0
Booked or	Booked	38	1
unbooked	Unbooked	44	17

The majority of the APH patients belonged to category four and five of changed Kuppaswamy Prasad's classification. 4% (N=4) of patients of PP had associated twin pregnancy. (Table 2). 22.5% cases of PP had associated malpresentation whereas 95% cases of AP were related to pre-eclampsia- eclampsia syndrome (Table 2).

Table 2: Associated risk factor

	Placenta Previa	Abruptio placenta
Malpresentation	18	0
PIH	0	13
Eclampsia	3	6
Oligohydramnios	2	0
Multiple Pregnancy	4	0

Previous LSCS scar was present in 32.5% of PP patients (n=26) whereas 6.25% cases (n=5) of PP had the previous history of D and C (Table 3).

Table 3: Distribution of patients according to the previous scar

	Placenta Previa	Abruptio placenta
Previous LSCS	26	2
D and C	5	12
Any other scar	0	0

The incidence of placenta accretes syndrome in the scarred uterus was found to be 6.25 % (2 out of 31 cases) in our study. Gestational age at termination was but 37 weeks in 37% cases of APH. 25% of pregnancies were terminated between 28 to 32 weeks, 11% at 32.1 weeks to 34 weeks, and 1% between 34 to 36 weeks (Table 4).

Table 4: Distribution of patients according to gestational age at termination

	Placenta Previa	Abruptio Placenta	Unclassified
28-32weeks	22	3	0
32.1 -34weeks	9	1	1
34.1-36.6weeks	1	0	0

The mode of delivery in 84% of cases of APH was LSCS whereas vaginal delivery was seen in 16% of cases. In patients that had PP, 93.75% (75 out of 80) had LSCS and 6.25% (5 patients) had FTND whereas 40% cases of AP had LSCS and 60% had a vaginal delivery (Table 5).

Table 5: Mode of delivery

	Placenta Previa	Abruptio placenta	Unclassified
Emergency LSCS	75	8	1
FTND	5	12	0

PPH was a significant intrapartum complication involving 42% of cases of APH. 39% cases of PP (30 out of 80) had PPH throughout delivery with per operative finding of 1 case every of focal placenta accreta, placenta increta and bicornate uterus (Table 6).

Table 6: Intrapartum complication

	Placenta Previa	Abruptio placenta
PPH	30	12
Maternal collapse	4	0
Placenta accreta	2	0
Placenta increta	2	0
Uterine anomaly	1 (Bicornuate uterus)	0

Blood transfusion was needed intraoperatively in 53% of total APH patients with 50% of PP cases and 65% of AP cases requiring blood transfusion. uterine tamponage was utilized in 30% of patients of APH, However, cesarean extirpation was required in 9% patients of APH with 6.25% (5 out of 80) cases of PP, bushed cases of central gestation, among these one case had focal placenta accreta, one case had placenta increta, and another case with the horned uterus and one patient died thanks to thromboembolism in post-operative amount. 20% (4 out of 20) cases of AP had cesarean extirpation (Table 7).

Table 7: Per operative intervention

	Placenta previa	Abruptio placenta
Blood transfusion	40	13
Uterine packing	30	0
Caesarean hysterectomy	5	4

Postoperatively, 7% of patients of APH had secondary PPH, all in cases of maternity whereas 86% needed a transfusion in postop amount (87.5% of PP and 80% of AP). 28% needed ICU admission with 39.29% of those requiring ventilator supports. 5% cases landed in septicemia. Wound complications (infection, dehiscence) were noted in 2% of cases of APH whereas general complications (respiratory morbidity, ARF, eclampsia) were seen in 13% (8.75% in PP and 30% in AP). One tolerant maternity developed occlusion within the post-operative amount. (Table 8)

Table 8: Post-op complication

	Placenta Previa	Abruptio placenta
PPH	7	0
BT	70	16
Need for ICU	18	10
Need for ventilator	5	6
Sepsis	1	4
Wound complication	2	0

Respiratory	2	0
Eclampsia	2	6
ARF	3	0
Thromboembolism	1	0

Neonatal outcome overall was poor with 31 APH patients having IUD (28.75% of PP and 35% of AP). 25% of newborns required NICU admission, (25% newborns of placenta previa patients and 25% newborns of abruptio placenta patients) (Table 9).

Table 9: Neonatal outcome

	Placenta Previa	Abruptioplacenta	Unclassified
IUD	23	7	1
Need for NICU	20	5	0

Analysis of maternal outcome unconcealed overall maternal mortality was 9% (9 out of 100) of all cases of APH. All the patients had central pregnancy giving a death rate of 10% in pregnancy patients. perinatal mortality was 39% (37.5% of PP cases and 40% of AP cases) (Table 10).

Table 10: Maternal and perinatal mortality

	Placenta Previa	Abruptio placenta	Unclassified
Maternal mortality	8	1	0
Perinatal mortality	30	8	1

Discussion

Incidence of APH has been quoted in alternative studies within the range of 2-5%. [1,2,10,11] In our study majority of the cases of APH were thanks to Placenta Previa pregnancy (80%) followed by abruptio (20%) which is comparable to studies done by Maurya et al, Adekanle et al.[10,12] The age distribution in our study discovered that 72% of APH cases were aged 26-30 years that is comparable to check by Adekanle et al within which 40% APH patients were between 25-29 years whereas within the study by Maurya et al the incidence of pregnancy was higher in 26-30 years cohort.[10,12] We determined additional gravida patients to own pregnancy whereas multiparity was additional common in abruptio placenta, however, in studies by Arora et al, Pandey et al, Maurya et al. most of the patients with gestation were multigravida whereas abruptio was seen a lot of in gravida I and low parity.[10,12,13] This inequality can be in all probability attributable to a lot of variety of gravida I have seen in our institute and thanks to increased prevalence of girdle inflammatory diseases in low socioeconomic category of patients. additionally, a majority of those patients were referred from varied peripheral health centers. The majority of APH cases in our study had a rural background with 90% of PP cases and every one AP cases comprising of the rural population that was in concordance with previous studies by Maurya et al and Pandey et al.[10,11] 61% cases of APH cases in our study were unreserved and reported in an emergency with hemorrhage per vaginum or labor pains. This was almost like previous studies done by Maurya et al that reports 62% unreserved cases and the same result was seen with the study by Pandey et al, Adekanle et al.[10-12] APH cases principally belonged to category 4 and 5 in line with changed Kuppusswamy Prasad's classification 2013.10,11

History of previous LSCS was present in 27% of APH cases and history of D and C present in 16%. Previous LSCS scar was a gift in 32.5% of PP cases and 6.25% available history of D and C accentuation the increased incidence of PP in these patient teams as was additionally seen in studies by Sheiner et al adventurer et al.6,8 Incidence of placenta accrete syndrome in patients with gestation and scarred uterus in our study was 6.25% whereas the study by Nasreen et al showed the incidence of placenta accreta to be 14.2% in the scarred uterus with placenta praevia.[5]

22.5% cases of PP had associated malpresentation that is that the alike (25%) as seen in the study by Maurya et al, Pandey et al.10,11 Around 39% cases of PP had malpresentation in the study by Nasreen et al.5 This high incidence of malpresentation additionally

accounts for increased cesarean rate even in minor degrees of PP. 84% case of AP were related to pre-eclampsia-eclampsia syndrome in our study as against 67% you bored with the study by Maurya et al and 52% you bored with a study by Pandey et al.[10,11]

The fertilization age at termination of pregnancies difficult by APH in our study was but 37 weeks completed weeks in 37% of APH patients, amongst these 25% were terminated between 28 to 32 weeks in maternal interest that is one in every of the factors accounting for top perinatal mortality of 39% in our study. 40% of pregnancies with PP were terminated before 37 weeks and 20% of patients with AP delivered before 37 weeks. Similar results were appreciated in the study by Maurya et al within which 52% of patients delivered before 37 weeks with the majority being cases of PP.10 28% premature deliveries were reported by Nasreen et al in patients with PP.[5]

In our investigation 84% of APH cases had LSCS and 16% had vaginal conveyance. 93.75% instances of PP were conveyed by cesarean segment and 1.25% conveyed vaginally, 40 % instances of AP had LSCS and 60% conveyed vaginally (Table 5), which is like investigation by Maurya et al with 94.3% LSCS rate in APH patients.10 Study by Pandey et al too announced 96% LSCS rate in PP patients.[11]

Cesarean hysterectomy was acted in 9% of instances of APH. 6.25% (n=5) cases with PP had a cesarean hysterectomy which is like rate of 5.3% in SOGC clinical practice rules and 5% in the investigation by Nasreen et al.[5]

Likewise, patients with PP and scarred uterus had a 12.5% danger of cesarean hysterectomy which is like danger cited in examination by Nielsen et al.[14] All the 5 patients in PP bunch who went through cesarean hysterectomy had focal placenta previa, 3 out of 5 were unbooked, and all had preterm crisis LSCS for draining per vaginum. One case had central placenta accreta, another had placenta increta, the third had a bicornuate uterus, every one of these discoveries was found per operatively. These discoveries demonstrate the significance of antenatal consideration and earlier information on muddling factors since a medical procedure arranged electively with the information on entangling factors prompts a multidisciplinary approach and better readiness which might have decreased the dismalness in these cases.

20% (4 out of 20) cases with AP had a cesarean hysterectomy, these patients were unbooked and every one of them had related iron

deficiency and toxemia, all had crisis preterm cesarean segment in the maternal premium or due to disintegrating state of the mother. The perinatal result was poor in AP when contrasted with PP, with 47.3% perinatal mortality in AP as against 40 % in PP. The investigations are done by Maurya, Suzuki S et al additionally demonstrated the perinatal result to be more regrettable in AP patients.[10,11,15] Perinatal mortality in this analysis was 39% in APH equivalent to 37.5% in the analysis done by Institute for Medical Sciences and Research Centre, Jaipur However our perinatal mortality was a lot higher than in different examinations, this is most likely because of the high number of patients alluded from fringe focuses so that when they show up intrauterine destruction has happened because of substantial blood misfortune or extreme fetal distress.10-12 Further adding to the high mortality is the way that 38% of pregnancies must be ended preterm out of which 56% were ended between 28 to 32 weeks and the endurance of youngsters at this gestational age in our NICU arrangement is poor further underlining the significance of multidisciplinary approach. Comparative high perinatal mortality of 44% was likewise seen in examination by Nasreen et al 5 in PP patients because of helpless NICU offices.

Maternal mortality in our investigation was 8%, all in instances of PP which is like examination by Maurya et al.¹⁰ 5 out of 6 passings were brought about by serious drain and hypovolemic stun while one patient created thromboembolism in the postoperative period. Of these 6 patients, 4 were unbooked (66.6 %), all introduced in crisis with hefty seeping because of focal placenta previa, 2 of these had extreme iron deficiency, one had serious frailty with placenta increta, 2 had twin pregnancy with paleness with eclampsia while one patient created thromboembolism in the post-employable time frame.

Conclusion

The antepartum drain is a significant reason for maternal and perinatal dreariness and mortality which could be forestalled by early enlistment, standard antenatal consideration, early recognition of critical cases, and an early reference to higher focus. Easily approachability and good facility of blood banks, Advances setups for the cesarean area, and well-equipped NICU set up and team effort by all medical departments can improve the maternal and perinatal result of APH. The implications of this analysis were found in acceptable accord with past researchs.

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