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Maternal and Perinatal Outcome of Abruptio Placentae at a Tertiary Care Referral Institute-A Prospective Study

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Abstract: *Abruptio placentae is one of the causes of antepartum haemorrhage. Separation of the placenta either partially or totally from its implantation site before delivery is described as Abruptio placentae. Our study aims to determine the causes, maternal and perinatal outcome in patients with Abruptio Placentae.This is a Prospective descriptive study conducted at government maternity hospital,tirupathi.In present study,41 cases of Abruption Placentae were included and studied regarding clinical features,presenting complaints,live births,maternal mortality, perinatal mortality and associated complications were noted.. Incidence of Abruptio Placaentae is increasing with increased age and parity.Most common risk factor for Abruptio Placentae is hypertension.Maternal mortality is 2.4% and perinatal mortality is 68.2%.Abruptio Placentae remains an important cause of perinatal mortality.It is an obstetric emergency truly accidental with few warning signs. Efforts to improve the perinatal outcome remains the principle challenge to the future in spite of the advent of USG to diagnose the cause and the ability to assess the fetal lung maturity to appropriately plan the time of delivery.*

Keywords*:Abruptio Placentae,perinatal mortality,warning signs.*

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I. Introduction

Obstetric haemorrhage is one of the leading causes of maternal mortality in developing and underdeveloped countries. In India maternal and perinatal mortality is still high due to associated problems like anemia, difficulties in transport in case of emergencies especially in tribal areas and restricted medical facilities.Abruptio placentae is one of the causes of antepartum haemorrhage. Separation of the placenta either partially or totally from its implantation site before delivery is described as Abruptio placentae.It has a wide variation of incidence ranging from 1:60 to 1:250.But an average it occurs in about 0.6% to 1% of pregnancies[1].Though MMR and PNMR due to Abruptio Placentae have decreased in the last few decades by improvements in obstetric care and blood transfusion services still it is one of the leading causes of maternal morbidity and perinatal loss.It is important to councel,diagnose ,refer and manage a case of Abruptio Placentae at a higher centre..

II. Aims And Objectives

Aim:This study is aimed to explore the causes of Abruptio Placentae and to study the maternal and perinatal outcome at tertiary care referral hospital

Objectives:

1. To study the demographic profile and the factors associated with Abruptio Placentae.
2. To study the maternal morbidity and mortality due to Abruptio Placentae.
3. To study the perinatal outcome in Abruptio Placentae.. [Prematurity, alive, IUD, neonatal death, NICU/SNCU admissions].

III. Materials And Methods

Study Design: A descriptive study including all the cases of Abruptio Placentae admitted in Government Maternity Hospital, Tirupati.

Study Subjects: All women who presented with bleeding per vagina at 28 weeks and above gestation. Pregnancies dated using a reliable reported date of last menstrual period and /or first trimester obstetrics scan.

Inclusion Criteria: All pregnant woman with Gestational age of 28 weeks and above presented with c/o bleedin p/v and diagnosed as abruption during the course of delivery.Including all Pregnant women both primigravida and multigravida in study.

Exclusion Criteria: All pregnant woman over 28 wks of gestation who were diagnosed as Placenta Previa,Genital tract trauma and lesions of genital tract.Patients who do not give informed consent.

Study Area : Department of Obstetrics and Gynaecology, Government Maternity hospital, Tirupati.

Study Period : From December 2017 to November 2018

Study Method : Data was collected by interviewing the patients by a piloted proforma meeting the objectives of the study after taking consent by clinical examination,ultrasonography and placental examination. Details like age, parity, previous obstetrics history, booking status, education, occupation, residence of the patients were noted. Records about mode of delivery, associated maternal complications such as preeclampsia, postpartum haemorrhage, need of blood transfusion, obstetrics hystectomy,ICU admissions were taken. Perinatal outcome in terms of maturity, perinatal mortality, NICU admissions were noted and analysed.Data was presented in tables and diagrams. Frequencies were described using percentages.

IV. Results

In the present study done from December 2017 to November 2018, the total numbers of deliveries with more than 28 weeks of gestation were 10482.Cases of Antepartum haemorrhage being 106,Abruptio Placentae being 41.Out of 41 deliveries, 1 woman had twin delivery. Total number of babies is 42. Number of Perinatal deaths due to Abruptio Placentae is 28 .Number of NICU admissions is 7.Maternal deaths due to Abruptio Placentae is 1.Prevalance of abruption placentae is 0.4%.Abruptio placentae was the commonest cause of APH followed by Placenta Previa.

Out of 41 women in the study 30(72.6%) were unregistered cases and 11 were registered in our hospital.

Distribution of cases based on grades of Abruptio Placentae

Grades of Abruptio Placentae	No. of cases	Percentage
Grade 1	3	7.3%
Grade 2	11	26.8%
Grade 3	27	65.9%
Total	41	100%

Grades of Abruptio Placentae were noted based on Sher's classification. Grade 1 was present in 7.3%, grade 2 in 26.8 percent and grade 3 in 65.9 percent which formed the largest group.

Age wise Distribution of cases of Abruptio Placentae

	Abruptio Placentae	
Age	No	%
15-19	4	9.8
20-29	35	85.3
30-40	2	4.9
Total	41	100

Regarding the maternal age, maximum number of women was between the ages grouping 20-29 i.e. 35(85.3%), followed by 15-19-i.e. 4(9.8%).

Distribution of cases according to gestational age at the time of Admission.

	Abruptio Placentae	
Gestational age in Weeks	No.	%
28-30	3	7.2
31-33	10	24.4
34-36	8	19.5
37 & Above	20	48.9
Total	41	100

In the present study, clinical manifestations of Abruptio Placentae occurred before term in 21cases,

Distribution of cases according to Gravida in Third Trimester.

	Primigravida		Multigravida		Grand multigravida	
APH	No	%	No	%	No.	%
Abruptio Placentae	17	41.5	24	58.5	0	0

Risk factors associated with Abruptio Placentae.

	Abruptio Placentae	
Risk Factors	**No.**	**%**
Previous Caesarean Section	3	7.3
Pre-Eclampsia in Present pregnancy	12	29.2
History of Abortions	9	21.9
Recurrent case of APH	5	12.1
Trauma	1	2.4
Endocrine Etiology	1	2.4
Total	31	75.6

In this study, Preeclampsia was the most common risk factor.

Table 9: Analysis of management of cases of Abruptio Placentae

	Abruptio Placentae	
Mode of Delivery	**No**	**%**
Normal	29	70.8
Caesarean	11	26.8
Caesarean Hysterectomy	0	0
Caesarean with uterine artery ligation	1	2.4

Table 7: Fetal Outcome in patients of Abruptio Placentae

	Abruptio Placentae	
Fetal Outcome	**Full Term**	**Preterm**
Macerated Still Birth	0	0
Fresh Still Birth	0	1
Neonatal Death	0	1
NICU admission	2	5
IUGR	1	0
Anomalous Babies	0	1
IUD	14	12
With Mother	4	1
Total	21	21

In abruption placentae majority of the babies are still born and IUD reflecting the severity of abruption. Among the 13 live babies, 7 babies were in NICU admission due to low APGAR with birth asphyxia and prematurity.1 were neonatal deaths due to prematurity and low birth weight.1 babies were with IUGR.Perinatal deaths are more in the babies of weight 1 -2kgs compared to other birth weights.

Total perinatal mortality in the present study 68.2%. PMR in vaginal delivery is 52.6% .Most of these is IUD which was allowed for vaginal delivery.As the GA increases, Perinatal deaths decreased in the present study. Number of perinatal deaths were more in babies with gestational age 28-33 weeks followed by babies with gestational age 34-36 followed in babies with > 37 weeks. After applying statics test P value is 0.05 which is significant.

Table 8: Maternal outcome in cases of Abruptio Placentae

Maternal outcome	No of cases
Postpartum Haemorrhage	7
Caesarean	12
Blood Transfusion	14
Peripartum Hystectomy	0
ICU Admissions	3
Death	1

Postpartum Haemorrhage is seen in 7 cases accounting to 17% of the cases. There were 3 ICU admissions of each 2 patient's recovered and 1 maternal death.

V. Discussion

The diagnosis of Abruptio Placentae should not only be on the basis of presence of a retroplacental hematoma but also through clinical and abdominal examination and examination of the placenta after delivery .Fetal condition should also be assessed . Most of the cases are referred from peripheral hospitals and most of them are emergency admissions as our institute is a tertiary care referral hospital. Out of 41 cases,30 were from rural areas, unbooked and admitted in emergency. Both maternal and neonatal mortality were more in these cases. During referral, 26 of all woman were accompanied by a nurse. The insufficiency of health service and low availability of equipment are the explanation of the situation.Incidence is more in multigravida (63.2%) than

in primigravida (36.8) in our study comparable to the studies of singhal et al[2] and adekanle et al.Other studies Gillium et al and clark et al also reported high incidence of Abruptio Placentae in multipara.
In the present study,the most common risk factor for Abruptio Placentae was hypertensive disorders of pregnancy observed in 29.2% of the cases comparable to Singhal et al[2] which reported 22.57%.
Higher percentage of the cases are delivered vaginally and the labour was accelerated by ARM and Syntocinon.LSCS was done for fetal distress in most cases and also if the maternal condition is deteriorating. Vaginal delivery is the preferred mode of delivery when the fetus is dead and the mother is stable haemodynamically. LSCS was done even if the fetus is dead in 8 cases(7.6%) to prevent the worse complications i.e DIC and if the obstetrician perceives the labour would be prolonged **.**

Comparison of mode of delivery in Abruptio placenta with other studies.

Study	Normal delivery	Caesarean section
Bako Et al[3]	63.3%	36.7%
Kalavati et al[4]	69%	31%
Nazli et al[5]	55%	45%
Vaidya et al[6]	73%	27%
Present study	70.8%	29.2%

In the present study, 70.8% of Abruptio placentae cases were allowed for vaginal delivery as most of them are were IUD which corroborated with the study of Vaidya et al , kalavathi et al,Bako et al.

34.2% of Abruptio Placentae cases required blood transfusion which is comparable to study done by Brennar et al and William et al who reported 36% and 52.2% respectively.The high rates of blood transfusion are because most of the cases are anemic at the time of admission. Maximum numbers of blood transfusions are required in a patient of Abruptio Placentae with DIC but the patient couldn't be revived. In study of Park SK 44.5% of patients received blood transfusions which are corroborative with the present study. Atonic PPH is more common in abruption placentae because of damage of endometrium,atony and coagulopathy.Fibrin and fibrin degradation products inhibit myometrial contractility.

Couvalaire uterus is seen in 4 cases (9.74%) patients corroborated with study of Rai et al [7]which reported couvalaire uterus in 10.5% of Abruptio placentae patients.Chakraborthy et al[8] reported a higher incidence 16.2%.

Perinatal mortality in present study is 68.2% which includes 32 IUDs,7 Neonatal deaths,2 still-births and 1 is anomalous baby which is comparable to the study of Sarwar et al[9](67.9%) and Nazli et al(66%).Perinatal mortality is high because most of the cases presented with dead fetus at the time of admission and also prematurity and severity of abruption.Main reason for IUD and still birth is maternal haemorrhage exposing the fetus to hypoxia and ultimately death. Fetal outcome can be improved by timely intervention and this proves the importance of early and vigorous management of APH.

In the present study, maternal mortality rate is 2.4%. one case was seen.A 20 year old G4P1L1A 2 with 37 Weeks gestational age and moderate anemia with severe preeclampsia with abruption grade 3 with IUD.She was induced with Tab. Misoprostol 25 mcgs and blood transfusion was started She delivered a dead male child of birth weight 2.8 kg with APGAR 0 by vaginal route and retroplacental clots of about 800grms expelled. Mild atonic PPH noted.Even with aggressive medical management bleeding was not controlled and emergency laparotomy with peripartum hystectomy was done. Couvelaire uterus was noted intraoperatively. She landed in hypovolemic shock and developed seizures and cardiac arrest. Patient was on mechanical ventilation VCV Mode. Totally 2 pints of blood,10 points FFP,8 points platelets were transfused. On 7th POD she developed pulmonary edema,DIC and cardiac arrest.patient died even after vigorous resuscitation.

VI. Conclusion

Accidental haemorrhage is an obstetric emergency and is one of the most common causes of significant maternal and perinatal morbidity and mortality.Awareness campaign to the pregnant mothers regarding importance of regular antenatal care,nutritional requirement,small family norm and easy accessibility to quality antenatal services should be conducted.The health personnel in the peripheries should be trained to identify the high risk cases,early registration and diagnosis,correction of anemia during antenatal period should be done by them.Efficient referral system should be made to reduce the rates of operative deliveries as there is greater risk of placental abnormalities in a scarred uterus.

Pregnant women with abruption should be considered as high risk and should be delivered in centres with skilled team,blood banking services and good neonatal intensive care unit. Efforts to improve the perinatal outcome remains the principle challenge to the future in spite of the advent of USG to diagnose the cause and the ability to assess the fetal lung maturity to appropriately plan the time of delivery.

References

[1]. Saihu HM, Bekan B,Aliyu MH,Rouse DJ,Kirby RS,Alexander GR,Perinatal mortality associated with abruption placentae in singletons and multiples.Am J Obstet Gynecol 2005 Jul;193(1):198-203.

[2]. Singhal S,Nymphaea,Nabda S.Maternal and Perinatal Outcome in Antepartum Haemorrhage:A Study At A Tertiary Care Referral Institute.The Internet Journal of Gynaecology and Obstetrics.2007;9(2).

[3]. B.Bako, B.M.Audu, C.M.Chama, O.Kyari, A.Idrissa.A8 year clinical review of Antepartum hemorrhage 1999-2006;BOMJ.2008;5(2):14-21.

[4]. Kalavati Girdharilal Jaju,A P Kulkarni,Shivprasad Kachrulal Mundada. Study of perinatal outcome in relation to APH. International Journal of Recent Trends in Science and Technology,2014;11(3):355-358.

[5]. Nazli H,Nusrat K,Syeda SS et al.Abruptio placenta and adverse pregnancy outcome.JPMA Vol 60,No.6,June 2010.

[6]. Vaidya PR. Abruptio Placentae:A study of 105 cases.J obstet Gynecol Ind., 1984;34:225-7.

[7]. Rai, L.Duvvi,Rao U.R. Vaidehi.Sever abruption placentae –Still unpreventable Int.J.G Gynecol Obstet.,1989;29:117.

[8]. Chakraborty B,De KC.Evaluation of third trimester bleeding with reference to maternal and perinatal outcome. J.Obst Gyne India, 1993; 42:166-71

[9]. Sarwar I,Abbasi AN,Islam A.Abruptio Placenta and its complication at Ayub teaching hospital Abbottabad.J.Ayub Med coll Abbottabad 2006;(18)127-131.

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