Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-7, Issue-5 | September-October 2021
Page no- 308-315 | Section- Research Article (Obstetrics & Gynaecology)

A Retrospective Study of Maternal and Fetal Outcome with Antepartum Hemorrhageat Tertiary Care Hospital

Tania Akbar[1*], Sumia Bari[2], Monowara Begum[3], Md. Faizur Razzaque khan[4]

[1]Assistant Professor, Department of Obstetrics and Gynaecology, Enam Medical College &Hospital, Savar, Dhaka, Bangladesh,
Email: taniaakbarfcps@gmail.com,
Orcid ID: 0000-0001-7518-8480
[2]Associate Professor, Department of Obstetrics and Gynaecology, Enam Medical College &Hospital, Savar, Dhaka, Bangladesh,
Email: sumia_bari@hotmail.com,
Orcid ID: 0000-0002-6627-7294
[3]Assistant Professor, Department of Obstetrics and Gynaecology, Enam Medical College &Hospital, Savar, Dhaka, Bangladesh, Email: moartuza@gmail.com, Orcid ID: 0000-0003-4632-6690
[4]Medical Officer, Sheikh Fazilatunnesa Mujib Eye Hospital & Training Institute, Gopalgonj, Bangladesh, Email: drfrkhansohan@gmail.com, Orcid ID: 0000-0002-7217-083X

*Corresponding Author

Received: 26 March 2021
Revised: 13 May 2021
Accepted: 22 May 2021
Published: 21 August 2021

Abstract

Background: Antepartum Hemorrhage (APH) has always been one of the most feared obstetric emergencies which contribute to significant maternal and perinatal mortality and morbidity. Aims and objectives: To determine the causes of Antepartum Hemorrhage. To study the maternal and fetal outcome in various types of antepartum hemorrhage. **Methods:** It is a study conducted in OPD, Labour room and Intensive Care Unit (ICU) admissions in Department of Obstetrics and Gynaecology, Enam Medical College& Hospital, Saver, Dhaka, Bangladesh over a period of one year from April 2019 to March 2020 were analysed retrospectively. All cases of APH with gestational age more than 28 weeks whether diagnosed previously or during antental visits or during delivery, referred from other hospitals, emergency admissions are included in the study. Data was statistically analysed using SPSS 20 software. **Results:** The present study included 28 patients who was diagnosed as having placenta previa, abruptio placentae or APH due to undetermined causes presented with or without bleeding per vaginum in OPD, labour room, ICU. Majority of the patients 17(60.71%)had Placenta previa while 10(35.71) had abruptio placentae, one case of APH is due to undetermined cause was 1(3.57%).11(64.71%) of the cases are unbooked cases in placenta previa and 7(70.00%) of the cases are unbooked cases in abruptio placenta but the difference is statistically not significant (p value-0.514). Postpartum hemorrhage is the second most common complication seen in 5 cases of placenta previa and 3 cases of abruptio placenta. In the present study 13 cases of placenta previa, 6 cases abruptio placenta were of low birth weight. The difference is not statistically significant (p value-0.371).11 cases of placenta previa and 5 cases of abruptio placenta were preterm. **Conclusion:** The most common cause of APH is placenta previa followed by abruptio placenta which was more common in unbooked cases with maternal risk factors. Antenatal booking, early identification of high risk cases and timely referral to tertiary care centres with good neonatal intensive care facilities, early intervention, blood and blood components transfusion, have a role in reducing maternal and perinatal morbidity and mortality.

Keywords: APH, Placenta previa, abruption.

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-7, Issue-5 | September-October 2021
Page no- 308-315 | Section- Research Article (Obstetrics & Gynaecology)

INTRODUCTION

Antepartum Hemorrhage (APH) has always been one of the most feared complications in obstetrics. Any bleeding from the genital tract during pregnancy after period of viability until the delivery of the baby is defined as antepartum hemorrhage. APH could be due to placenta previa, abruptio placentae, indeterminate causes or local causes although these are not common. APH complicates about 3-5% of all the pregnancies with incidence of placenta previa about 0.33-0.55%, incidence of abruptio placentae is about 0.6-1%.[1,2,3]Hemorrhage is one of the leading causes of maternal morbidity and mortality. Hemorrhage emerges as the major cause of severe maternal morbidity in almost all near miss audits in both developed and developing countries.[4] According to World Health Organization (WHO) hemorrhage was a direct cause of maternal mortality in 25% cases. Antepartum hemorrhage contributes to significant amount of maternal and perinatal mortality and morbidity. The maternal complications in patients with APH are malpresentations, preterm labour, postpartum hemorrhage, sepsis, shock, retained placenta, acute renal failure, and disseminated intravascular coagulation. Fetal complications are prematurity, low birth weight, birth asphyxia, congenital malformations, and intrauterine death,[5] Maternal mortality due to APH in India is about 4.08/1000 live births. In developing countries widespread pre-existing anemia, decreased awareness among the people, difficulty in accessing the medical care is responsible for high maternal mortality rate. Perinatal mortality is about 60/1000 livebirths in India.[6]APH is one of the complications of pregnancy that has to be managed before it can be diagnosed. Although APH cannot be prevented maternal and perinatal morbidity and mortality can be significantly reduced by aggressive expectant management. Presently increased use of ultrasonography techniques, improved obstetrical and anaesthetic facilities, increased use of blood and its products, advanced neonatal care facilities collectively played an important role in reducing maternal and perinatal morbidity and mortality.[7]

MATERIALS & METHODS

It is a study conducted in OPD, Labour room and Intensive Care Unit (ICU) admissions in Department of Obstetrics and Gynaecology, Enam Medical College& Hospital, Saver, Dhaka, Bangladesh over a period of one year from April 2019 to March 2020 were analysed retrospectively. All cases of APH with gestational age more than 28 weeks whether diagnosed previously or during antental visits or during delivery, referred from other hospitals, emergency admissions are included in the study. Data was statistically analysed using SPSS 20 software.

Inclusion criteria:
All cases of APH with gestational age more than 28 weeks
Exclusion criteria:
All cases of APH with gestational age of less than 28 weeks

RESULT

The present study included 28 patients who was diagnosed as having placenta previa, abruptio placentae or APH due to undetermined causes presented with or without bleeding per vaginum in OPD, labour

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-7, Issue-5 | September-October 2021
Page no- 308-315 | Section- Research Article (Obstetrics & Gynaecology)

room, ICU. Majority of the patients 17 (60.71%) had Placentaprevia while 10 (35.71) had abruptioplacentae, one case of APH is due to undetermined cause was 1(3.57%) in Table-1.11(64.71%) of the cases are unbooked cases in placenta previa and 7(70.00%) of the cases are unbooked cases in abruptio placenta but the difference is statistically not significant (p value-0.514) in Table-02.Mean age group of distribution is between 20- 24 years in both placenta previa 11(64.71%) and abruption placenta7 (70.00%). The difference is not statistically significant (p value-0.257).6(35.29%) of the cases of placenta previa are primigravida and 5(50.00%) cases of abruptio placenta areprimigravida. The difference is clinically significant but statistically not significant (p value-0.409).8(47.06%) cases of placenta previa are admitted between 33-36 weeks of gestational age and 6(60.00%) cases of abruptio placentae are admitted between 33-36 weeks of gestational age. The difference is statistically not significant. 9(52.39%) cases of placenta previa are terminated between 33-36 weeks of gestational age and 6(60.00%) cases of abruptio placentae are terminated between 33-36 weeks of gestational age. The difference is statistically not significant (p value-0.601).14(82.35%) of the cases of placenta previa are admitted with good fetal heart rate. Most of the cases of abruptio placentae 7(70.00%) are admitted with absent fetal heart rate. The difference is statistically significant (p value-0).10(58.82%) of the cases of placenta previa are delivered by Caesarean section 3(30.00%) of the cases of abruptio placenta are delivered by vaginal route. The difference is statistically significant (p value-0) in Table-3.In the present study anemia is the most common complication seen in 7 cases of placenta previa and 5 cases of abruptio placenta. The difference is clinically significant but statistically not significant (p value-0.908). Postpartum hemorrhage is the second most common complication seen in 5 cases of placenta previa and 3 cases of abruptio placenta in Fig-1.In the present study 13 cases of placenta previa, 6 cases abruptio placenta were of low birth weight. The difference is not statistically significant (p value-0.371).11 cases of placenta previa and 5 cases of abruptio placenta were preterm in Fig-2.

Table-1: Distribution of patients according to Cause of APH

Type of APH	**Number**	**Percentage**
Placenta Previa	17	60.71
Abruptio Placenta	10	35.71
Undetermined Cause	1	3.57
Total	**28**	**100.00**

Table-2: Booked versus Unbooked patients

Type of APH	**Booked**		**Unbooked**		**Total**	
	Number	%	**Number**	%	**Number**	%
Placenta Previa	6	35.29	11	64.71	17	100.00

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-7, Issue-5 | September-October 2021
Page no- 308-315 | Section- Research Article (Obstetrics & Gynaecology)

Abruptio Placenta	3	30.00	7	70.00	10	100.00
Undetermined Cause	0	0	1	100	1	100.00
TOTAL	**9**	**32.14**	**19**	**67.86**	**28**	**100.00**

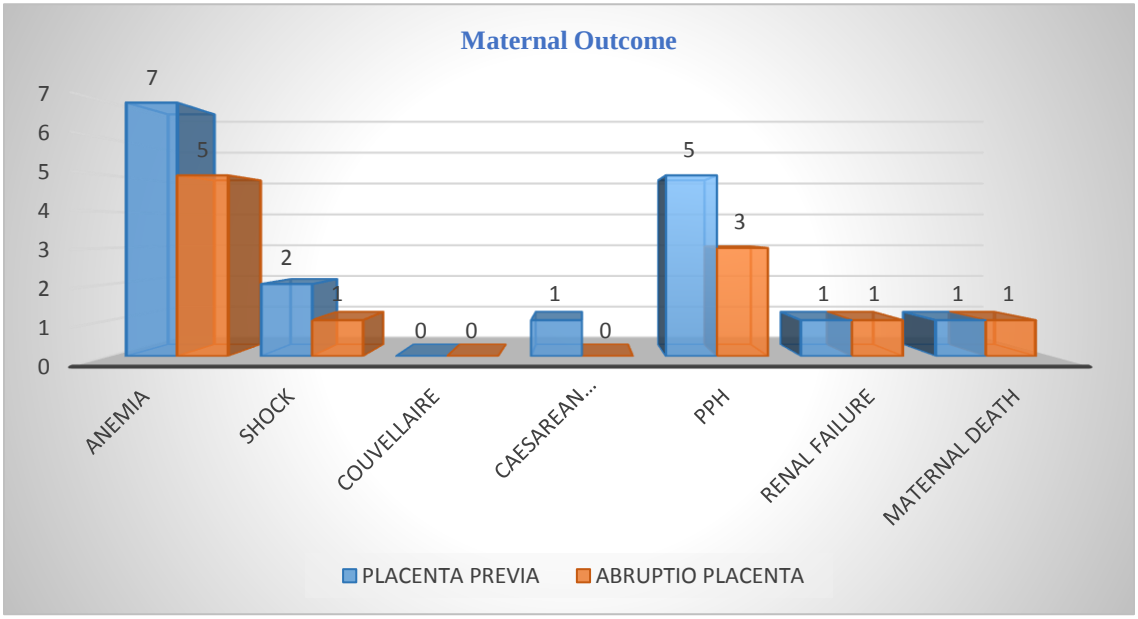
Table -3: Distribution of patients according to different parameter

Subject	Placenta previa		Abruptio placenta		Undetermined cause		Total	
	N	%	N	%	N	%	N	%
Distribution of patients according to age group (in years)								
20-24	11	64.71	7	70.00	0	0	18	64.29
25-29	4	23.53	2	20.00	0	0	6	21.43
30-35	1	5.88	1	10.00	1	100	3	10.71
>35	1	5.88	0	0.00	0	0	1	3.57
TOTAL	17	100.00	10	100.00	1	100.00	28	100.00
Distribution according to number of pregnancies								
PRIMI	6	35.29	5	50.00	0	0	11	39.29
G2	7	41.18	3	30.00	0	0	10	35.71
G3	2	11.76	2	20.00	1	100	5	17.86
G4	1	5.88	0	0.00	0	0	1	3.57
≥G5	1	5.88	0	0.00	0	0	1	3.57
Total	17	100.00	10	100.00	1	100	28.00	100.00
Gestational age at the time of admission (in weeks)								
28-32	2	11.76	1	10.00	1	100.00	4	14.29
33-36	8	47.06	6	60.00	0	0.00	14	50.00
>36	7	41.18	3	30.00	0	0.00	10	35.71
Total	17	100.00	10	100.00	1	100.00	28	100.00
Gestational age at the time of termination (in weeks)								
28-32	1	5.88	1	10.00	1	100.00	3	10.71
33-36	7	41.18	6	60.00	0	0.00	13	46.43
>36	9	52.94	3	30.00	0	0.00	12	42.86
Total	17	100.00	10	100.00	1	100.00	28	100.00
According to Fetal Heart Sound (FHS)								
Good	14	82.35	2	20.00	0	0	16	57.14
Absent	1	5.88	7	70.00	1	100	9	32.14
Distress	2	11.76	1	10.00	0	0	3	10.71
Total	17	100.00	10	100.00	1	100	28	100.00
Mode of delivery								
Vaginal	1	5.88	7	70.00	0	0	8	28.57

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-7, Issue-5 | September-October 2021
Page no- 308-315 | Section- Research Article (Obstetrics & Gynaecology)

LSCS Elective	6	35.29	0	0.00	0	0	6	21.43
Emergency	10	58.82	3	30.00	1	100	14	50.00
Total	17	100.00	10	100.00	1	100	28	100.00
Indication for Caesarean section								
Elective	7	41.18	0	0	0	0	7	25.00
Fetal Distress	2	11.76	3	30	0	0	5	17.86
Hemorrhage	6	35.29	7	70	1	100	14	50.00
Malpresentation	1	5.88	0	0	0	0	1	3.57
PROM	1	5.88	0	0	0	0	1	3.57
Total	17	100.00	10	100	1	100	28	100.00

Table-11: Maternal Outcome



Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-7, Issue-5 | September-October 2021
Page no- 308-315 | Section- Research Article (Obstetrics & Gynaecology)

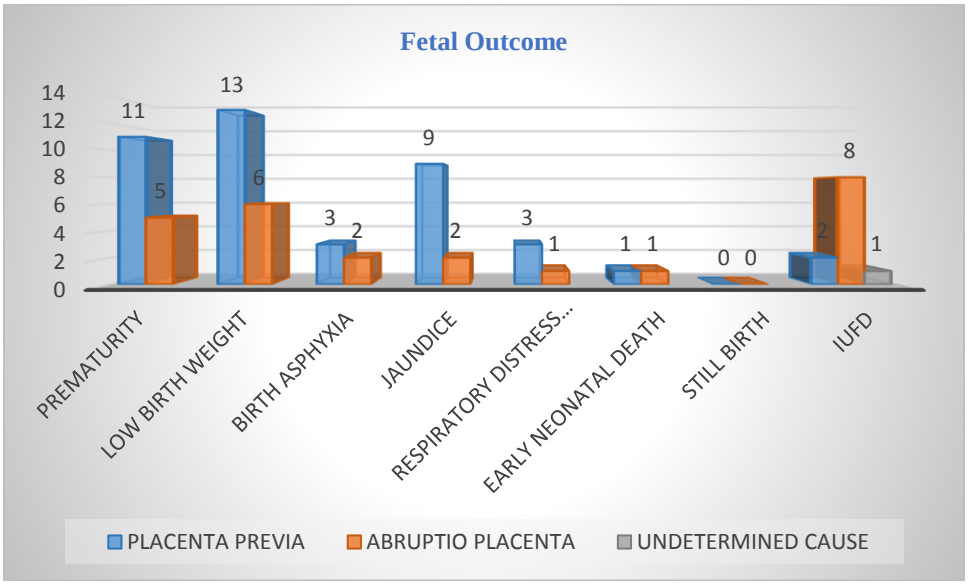


Fig-2: Fetal Outcome

DISCUSSION

In the present study various causes of APH were determined clinically, radiologically during pregnancy and during the delivery. Incidence

Of the patients 17 (60.71%) had Placenta previa while 10 (35.71) had abruptio placentae, one case of APH is due to undetermined cause was 1(3.57%). Taylor et al.[8] observed a high incidence of Placenta previa in women of Asian origin. In the present study 11(64.71%) of the cases are unbooked cases in placenta previa and 7(70.00%) of the cases are unbooked cases in abruptio placenta but the difference is statistically not significant (p value-0.514). Baskette et al.[9] Reported that 75% cases were unbooked and stressed the importance of regular antenatal checkups. Most of the cases of APH (64.3%) belong to the mean age group of 20-24 years both in placenta previa (57.5%) and abruptio placenta(75.9%) and the unclassified hemorrhage belongs to the age group of 25-29 years. The difference is not statistically significant (p value-0.257). William et al.[10] reported increasing risk of abruptio placenta with increasing age.35% of the cases of placenta previa are primigravida and 48.3% cases of abruptio placenta are primigravida. The difference is clinically significant but statistically not significant (p value- 0.409). Chakraborthy et al.[11] reported that prevalence of APH is more common in multigravidas.47.5% cases of placenta previa and 51.7% cases of abruptio placenta were admitted in between 33- 36 weeks of gestation8(47.06%) cases of placenta previa are admitted between 33-36 weeks of gestational age and 6(60.00%) cases of abruptio placentae are admitted between 33-36 weeks of gestational age. The difference is statistically not significant. 9(52.39%) cases of placenta previa are terminated between 33-36 weeks of gestational age and 6(60.00%) cases of abruptio

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-7, Issue-5 | September-October 2021
Page no- 308-315 | Section- Research Article (Obstetrics & Gynaecology)

placentae are terminated between 33-36 weeks of gestational age. The difference is statistically not significant (p value-0.601).FHS is an indicator of fetal wellbeing on which the obstetric management of the APH case is partially dependant. In placenta previa 82.5% cases had good FHS at the time of admission, 10% had fetal distress and 7.5% had absent FHS. In abruptio placenta 58.6% had absent FHS, 24.1% had good FHS, 17.2% had fetal distress. The difference is statistically significant (p value-0). The case with unclassified hemorrhage had absent FHS.Out of the 40 cases of placenta previa, 11(27.5%) had previous caesarean section. Out of the 29 cases of abruptio placenta 2(6.9%) had previous caesarean section. One case of unclassified hemorrhage had previous caesarean section. Gilliam et al.[12] found that 20% cases had a history of previous caesarean section. 2 cases (5%) of placenta previa and 2 cases(6.9%) of abruptio placenta had a history of previous abortion. Kedar K et al.[13] reported that 11.7% cases of placenta previa and 2.94% cases of abruptio placenta.14 cases (48.3%) of abruptio placenta had hypertensive disorders of pregnancy Placenta previa is not associated with hypertensive disorders of pregnancy. Hibbard et al.[14] found hypertensive disorders of pregnancy complicating 7.4% patients with APH. In placenta previa 4 cases (10%) were delivered vaginally, 36 cases (90%) were delivered by Caesarean section out of which 14(35%) were delivered by elective section and 22 cases (55%) were delivered by emergency section. 10(58.82%) of the cases of placenta previa are delivered by Caesarean section 3(30.00%) of the cases of abruptio placenta are delivered by vaginal route. The difference is statistically significant (p value-0). Cotton et al.[15] reported hemorrhage as an indication for caesarean section in 70.6% cases of APH in their study.In the present study anemia is the most common complication seen in 7 cases of placenta previa and 5 cases of abruptio placenta. The difference is clinically significant but statistically not significant (p value-0.908). Postpartum hemorrhage is the second most common complication seen in 5 cases of placenta previa and 3 cases of abruptio placenta. Chakraborthy et al.[11] reported an incidence of 16.25% cases of APH. Caesarean hysterectomy is done in one cases of placenta previa who had placenta accreta.[16] A 2016 study conducted using the National Inpatient Sample found that the overall rate of placenta accreta in the United States was 1 in 272 due to increased cesarean rate. Couvellaire uterus is seen in one case (1.4%).Rai et al.[17] reported couvellaire uterus in 10.5% of APH patients. Maternal death is seen in 2 cases, 1 cases of placenta previa and 1 case of abruptio placenta due to haemorhagic complications. In the present study 13 cases of placenta previa, 6 cases abruptio placenta were of low birth weight. The difference is not statistically significant (p value-0.371).11 cases of placenta previa and 5 cases of abruptio placenta were preterm.Neonatal jaundice is the most common complication seen in 9 cases of placenta praevia and 2 cases of abruptio placenta. Birth asphyxia is seen in 3 cases of placenta previa and 2 cases of abruptio placenta. Respiratory distress is seen in 3 cases of placenta previa and 1 case of abruptio placenta. 8 cases of abruptio placenta and 2 cases of placenta previa presented with IUFD. The difference is clinically significant (p value-0). Early neonatal death is seen in one case of placenta previa and one case of abruptio placenta.

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-7, Issue-5 | September-October 2021
Page no- 308-315 | Section- Research Article (Obstetrics & Gynaecology)

CONCLUSION

The most common cause of APH is placenta previa followed by abruptio placenta but more maternal and neonatal morbidity and mortality seen in abruptio. Regular antenatal checkups, early identification high risk cases and timely referral to tertiary care centres, early intervention, expectant management till fetal maturity in necessary cases, blood and blood components transfusion, good neonatal intensive care facilities will reduce the maternal and neonatal morbidity and mortality.

REFERENCES

1. Calleja Agius, J, Custo R, Brincat M.P, Calleja N. Placental abruption and placenta praevia. EurClinObstetGynaecol.2006;2(3),121-127.https://doi.org/10.1007/s11296-006-0046-5
2. Crane JM, van den Hof MC, Dodds L, Armson BA, Liston R. Neonatal outcomes with placenta previa. Obstet Gynecol. 1999;93(4):541-4. doi: 10.1016/s0029-7844(98)00480-3.
3. Salihu HM, Bekan B, Aliyu MH, Rouse DJ, Kirby RS, Alexander GR. Perinatal mortality associated with abruptio placenta in singletons and multiples. Am J Obstet Gynecol. 2005;193(1):198-203. doi: 10.1016/j.ajog.2005.05.021.
4. Brace V, Kernaghan D, Penney G. Learning from adverse clinical outcomes: major obstetric haemorrhage in Scotland, 2003-05. BJOG. 2007;114(11):1388-96. doi: 10.1111/j.1471-0528.2007.01533.x.
5. Aslam HM, Saleem S, Afzal R, et al. Risk factors of birth asphyxia. Ital J Pediatr. 2014;40:94. doi:10.1186/s13052-014-0094-2
6. Vora KS, Mavalankar DV, Ramani KV, et al. Maternal health situation in India: a case study. J Health Popul Nutr. 2009;27(2):184-201. doi:10.3329/jhpn.v27i2.3363
7. Harris RD, Marks WM. Compact ultrasound for improving maternal and perinatal care in low-resource settings: review of the potential benefits, implementation challenges, and public health issues. J Ultrasound Med. 2009;28(8):1067-76. doi: 10.7863/jum.2009.28.8.1067.
8. Taylor VM, Peacock S, Kramer MD, Vaughan TL. Increased risk of placenta previa among women of Asian origin. Obstet Gynecol. 1995;86(5):805-8. doi: 10.1016/0029-7844(95)00262-P.
9. Baskett TF. Grand multiparity - a continuing threat: a 6-year review. Can Med Assoc J. 1977;116(9):1001-1004.
10. Williams MA, Mittendorf R. Increasing maternal age as a determinant of placenta previa. More important than increasing parity? J Reprod Med. 1993;38(6):425-8.
11. Amirkhani Z, Akhlaghdoust M, Abedian M, et al. Maternal and perinatal outcomes in pregnant women with first trimester vaginal bleeding. J Family Reprod Health. 2013;7(2):57-61.
12. Gilliam M, Rosenberg D, Davis F. The likelihood of placenta previa with greater number of cesarean deliveries and higher parity. Obstet Gynecol. 2002;99(6):976-80. doi: 10.1016/s0029-7844(02)02002-1.
13. KedarK, Prashant Uikey, Ashwini Pawar, Anuja Choudhary, Maternal and fetal outcome in antepartum haemorrhage: a study at tertiary care hospital. Int JReprod ContraceptObstetGynecol. 2016;5(5):1386-91.https://dx.doi.org/10.18203/2320-1770.ijrcog20161291
14. Hibbard BM, Jeffcoate TN. Abruptio placentae. Obstet Gynecol. 1966;27(2):155-67.
15. Cotton DB, Read JA, Paul RH, Quilligan EJ. The conservative aggressive management of placenta previa. Am J Obstet Gynecol. 1980;137(6):687-95. doi: 10.1016/s0002-9378(15)33242-7.
16. Mogos MF, Salemi JL, Ashley M, Whiteman VE, Salihu HM. Recent trends in placenta accreta in the United States and its impact on maternal-fetal morbidity and healthcare-associated costs, 1998-2011. J Matern Fetal Neonatal Med. 2016;29(7):1077-82. doi: 10.3109/14767058.2015.1034103.
17. Rai L, Duvvi H, Rao UR, Vaidehi, Nalinii V. Severe abruptio placentae--still unpreventable. Int J Gynaecol Obstet. 1989;29(2):117-20. doi: 10.1016/0020-7292(89)90839-4.

Source of Support: Nil, Conflict of Interest: None declared