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5 Year Review of Maternal and Fetal Outcome Among Pregnant Women with Abruptio Placentae.

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Abstract
Background: Abruptio Placentae is one of the common causes of antepartum haemorrhage. It is defined as premature separation of a normally situated placenta. It is associated with high perinatal and fetal morbidity and mortality. Early detection and timely intervention of abruptio placenta in daily clinical practice are important to improve maternal and perinatal outcomes.
Methodology: It was a retrospective study where data from medical records of all cases of Abruptio Placentae that presented to the Department of Obstetrics and Gynaecology of Usmanu Danfodiyo University Teaching Hospital Sokoto from January 2018 to December 2022.
Results: The mean age of the cases was 28.89 ± 6.6 years. The median parity was 3. The mean gestational age at presentation was 35.5 ± 3.7 weeks. The patients had varying clinical features with majority of them presenting with bleeding per vaginam, lower abdominal pain and were found to be pale. Most of the cases were delivered of live birth babies through Caeserean section.
Conclusion: Abruptio placentae is a leading cause of maternal and perinatal morbidity and mortality that can be reduced with timely diagnosis and prompt intervention.

Keywords: Abruptio Placenta. Maternal, Fetal.

Introduction
Placental abruption is a common cause of antepartum haemorrhage and is defined as premature separation of a normally implanted placenta. The overall incidence is about 1 in 200 deliveries. It is a significant cause of maternal (2-5%) and perinatal (15-20%) mortality(1,2). There are basically two types of abruptio placentae, revealed and concealed. In the revealed type, blood tracks between the membranes and escapes through the cervix and vagina, whereas in the concealed type blood collects behind the placenta with no evidence of vaginal bleeding. It may be partial or complete. Primary cause of abruption is not known but the main precipitating and predisposing factors are advanced maternal age, high parity, preeclampsia/eclampsia, premature rupture of membrane and trauma among others.
Clinical features depend on degree of separation and the amount of blood loss. They classically present with history of bleeding per vaginam that was preceeded by lower abdominal pain. Patients are usually pale with tachycardia. Abdominal examination reveals tenderness and a firm uterus. There might be active bleeding in the revealed type. Abruptio placentae may be associated with adverse maternal outcomes such as anaemia, post-partum haemorrhage, disseminated intravascular coagulopathy, blood transfusion, acute renal failure and death. Fetal complications include prematurity, low birth weight, birth asphyxia and fetal death.
The aim of the study was to evaluate the maternal and fetal outcomes among patients with abruptio placentae.

Materials and Method
It was a retrospective study conducted at the Obstetrics and Gynaecology Department of Usmanu Danfodiyo University Teaching Hospital Sokoto. All 106 cases of Abruptio Placentae diagnosed over a 5-year period from January 2018 to December 2022 were retrieved. Medical records of all the cases were reviewed for information regarding patients sociodermographic characteristics, risk factors, clinical presentation, ultrasound and

cardiotocographic findings, mode of delivery and outcomes. Statistical analysis was performed using SPSS version 23. The data was presented in text, tables and Charts.

Results

The mean age of the cases was 28.89 ± 6.6 years. The youngest was 16 years and the eldest was 43 years. The median parity was 3. The mean gestational age at presentation was 35.5 ± 3.7 weeks. The least gestational age at delivery was 28 weeks and highest was 42 weeks.

Table 1: Sociodemographic and Obstetrics characteristics of the respondents.

Characteristics	Frequency (n)	Percentage (%)
Age		
Less than 20 years	8	7.5
20 to 24 years	18	17
25 to 29 years	26	24.5
30 to 34 years	30	28.3
Above 35 years	24	22.6
Ethnicity		
Hausa/Fulani	92	86.8
Yoruba	4	3.8
Igbo	4	3.8
Others	6	5.7
Educational status		
No formal education	54	50.9
Primary	6	5.7
Secondary	20	18.9
Tertiary	26	24.5
Occupation		
Unemployed	88	83.0
Civil servant	14	13.2
Petty trader	4	3.8
Booking status		
Booked	58	54.7
Unbooked	48	45.3
Parity		
Primigravida	24	22.6
Para 1 to 4	46	43.4
Para 5 and above	36	34.0

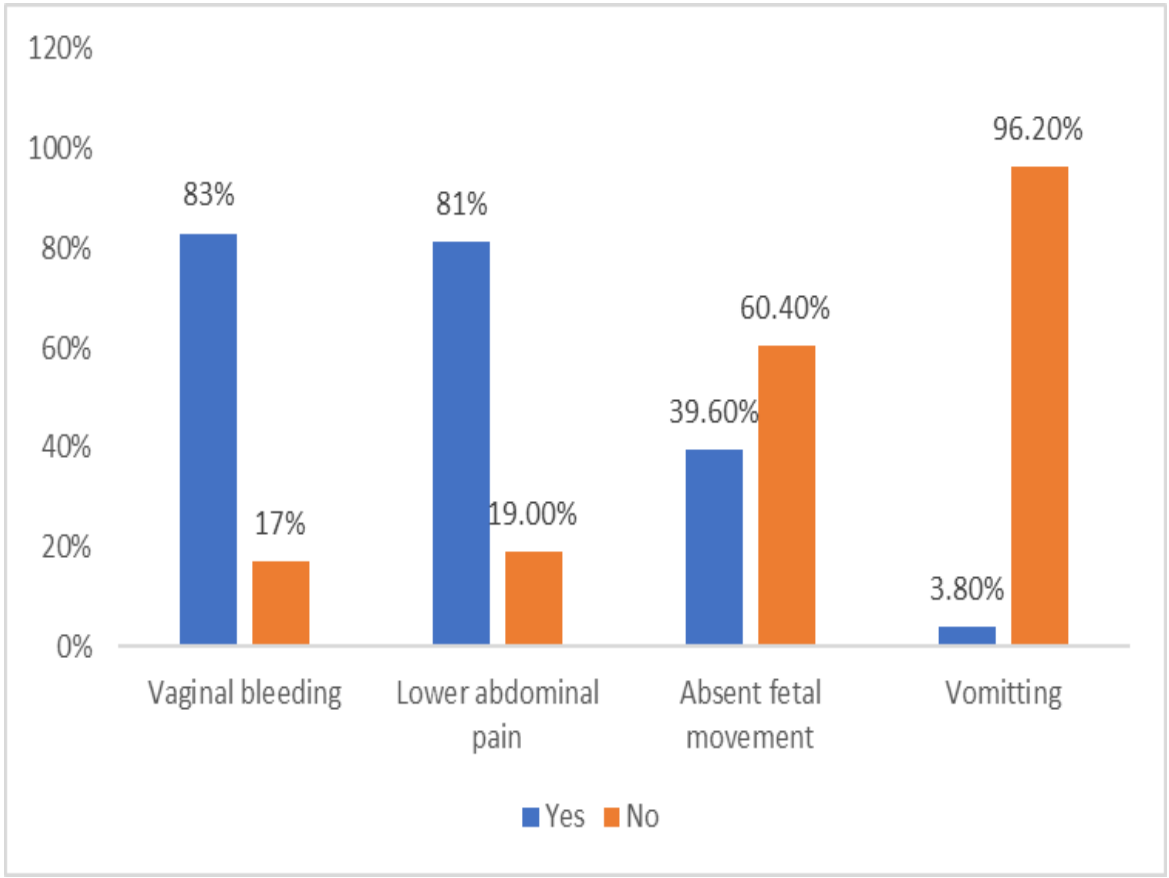

Fig. 1: Presenting symptoms of patients.

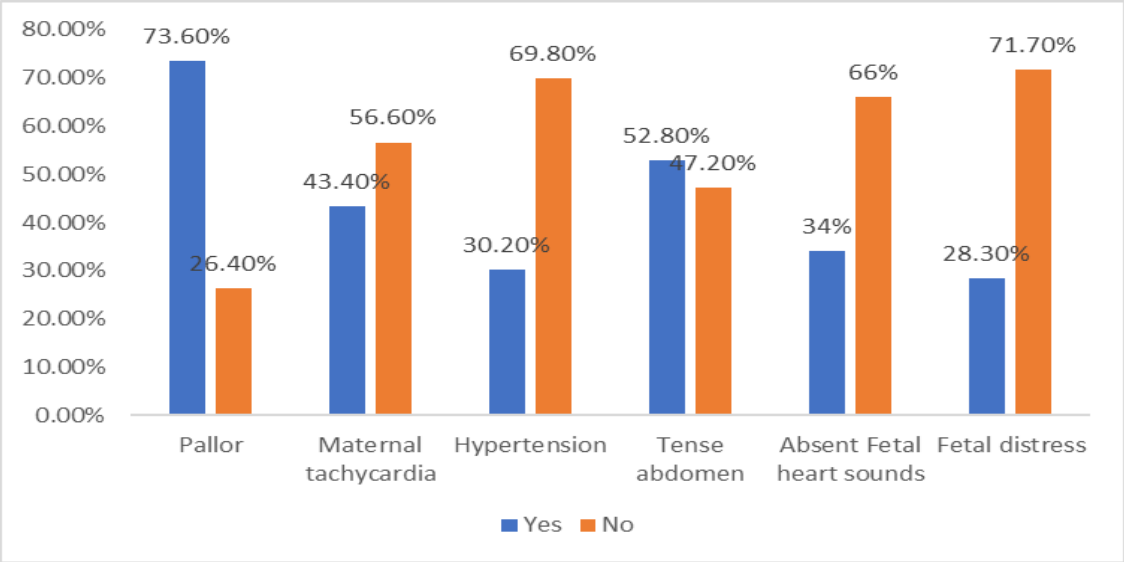

Fig. 2: Clinical signs at presentation.

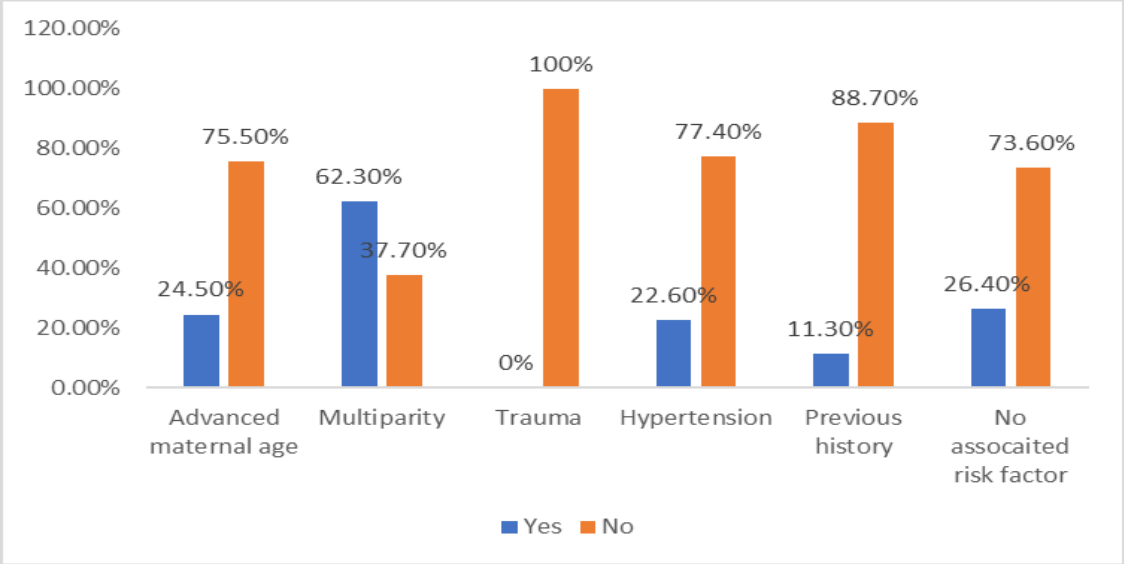

Fig. 3: Risk factors identified among the cases.

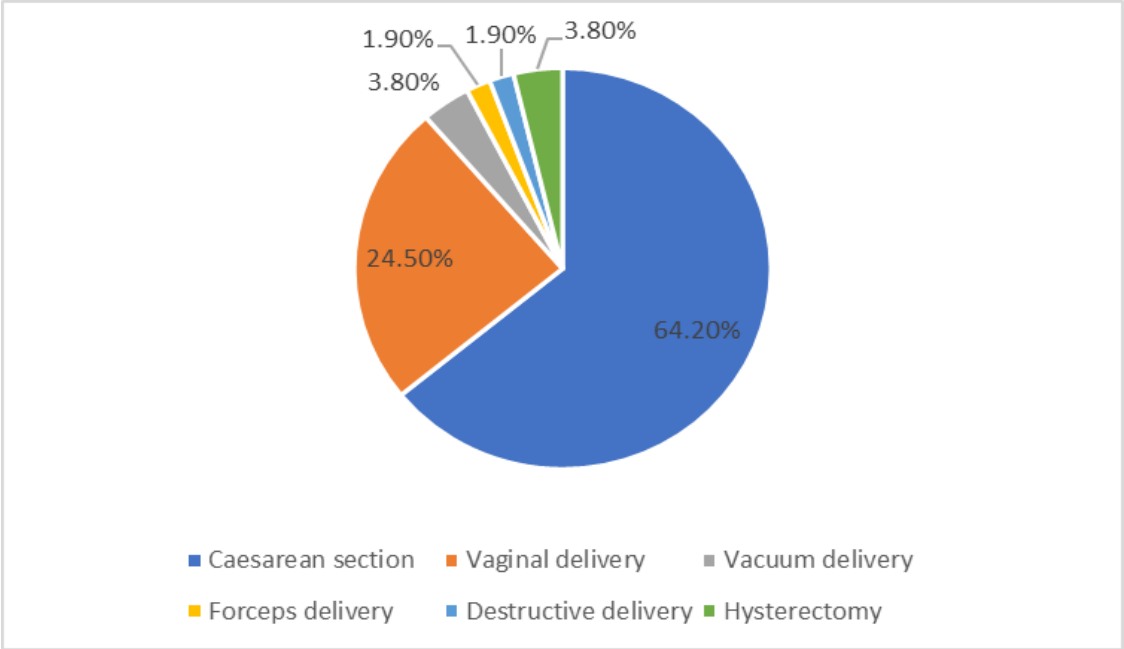

Fig. 4: Mode of delivery among the cases.

Maternal Complications.

Complication	Number	Percentage
Post partum Haemorrhage	52	49.1
Anaemia	80	75.5
Disseminated intravascular coagulopathy	2	1.9
Acute kidney injury	4	3.8
Couvelaire uterus	6	5.7
Blood transfusion		
No transfusion	24	22.6
1 to 4 units of blood transfused	66	62.3
5 or more units of blood transfused	16	15.1

Maternal and Fetal outcome.

Maternal outcome		90.6
Complete recovery	96	1.9
Maternal mortality	2	7.5
Signed against medical advice	8	
Fetal outcome: Among the cases, 43.4% had l		43.4
Live birth	46	57.6
Fetal death	54	

Discussion

Placental abruption is one of the serious complications of pregnancy, as it leads to both poor maternal and fetal outcome. In this study, most of the patients (80%) were within the reproductive age group of between 20 -35years, (84%) were found to be multipara and at a gestational of > than 32 weeks. This is similar to the findings of Kunal and Subha were 85% of the patients were >26years, multiparous and 74% presented at a gestational age of >32 weeks (3,4).

The signs and symptoms of abruptio placenta vary depending upon the severity of bleeding and the degree of separation of the placenta. The commonest symptoms in this study were bleeding per vaginam and lower abdominal pain in more than 80% of patients. Majority of them were pale with tachycardia and tensed abdomen. Previous studies reported pain as the commonest presenting symptom while bleeding was seen in only 20% of cases (5,6,7,8). The bleeding occurred because it was a revealed type of abruptio placentae as blood does not drain out in the concealed type.

The aetiology of abruptio placentae is not known. However, there are some risk factors associated with the condition. Multiparity was the commonest risk factor identified in this study, followed by advanced maternal age and hypertensive disorders in pregnancy. The reverse was the case in previous studies at India and Tanzania, other studies have reported cigarette smoking as an additional risk factor (9,10,11,12). This variation may be due to the geographical and socioeconomic differences in the study sites.

From this study, majority of the patients were delivered through Caesarean section (64%) while (24.5%) had vaginal delivery. More than half of the patients delivered by CS had live births. Few patients had instrumental delivery in form of vacuum and forceps delivery to shorten the second stage of labour. Hysterectomy was performed in some patients due to uncontrolled intractable bleeding. Findings are higher than what was reported in an earlier study where 50% of patients had caesarean section and the remaining 50% had vaginal delivery. Timely diagnosis and prompt intervention improves both maternal and fetal outcome (3,4,13).

Abruptio placentae is associated with increased maternal complications. Anaemia was the commonest complication seen in about 76% of patients followed by post-partum haemorrhage in 50% of cases. Most patients required blood transfusion due to severe blood loss. A study in India also reported similar findings (2). Life threatening complications including acute renal failure, couvalaire uterus and DIC were encountered in few patients. Maternal mortality was recorded in 2% of cases, majority (98%) recovered and were discharged home.

Placental abruption accounts for a disproportionately high rate of premature birth, low birth weight, stillbirth rate and perinatal death. Low birth weight in abruptio placentae is mostly associated with preterm birth. Birth asphyxia, neonatal death, stillbirth usually occur due to early separation of the placenta which cuts off oxygen and nutrients to unborn fetus leading to low APGAR score or 43.4% deaths due to prolonged hypoxia and extreme prematurity. In the current study, 33% had preterm birth and 26% had low birth weight. The mean birth weight was 2.6± 0.7 kg. The least birth weight was 1kg and the highest was 3.8kg. Live birth was recorded in 43.4% of cases. Findings are consistent with other studies (14,15,16).

Conclusion

Abruptio placenta is one of the most common causes of antepartum haemorrhage affecting maternal and foetal outcomes. Abruptio placenta should be suspected whenever the patient presents with pain in the abdomen with/without PV bleeding, decreased foetal movement along with detection of bloody amniotic fluid, and foetal heart rate abnormalities. Timely diagnosis and prompt intervention reduces maternal and perinatal morbidity and mortality with improved outcome.

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