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Antepartum Hemorrhage

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6th stage

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بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

نَرْفَعُ دَرَجَاتٍ مِّنْ نَّشَأٍ

وَفَوْقَ كُلِّ ذِي عِلْمٍ

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Dedication& Acknowledgment

I would like to dedicate this humble research to my beloved family and the people who support me during my life and still do.

And as an acknowledgment to my supervisor Dr. Omer for his assistance in this work

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Symbols and abbreviations

APH Antepartum Hemorrhage

C.S. Cesarean Section

Abstract

Background: Antepartum Hemorrhage is defined as bleeding from genital tract from the time of viability (20 weeks) of pregnancy for extra uterine survival to delivery of the baby it is a major cause of maternal and perinatal morbidity and mortality even in modern day obstetrics and is one of the most frequent emergencies in obstetrics

The Aim: is to determine the frequency, causes, risk factors and various treatment methods using for antepartum hemorrhage.

The Study Design: is a descriptive study

The Place and The Duration of Study: this study was conducted at the department of obstetrics and gynecology at Al-Imamain Al-Kadhimain Medical City, Baghdad, Iraq from October 2018 till February 2019

Patients And Methodology: the study done on 45 cases admitted for antepartum hemorrhage.

Results: There were 4298 deliveries during the period from October 2018 to February 2019, there were 45 cases of APH involved in this study. The incidence of APH was 1.04%. The mean age was 26.6 years, the majority of cases had an identifiable risk factors for

developing APH ,the most common cause was placenta previa .All cases (100%) survived the condition .

Conclusion: APH is an obstetric emergency carry high maternal and perinatal morbidity and mortality,it can be prevented .

Introduction:

Antepartum hemorrhage (APH) is a major cause of maternal and perinatal morbidity and mortality even in modern day obstetrics and is one of the most frequent emergencies in obstetrics.[1,2] APH is defined as bleeding from the genital tract from the time of viability (20 weeks) of pregnancy for extrauterine survival to the delivery of the baby.[3]

APH complicates 0.5-5% of pregnancies which varies with sociodemographic variables.[1,4,5] The main causes of APH are placenta previa and abruptio placentae; however, the exact cause of bleeding in some cases may be undetermined.[5] In a small proportion where placenta previa and abruption have been excluded, the cause may be related to local lesions of the cervix and vagina, e.g., cervicitis, cervical erosion, genital tumors, vulvar varicosities, ruptured vasa previa, and heavy show.[5,6]

The overall prevalence in a study from Qatar was found to be 15.3%[7] and poor education, family history of hypertension, G6PD, and Down's syndrome were found to be significantly associated with increased APH in that study.[7] However, in a study from Osun, South-Western Nigeria, the prevalence was 1.5% and the major cause of antepartum hemorrhage was found to be placenta previa followed by abruption and lastly by unknown causes.[8] In Lagos, Nigeria, an incidence of 3.5% was reported and placenta previa constituted 58.4% of the cases, while placental abruption was a factor in 35.6%.[9]

In a comparison of maternal risk factors, research reports[5] concluded that abruption is more likely to be related to conditions occurring during pregnancy (preeclampsia, abdominal trauma, intrauterine infections, prelabor rupture of membranes, polyhydramnios elevated maternal serum alpha-fetoprotein, smoking, and substance abuse) and placenta previa related to conditions existing prior to the pregnancy (uterine scar, manual removal of placenta, curettage, advanced maternal age, multiparity, and previous placenta previa).[5] The precise cause of abruption is unknown; however, hypertension is the most consistent predisposing factor.[10] In a study conducted at the University of Oslo, age was studied as a significant sociodemographic characteristic, with mothers over the age of 40 years being significantly more likely to have severe hemorrhage.[1] On the other hand, maternal characteristics associated with lower sociodemographic status, namely low education was the main variable associated with APH in a study from Qatar.[7] Maternal complications of APH include hypovolemic shock, disseminated intravascular coagulation, and acute renal failure.[11] It also includes higher rates of cesarean sections as high as 83.3% for placenta previa, peripartum hysterectomies (2.1%), and postoperative anemia (7.3%) in a study from Sokoto, Nigeria.[12] The maternal mortality rate was 1% in both studies.[11,12] Fetal complications are premature delivery, low birth weight, birth asphyxia, and intrauterine fetal death.[1] Up to one-fifth of very preterm babies are born in association with APH,[5] and the known association of

APH with cerebral palsy can be explained by preterm delivery. A retrospective observational study from Australia found that women with unexplained APH are at greater risk of preterm delivery, and their babies are more likely to develop hyperbilirubinemia.[5] Furthermore, women with unexplained APH were more likely to have smaller babies, and this difference remained statistically significant when the birth weight was adjusted for gestational age at delivery and other confounders.[5]

For the purposes of this research, the following definitions have been used: **Spotting - staining**, streaking or blood spotting noted on underwear or sanitary protection

Minor haemorrhage - blood loss less than 50 ml that has settled

Major haemorrhage - blood loss of 50-1000 ml, with no signs of clinical shock

Massive haemorrhage - blood loss greater than 1000 ml and/or signs of clinical shock.

A number of clinical and epidemiological studies have identified predisposing risk factors for placental abruption. 13 The most predictive is abruption in a previous pregnancy. A large observational study from Norway reported a 4.4% incidence of recurrent abruption 14

abruption recurs in 19-25% of women who have had two previous pregnancies complicated by abruption. Other risk factors for placental abruption include: pre-

eclampsia, fetal growth restriction, non-vertex presentations, polyhydramnios, advanced maternal age, multiparity, low body mass index (BMI), pregnancy following assisted reproductive techniques, intrauterine infection, premature rupture of membranes, abdominal trauma (both accidental and resulting from domestic violence), smoking and drug misuse (cocaine and amphetamines) during pregnancy. [15](#)

First trimester bleeding increases the risk of abruption later in the pregnancy. A retrospective cohort study from Denmark found that threatened miscarriage increases the risk of placental abruption from 1.0% to 1.4% [16](#).

A systematic review reported first trimester bleeding to be associated with an increased risk of placental abruption; when an intrauterine haematoma is identified on ultrasound scan in the first trimester, the risk of subsequent placental abruption is increased [17](#).

Maternal thrombophilias have been associated with placental abruption. In a systematic review, Robertson et al. [18](#) identified seven studies that evaluated the association between thrombophilias and placental abruption.

Overall, thrombophilias were associated with an increased risk of placental abruption, but significant associations were only observed with heterozygous factor V Leiden and heterozygous prothrombin. [19](#)

While these and other risk factors for placental abruption are recognised, causal pathways remain

largely speculative²⁰. Women should be assessed for these factors at each antenatal contact. This information may be used to assign women to high-risk or low-risk antenatal care.

A number of risk factors for placenta praevia have been described, some of which are listed in Table 1²¹.

In a comparison of maternal risk factors for placenta praevia and placental abruption, Yang et al. concluded that abruption is more likely to be related to conditions occurring during pregnancy and placenta praevia is more likely to be related to conditions existing prior to pregnancy.

Table 1. Risk factors for placenta praevia 21

Previous placenta praevia

Previous caesarean sections

Previous termination of pregnancy

Multiparity

Advanced maternal age (>40 years)

Multiple pregnancy

Smoking

Deficient endometrium due to presence or history of:

- uterine scar
- endometritis
- manual removal of placenta
- curettage
- submucous fibroid

Assisted conception

Table 2. Complications of APH

Maternal complications	Fetal complication
Anaemia	Fetal hypoxia
Infection	Small for gestational age & growth restriction
Shock	Prematurity
Renal tubular necrosis	
Consumptive coagulopathy	
Postpartum haemorrhage	
Prolonged hospital stay	
Psychological sequelae	
Complications of blood transfusion	

The role of clinical assessment in women presenting with APH is first to establish whether urgent intervention is required to manage maternal or fetal compromise. The process includes history taking to assess coexisting symptoms such as pain, an assessment of the extent of vaginal bleeding, the cardiovascular condition of the mother, and an assessment of fetal wellbeing.

Women presenting with a major or massive haemorrhage that is persisting or if the woman is unable to provide a history due to a compromised clinical state, an acute appraisal of maternal wellbeing should be performed and resuscitation started immediately. The mother is the priority in these situations and should be stabilised prior to establishing the fetal condition.

If there is no maternal compromise a full history should be taken. The clinical history should determine whether

there is pain associated with the haemorrhage. Placental abruption should be considered when the pain is continuous. Labour should be considered if the pain is intermittent.

The woman should be asked about her awareness of fetal movements and attempts should be made to auscultate the fetal heart.

If the APH is associated with spontaneous or iatrogenic rupture of the fetal membranes, bleeding from a ruptured vasa praevia should be considered.

Previous cervical smear history may be useful in order to assess the possibility of a neoplastic lesion of the cervix as the cause of bleeding. The presentation of cervical cancer in pregnancy depends on the stage at diagnosis and lesion size; most women with International Federation of Gynecology and Obstetrics (FIGO) stage I cancer are asymptomatic; symptomatic pregnant women usually present with APH (mostly postcoital) or vaginal discharge²². In a Swedish population study, the incidence of cervical cancer was 7.5 cases per 100 000 deliveries; in over half of these cases, the women had an abnormal cervical smear history. ²³

Examination of the woman should be performed to assess the amount and cause of APH.

Abdominal palpation The woman should be assessed for tenderness or signs of an acute abdomen. The tense or 'woody' feel to the uterus on abdominal palpation indicates a significant abruption. Abdominal palpation may also reveal uterine contractions. A soft, non-tender

uterus may suggest a lower genital tract cause or bleeding from placenta or vasa praevia.

Speculum examination A speculum examination can be useful to identify cervical dilatation or visualise a lower genital tract cause for the APH. If the woman presents with a clinically suspicious cervix she should be referred for colposcopic examination.

Digital vaginal examination If placenta praevia is a possible diagnosis (for example, a previous scan shows a low placenta, there is a high presenting part on abdominal examination or the bleed has been painless), digital vaginal examination should not be performed until an ultrasound has excluded placenta praevia. Digital vaginal examination can provide information on cervical dilatation if APH is associated with pain or uterine activity.

Maternal investigations

Blood tests In cases of major or massive haemorrhage, blood should be analysed for full blood count and coagulation screen and 4 units of blood cross-matched. Urea, electrolytes and liver function tests should be assayed. The initial haemoglobin may not reflect the amount of blood lost and therefore clinical judgement should be used when initiating and calculating the blood transfusion required. The platelet count, if low, may indicate a consumptive process seen in relation to significant abruption; this may be associated with a coagulopathy. In minor haemorrhage, a full blood count and group and save should be performed. A coagulation

screen is not indicated unless the platelet count is abnormal. In all women who are RhD-negative, a Kleihauer test should be performed to quantify FMH to gauge the dose of anti-D Ig required.²⁴ The Kleihauer test is not a sensitive test for diagnosing placental abruption²⁵.

Ultrasound scan Women presenting with APH should have an ultrasound scan performed to confirm or exclude placenta praevia if the placental site is not already known. Ultrasound scanning is well established in determining placental location and in the diagnosis of placenta praevia. ²⁶ The sensitivity of ultrasound for the detection of retroplacental clot (abruption) is poor ultrasonography will fail to detect three-quarters of cases of abruption²⁷. However, when the ultrasound suggests an abruption, the likelihood that there is an abruption is high.

Fetal investigation An assessment of the fetal heart rate should be performed, usually with a cardiotocograph (CTG) in women presenting with APH once the mother is stable or resuscitation has commenced, to aid decision making on the mode of delivery.

APH, particularly major haemorrhage and that associated with placental abruption, can result in fetal hypoxia and abnormalities of the fetal heart rate pattern. If the fetal heart rate cannot be heard on auscultation, then an ultrasound scan should be performed to exclude an intrauterine fetal death.²⁸

Management

In women presenting with spotting, where the most likely cause is lower genital tract bleeding, where imminent

delivery is unlikely, corticosteroids are unlikely to be of benefit, but could still be considered.

Antenatal Corticosteroids to Reduce Neonatal Morbidity state that antenatal corticosteroids should be given to all women at risk of iatrogenic or spontaneous preterm birth up to 34 +6 weeks of gestation. Antenatal corticosteroids are associated with a significant reduction in rates of neonatal death, respiratory distress syndrome and intraventricular haemorrhage. In women with APH and no immediate indication to deliver the baby, an assessment should be made in each individual case. If bleeding is associated with pain suggestive of uterine activity or abruption the risk of preterm birth is increased and therefore steroids may be of benefit. Women presenting with spotting which has stopped (particularly an identified lower genital tract cause such as postcoital from a cervical ectropion) and no abdominal pain or tenderness may not require steroids.

Tocolysis should not be used to delay delivery in a woman presenting with a major APH, or who is haemodynamically unstable, or if there is evidence of fetal compromise.

therapy is contraindicated in placental abruption and is 'relatively contraindicated' in 'mild haemorrhage' due to placenta praevia. 29

The calcium antagonist nifedipine has been associated with cases of maternal hypotension and is probably best avoided. 30

Labour and delivery If fetal death is diagnosed, vaginal birth is the recommended mode of delivery for most

women (provided the maternal condition is satisfactory), but caesarean birth will need to be considered for some.

If the fetus is compromised, a caesarean section is the appropriate method of delivery with concurrent resuscitation of the mother. The optimum timing of delivery of women presenting with unexplained APH and no associated maternal and/or fetal compromise is not established.

APH associated with maternal or fetal compromise is an obstetric emergency. Management should include maternal resuscitation and delivery of the fetus to control the bleeding. Intrapartum fetal monitoring employed for women whose pregnancies were complicated by APH. Women in labour with active vaginal bleeding require continuous electronic fetal monitoring.

The monitoring of the fetal heart rate in labour aims to identify hypoxia before it leads to perinatal death or impaired neurological development. There is a lack of evidence to support recommendations on intrapartum fetal monitoring after APH.

Postpartum haemorrhage (PPH) should be anticipated in women who have experienced APH. Women with APH resulting from placental abruption or placenta praevia should be strongly recommended to receive active management of the third stage of labour.

In the non-sensitised RhD-negative woman in the event of recurrent vaginal bleeding after 20 weeks of gestation, anti-D Ig should be given at a minimum of 6-weekly intervals.

The management of massive APH should follow locally devised multidisciplinary protocols for massive obstetric haemorrhage. The management team should include a consultant obstetrician, anaesthetist, haematologist and midwifery labour ward coordinator. Laboratory staff and portering staff should be alerted.

The principles of fluid replacement and administration of blood products are the same for APH as they are for PPH. **32** Data regarding transfusion of blood products in APH are limited. In the management of military trauma decrease in coagulopathy and improved survival is reported with a high fresh frozen plasma (FFP) to packed red cell (PRC) transfusion ratio of 1:1 to 1:1. **33** An observational population-based study compared the transfusion of whole blood versus PRCs in obstetric haemorrhage. Women who were transfused with PRCs developed acute tubular necrosis more often than women given whole blood, while pulmonary oedema was more commonly seen in women given whole blood. Prospective randomised trials are required before recommendations can be made on whole blood transfusion in obstetric haemorrhage. **34**

In women who have experienced a massive blood loss or a major abruption, the development of a disseminated intravascular coagulation (DIC) should be considered. Clotting studies and a platelet count should be urgently requested and advice from a haematologist sought. Up to 4 units of FFP and 10 units of cryoprecipitate may be given whilst awaiting the results of the coagulation studies.

In cases of placental abruption and associated intrauterine fetal death, coagulopathy and hypovolaemic shock are not uncommon³⁵

Women receiving antenatal anticoagulant therapy (usually low molecular weight heparin or warfarin) should be advised that if they have any vaginal bleeding they should not take any more doses of anticoagulant medication. They should attend hospital urgently, be assessed on admission and further doses should only be administered after consultation with medical staff.

Any woman who is considered to be at high risk of haemorrhage and in whom continued heparin treatment is considered essential should be managed with intravenous, unfractionated heparin until the risk factors for haemorrhage have resolved³⁶

Abruption and vasa praevia

The principal concern in these circumstances is neonatal anaemia and therefore these babies should be managed by an experienced paediatrician/neonatologist. Neonatal staff should be present at the time of delivery and be informed of the likely diagnosis and extent of the blood loss so that arrangements for early neonatal blood transfusion can be made if necessary.

The obstetrician should ensure that, in cases of vasa praevia, the umbilical cord is clamped as soon as possible after delivery, leaving the longer part attached to the neonate so that umbilical artery catheterisation is facilitated if required.

Anterior placenta praevia that necessitates incising the placenta at the time of caesarean section is an indication for attendance by an experienced paediatrician/neonatologist.

Regardless of the gestation, the mother's life should take priority. She should be resuscitated and stabilised before any decision is made regarding delivery of the baby.

Conservative management is usually appropriate when APH occurs in the extremely preterm pregnancy (less than 26 weeks of gestation) and the mother's condition is stable. When the bleeding is considered life-threatening for the woman or there is evidence of cardiovascular compromise that fails to respond to resuscitation, consideration should be given to delivery of the fetus.

The events should be discussed and the woman and her family given the opportunity to ask questions. A follow-up appointment 4 to 6 weeks following birth should be offered and contact numbers for access to medical and psychological support should be provided as appropriate. Haemorrhage and blood transfusion are risk factors for venous thromboembolism therefore thromboprophylaxis should be commenced or reinstated as soon as the immediate risk of haemorrhage is reduced, may be more appropriately managed with unfractionated heparin and/or graduated compression stockings. 36

As APH stands out as a serious, life-threatening condition resulting in significant maternal and perinatal morbidity and mortality, it is particularly important to

appraise the pattern of this condition in a developing country for better maternal health-care services. Thus, this study is aimed at determining the prevalence, etiology, sociodemographic characteristics, and fetomaternal outcome of APH at Al-Imamain Al-Kadhmain medical city, Baghdad, Iraq .

The aim:

The purpose of this research is to determine the frequency, causes, risk factors and various treatment methods using for antepartum hemorrhage.

Patients & Methodology:

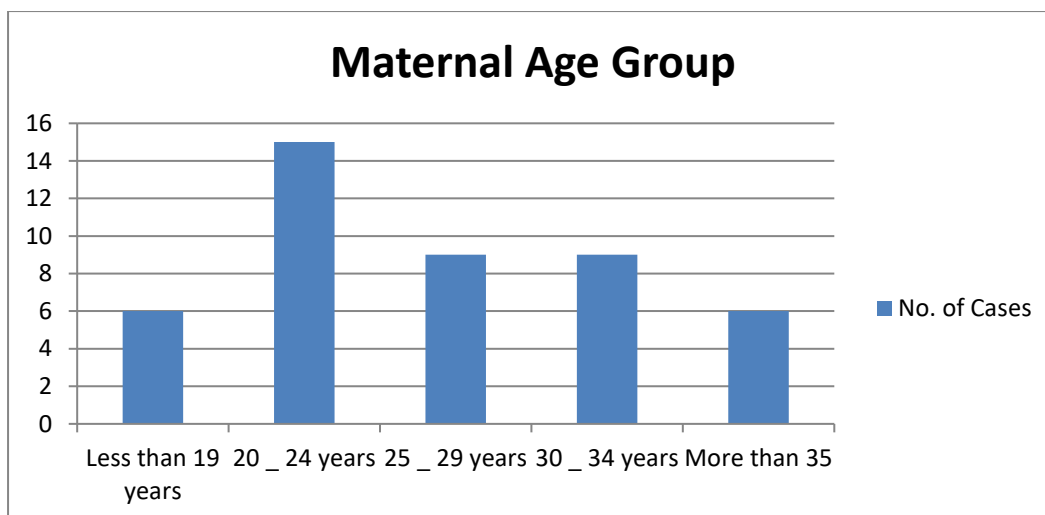
The research was retrospective descriptive study, done in the department of obstetrics and gynecology in Al-Imamaine Al-kadhmain medical city ,Baghdad ,Iraq .under the supervision of Dr.Omar Faisal and I collect 45 cases from the ward during the period from the 25/10/2018 till 20/3/2019.We select the antepartum hemorrhage cases with different gestational ages(above 24 weeks gestation) and different age of mothers(between 18-40 years).

The Results:

A Total of 45 patients were diagnosed with APH during study period which was from October 2018 till February 2019 and a total 4298 deliveries were similarly recorded during the same period giving an institutional prevalence of 1.04% ,with placenta previa having 46.6% ,placenta abruption 37.7% ,while unexplained causes had 6.6%.The mean age of patients was (26.4)years with a range of 18-38 years and the predominant age from 20 -24 years as table (3) shows 6(13.33%) patients less than 20 years of age ,15 (33.33%) patients belonged to age group (20-24) years ,while 6(13.33%) patients were more than 35 years .

Table (3): Maternal Age Group

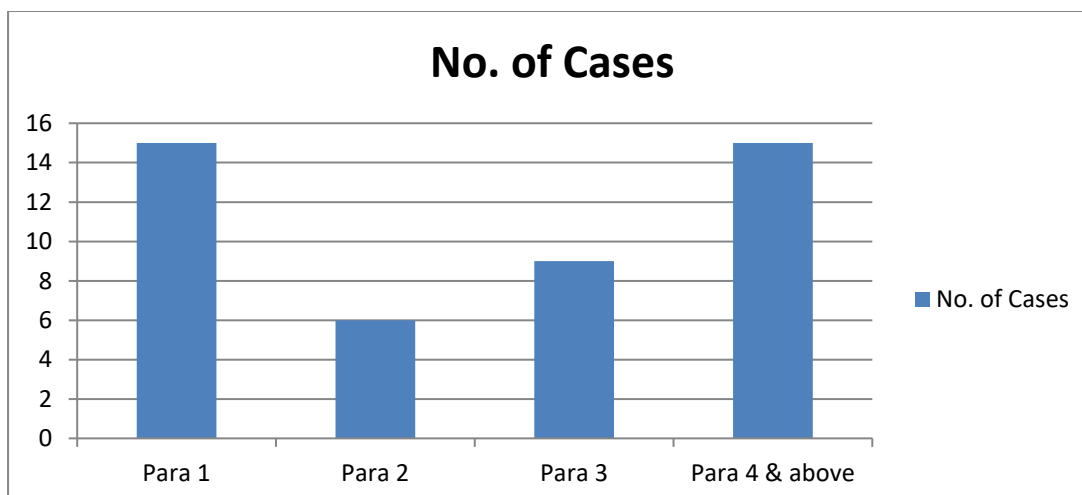
Age Group	No. of cases	Percentage (%)
Less than 19 years	6	13.33 %
20 _ 24 years	15	33.33 %
25 _ 29 years	9	20 %
30 _ 34 years	9	20 %
More than 35	6	13.33 %



Regarding parity of study population multiparas were predominant, 15(33.33%) patients were primipara, 6(13.33%) were para2, 9(20%) were para3, and para4 and above were 15(33.33%) .

Table (4): No. of Parity

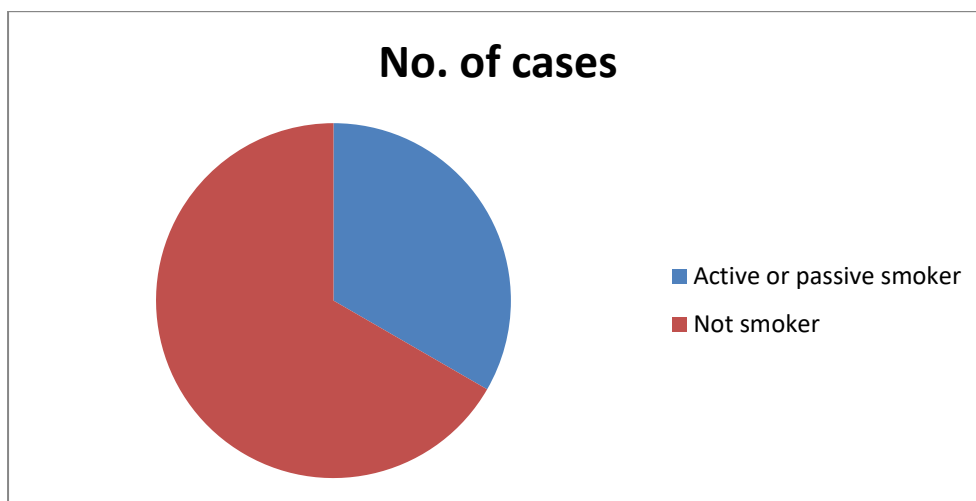
No. of parity	No. of cases	Percentage (%)
Para 1	15	33.33
Para 2	6	13.33
Para 3	9	20
Para 4 & above	15	33.33



Regarding smoking 15(33.33%) of cases were smokers while 30 (66.66%) were not smokers

Table (5): Smoking

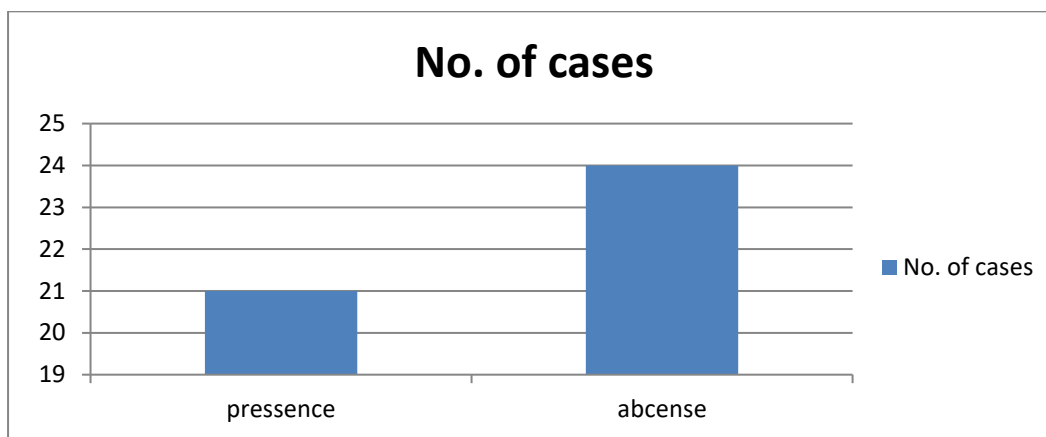
smoking	No. of cases	Percentage (%)
Active or passive smoker	15	33.33
Not smoker	30	66.66



About table (6) which showed 21(46.67%) cases with previous antepartum hemorrhage while 24(53.33%) not have .

Table (6): Previous antepartum hemorrhage

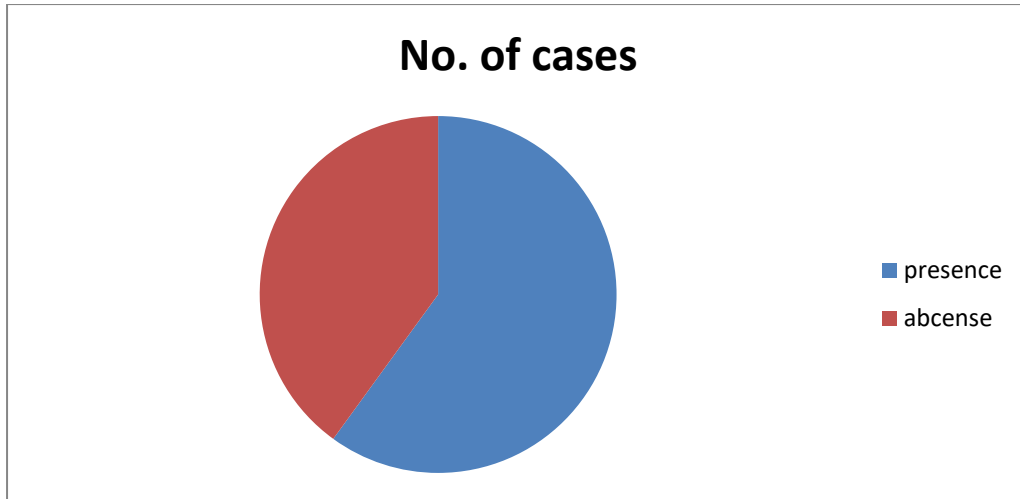
Previoud APH	No. of cases	Percentage (%)
pressence	21	46.667
Abcense	24	53.333



Regarding previous Cesarean section or/and uterine scars 27(60%) of patients they have and 18(40%) haven't

Table (7): Previous C.S and uterine scars

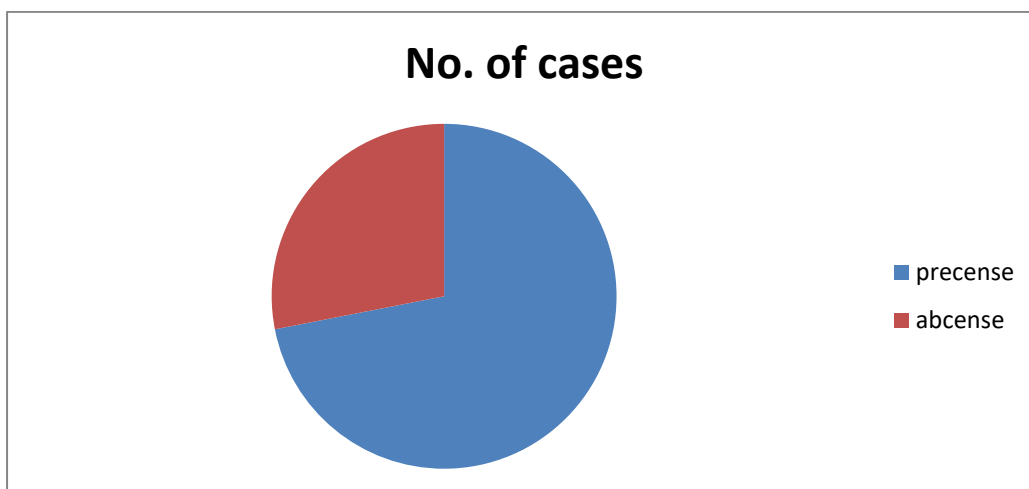
Previous C.S	No. of cases	Percentage (%)
presence	27	60
abcense	18	40



And for multiple Pregnancy just 8(17.77%) patients with antepartum hemorrhage have a relation with it while the rest lack this relation

Table (8): Multiple pregnancy

Multiple pregnancy	No. of cases	Percentage (%)
precense	8	17.778
abcense	37	82.222



The gender of fetus 24(53.33%) of the samples were males .The rest were females.

Table(9): Gender of fetus

Gender of fetus	NO. of cases	Percentage (%)
Male	24	53.33
Female	21	46.67

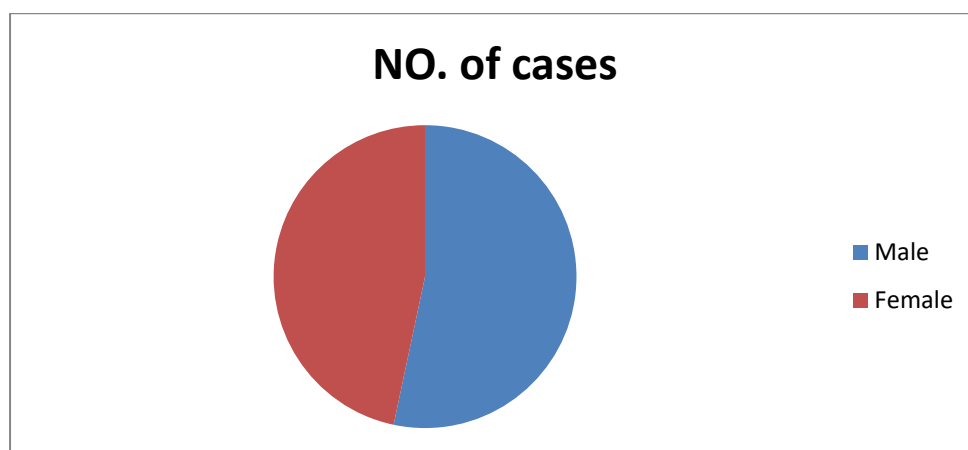


Table 10 showing the causes of antepartum hemorrhage and here we found that the most effective causes are Placenta Previa 46.76% and Placenta abruption 37.77%

All other Causes have an effect on APH but not considered as a major causes.

Table (10): Causes of antepartum hemorrhage

Cause	No. of Cases	Percentage (%)
Placenta Previa	21	46.67
Placenta abruption	17	37.77
Vasa previa	1	2.22

Placental accreta	3	6.67
Unexplained APH	3	6.67

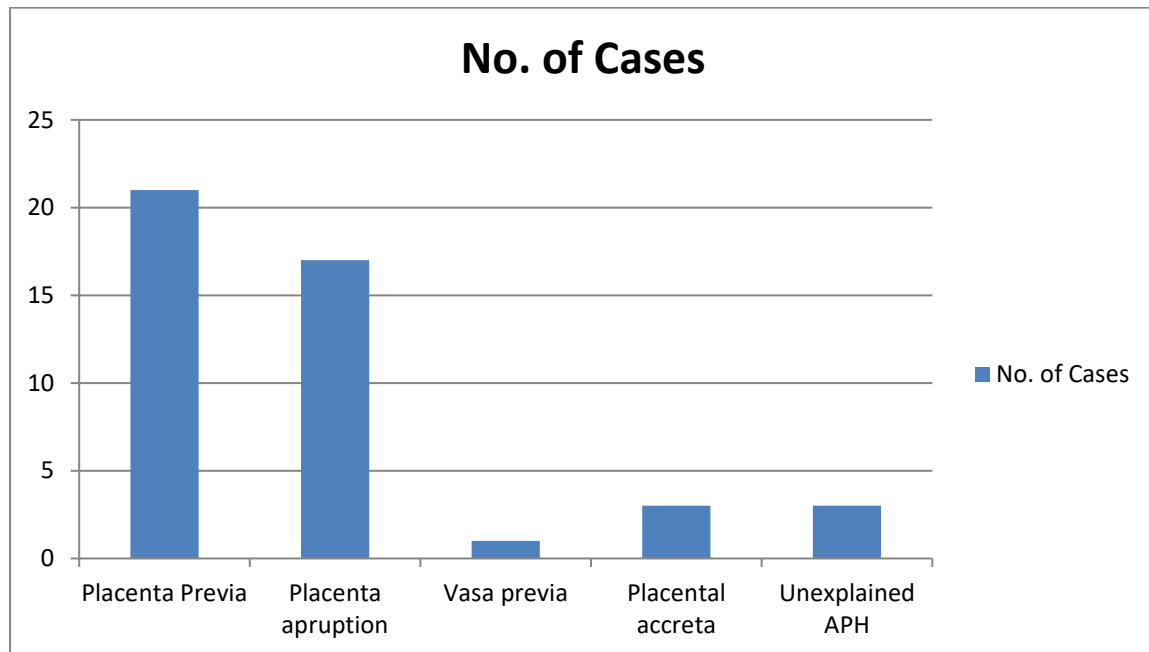


Table (11): Risk Factors of Placenta Previa

Risk Factor		No. (percentage)
Maternal Age	Below20yrs.	3 (14.28%)
	20-30 yrs.	8 (38.09%)
	Above30yrs.	10 (47.61%)
Parity	Primipara	5 (23.81%)
	Multipara	16 (76.19%)
Previous APH		6 (28.57%)
Previous Scar		9 (42.85%)
Previous Curettage		2 (9.5%)
Smoking		12 (57.14%)
Multiple Pregnancy		6 (28.57%)

Table 11 showing that the most effective risk factors for placenta previa were age group above 30 years old 10 (47.61%), multiparas 16 (76.19%), previous scar/s 9 (42.85%) ,and smoking 12(57.14%) .

Table (12): Risk Factors of Placenta Abruptio

Risk Factor		No. (percentage)
Maternal Age	Below20yrs.	1(5.88%)
	20-30 yrs.	9(52.95%)
	Above30yrs.	7(41.17%)
Parity	Primipara	6 (35.29%)
	Multipara	11 (64.70%)
Hypertension Disorders		9 (52.94%)
Trauma		3 (17.65%)
Thrombophilia		2 (11.76%)
Smoking		9 (52.94 %)
Multiple Pregnancy		3 (17.65%)

While table 12 showing that the more risky group were between 20-30 years ,multiparas were 11(64.94%),hypertention 9(52.94%) ,smoking 9(52.94%) .

Discussion:

The prevalence of APH was 1.04% in this study which is comparable to 1.5% reported from Oshogbo.[8] It is however lower than 5.4% documented in Pakistan[1] and 15.3% from Qatar.[7] Other studies have also reported higher values 2-5%, 3.01%,[4] and 2.53%[1] when compared to our result. The lower figure found in our study may be an underestimate of the actual figure as many patients with APH fail to reach the hospital in time or a multitude of cases may not report to the hospital at all. The low prevalence may also reflect the sociocultural and economic factors in the study environment that do not allow most women to seek medical attention unless in dire need.[37]

The leading cause of antepartum hemorrhage in this study was found to be placenta previa followed by placenta abruption as similar to findings in Southwestern Nigeria[38]

Hypertension has also been found to be the most consistent predisposing factor associated with abruptio placentae.[10] The finding of advanced maternal age is similar to findings by other authors. It is also similar to

the finding from a study in Enugu (33.3%)[39] and Niger (38.2%).[40] This maybe because up to one-third (33.33%) of our patients in the study were above age of 30 years and probably age-related chronic medical conditions such as hypertension might have set in.[41]

The prevalence of APH in this study is higher in multipara (53.33%) when compared to patients with lower parity (46.66%). This agrees with reports of other studies.[42] Hence being a problem of multiparity, reduction in family size and contraception are highly recommended if the prevalence and associated morbidity and mortality are to be reduced.

.Conclusion:

APH is an obstetric emergency with a high prevalence in our environment , and it is one of the most common causes of significant maternal and perinatal morbidity and mortality .clinical care should therefore concentrate on prevention ,early detection of high risk group, and prompt management. It can prevented by regular antenatal care ,early referral to higher center with good facilities for caesarean section, availability of blood banks and good NICU set up and multidisciplinary approach can improve maternal and perinatal outcome .

Recommendations:

One of the most important risk factor for developing APH is multiparity ,soits important to have family planning in our community by special programs and by using different contraceptive methods .

Also its recommended to all pregnant women to have regular antenatal care to detect any risk factors and prevent them if possible.

Other important points in our recommendations are to reduce unnecessary C.S., control hypertention and prevent its complications before and during pregnancy , and to stop and avoid smoking

Reference:

1. Sheikh F, Khokhar S. A study of antepartum haemorrhage: Maternal and perinatal outcomes. *Med Chan.* 2010;16:22.]
2. Paterson-Brown S. Obstetric emergencies. In: Edmunds DK, editor. *Dewhurst Textbook of Obstetrics and Gynaecology for Postgraduates.* UK: Blackwell Science; 2007. pp. 149–52.]
3. Arulkumaran S, Regan L. *Obstetrics and Gynaecology.* 1st ed. New York City, USA: Oxford University Press; 2011. Antepartum haemorrhage; pp. 326–7.
4. Singhal S, Nymphaea, Nanda S. Maternal and Perinatal Outcome In Antepartum Haemorrhage: A study At A Tertiary Care Referral Institute. *The Internet Journal Of Gynaecology and Obstetrics.* 2007;9:1–45. Green-top Guideline No. 63. London: RCOG; 2011. Royal College of Obstetricians and Gynaecologists. Antepartum Haemorrhage.
6. Kwakwume EY. Antepartum haemorrhage. In: Kwakwume EY, Emuveyan EE, editors. *Comprehensive Obstetrics and Gynaecology in the Tropics.* 1st ed. Accra, Ghana: Asante and Hitscher Printing Press; 2002. pp. 140–50.
7. Bener A, Saleh NM, Yousafzai MT. Prevalence and associated risk factors of ante-partum hemorrhage among Arab women in an economically fast growing society. *Niger J ClinPract.* 2012;15:185–9.
8. Adekanle A, Adeyemi A, Fadero F. Antepartum haemorrhage in LAUTECH Teaching Hospital, South-Western Nigeria. *J Med Sci.* 2011;2:1243–7.
9. Adegbola RO, Okunodo AA. Pattern of antepartum haemorrhage at the Lagos University Teaching Hospital. *Niger Med Pract.* 2009;5:6.
10. Giordano R, Cacciatore A, Cignini P, Vigna R, Romano M. Antepartum haemorrhage. *J Prenat Med.* 2010;4:12–6.
11. Pandelis K, Kardina A, Samina M. Antepartum haemorrhage. *ObstetGynaecolReprod Med.* 2012;1:21–5.
12. Borodo AT, Shehu CE. Placenta previa at UsmanuDanfodio University Teaching Hospital: A 5 year review. *Sahel Med J.* 2013;16:56–9.
13. Raymond EG, Mills JL. Placental abruption: maternal risk factors and associated fetal conditions. *ActaObstetGynecol Scand*1993;72:633–9
14. Rasmussen S, Irgens LM. Occurrence of placental abruption Inrelatives. *BJOG* 2009;116:693–699.
15. Kennare R, Heard A, Chan A. Substance use during pregnancy risk factors and obstetric and perinatal outcomes in South Australia. *ANZJOG* 2005;45:220–5
16. Lykke JA, Dideriksen KL, Lidegaard O, Langhoff-Roos J. First trimester vaginal bleeding and complications later in pregnancy. *ObstetGynecol* 2010;115:935–44.

17. van Oppenraaij RH, Jauniaux E, Christiansen OB, Horcajadas JA, Farquharson RG, Exalto N; ESHRE Special Interest Group for Early Pregnancy (SIGEP). Predicting adverse obstetric outcome after early pregnancy events and complications: a review. *Hum Reprod* 2009;15:409–21.

Reprod Update 2009;15:409–21

18. Robertson L, Wu O, Langhorne P, Twaddle S, Clark P, Lowe GD. et al; Thrombosis: Risk and Economic Assessment of Thrombophilia Screening (TREATS) Study. Thrombophilia pregnancy: a systematic review. *Br J Haematol* 2006;132:171–96

19. Rodger MA, Betancourt MT, Clark P, Lindqvist PG, Dizon-Townson D, Said J, et al. The association of factor V Leiden and prothrombin gene mutation and placental-mediated pregnancy complications: a systematic review and meta-analysis of prospective cohort studies. *PLoS Med* 2010;7:e1000292.

20. Nath CA, Ananth CV, Smulian JC, Shen-Schwarz S, Kaminsky L; New Jersey-Placental Abruptio Study Investigators. Histologic evidence of inflammation and risk of placental abruptio. *Am J Obstet Gynecol* 2007;197:319.e1–6.

21. Healy DL, Breheny S, Halliday J, Jaques A, Rushford D, Garrett C et al. Prevalence and risk factors for obstetric haemorrhage in 6730 singleton births after assisted reproductive technology in Victoria Australia. *Hum Reprod* 2010;25:265–74

- Yang Q, Wen SW, Phillips K, Oppenheimer L, Black D, Walker MC. Comparison of maternal risk factors between placental pregnancy abruptio and placenta previa. *Am J Perinatol Res Clin Obstet Gynaecol* 2005;19:611–30.

2009;26:279–86.

- Parazzini F, Dindelli M, Luchini L, La Rosa M, Potenza M, Frigerio L, et al. Risk factors for placenta praevia. *Placenta* 1994;15:321–6

22. Van Calsteren K, Vergote I, Amant F. Cervical neoplasia during pregnancy: diagnosis, management and prognosis. *Best Pract Obstet Gynaecol* 2005;19:611–30.

23. Norström A, Jansson I, Andersson H. Carcinoma of the uterine cervix in pregnancy. A study of the incidence and treatment in the Western region of Sweden 1973 to 1992. *Acta Obstet Gynecol Scand* 1993;48:15–8.

24. Royal College of Obstetricians and Gynaecologists. The Use of Anti-D Immunoglobulin for Rhesus D Prophylaxis. Green-top Guideline No. 22. London: RCOG; 2011.

25. Emery CL, Morway LF, Chung-Park M, Wyatt-Ashmead J, Sawady J, Beddow TD. The Kleihauer-Betke test. Clinical utility indication, and correlation in patients with placental abruptio and cocaine use. *Arch Pathol Lab Med* 1995;119:1032–7

- Dhanraj D, Lambers D. The incidences of positive Kleihauer-Betke test in low-risk pregnancies and maternal trauma patients. *Am J Obstet Gynecol* 2004;190:1461–3

26. Oyelese Y. Placenta previa: the evolving role of ultrasound. *Ultrasound Obstet Gynecol* 2009;34:123–6.

27. Glantz C, Purnell L. Clinical utility of sonography in diagnosis and treatment of placental abruptio. *Med* 2002;21:837–40.

28. Royal College of Obstetricians and Gynaecologists. Late Intrauterine Fetal Death and Stillbirth. Green-top Guideline. No. 55. London: RCOG; 2010.

29. Royal College of Obstetricians and Gynaecologists. Tocolytic. Green-top Guideline. No. 1b. London: RCOG; 2011.

30. Khan K, Zamora J, Lamont RF, Van Geijn Hp H, Svare J, Santos Jorge C, et al. Safety concerns for the use of calcium channel blockers in pregnancy for the treatment of spontaneous preterm labour and hypertension: a systematic review and meta-regression analysis. *J Matern Fetal Neonatal Med* 2010;23:1030–8.

31. Royal College of Obstetricians and Gynaecologists. Late Intrauterine Fetal Death and Stillbirth. Green-top Guideline. No. 55. London: RCOG; 2010.

32. Royal College of Obstetricians and Gynaecologists. Prevention and Management of Postpartum Haemorrhage. Green-top No. 52. London: RCOG; 2009.
33. Healy DL, Breheny S, Halliday J, Jaques A, Rushford D, Garrett C et al. Prevalence and risk factors for obstetric haemorrhage in 6730 singleton births after assisted reproductive technology in Victoria Australia. *Hum Reprod* 2010;25:265–74
34. Mercier FJ, Bonnet MP. Use of clotting prohemostatic drugs for obstetric hemorrhage. *Curr Opin Ed Anaesthesiol* 2010;23:310–6.
35. Oyelese Y. Placenta previa: the evolving role of ultrasound. *Ultrasound ObstetGynecol* 2009;34:123–6.
36. Royal College of Obstetricians and Gynaecologists. The Acute Management of Thrombosis and Embolism During Pregnancy and the Puerperium. Green-top Guideline No. 37b. London: RCOG; 2007
37. Nwobodo EI. Obstetric emergencies as seen in a tertiary health institution in North-Western Nigeria: Maternal and fetal outcome. *Niger Med Pract.* 2006;49:54–5.
38. Ikechebelu JI, Onwusulu DN. Placenta praevia: Review of clinical presentation and management in a Nigerian teaching hospital. *Niger J Med.* 2007;16:61–4.
39. Ozumba BC. Abruptio placentae at the University of Nigeria Teaching Hospital, Enugu: A 3-year study. *Aust N Z J ObstetGynaecol.* 1989;29:117–20.
40. Nayama M, Tamakloé-Azamesu D, Garba M, Idi N, Djibril B, Kamayé M, et al. Abruptio placentae. Management in a reference Nigerian maternity. Prospective study about 118 cases during one year. *GynecolObstetFertil.* 2007;35:975–81.
41. Agboola A, editor. Textbook of Obstetrics and Gynaecology for Medical Students. Lagos: Heinemann Education Books Plc.; 2006. Antepartum haemorrhage; pp. 340–7.
42. Eniola AO, Bako AU, Selo-Ojeme DO. Risk factors for placenta praevia in Southern Nigeria. *East Afr Med J.* 2002;79:535–8.
- Faiz AS, Ananth CV. Etiology and risk factors for placenta previa: An overview and meta-analysis of observational studies. *J Matern Fetal Neonatal Med.* 2003;13:175–90.