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ANALYSIS OF ANTEPARTUM HEMORRHAGE AND ASSOCIATED RISK FACTORS FOR MATERNAL AND NEONATAL OUTCOMES

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Abstract

This study involves pregnant women and their babies: it goes on to examine the prenatal, maternal and neonatal features that give rise to Antepartum Haemorrhage (APH).The study shows notable results related to maternal age, education background, number of births, obesity and pregnancy outcomes. Age-related risks were shown, with 36% of the participants under 20 years of age and 33% over 35.Maternal educational level was uneven. Those with college education made up 24% of the participants, There were 15% who didn't even graduate from elementary school. Obesity was common among the patients, with 57% obese (more than one year).This represented for 35% of pregnancies being premature and reinforced the need to improve prenatal care. Total sicknesses such as diabetes and hypertension were common. 55% of participants had diabetes while 47% experienced hypertension in the pregnancy. POST operative proportions were also large, with 38% (see FIG.1).A number of risk factors such as previous uterine scars, gestational hypertension, multiple childbearing, and advanced motherhood (over 35) were very common in this group. The study further identifies significant placental problems like placenta previa, abruption, and accreta, which present substantial risks to both mother and new born child. Large parts of maternal outcomes involved carrying out cesarean sections, removing the uterus, as well as post delivery anemia as a result of blood loss. Neonatal outcomes show high rates of low birth weight, stillbirths and suffocation at birth. This is a severe challenge for health. The study calls for antenatal monitoring targeted to identified patients, interventions early on and better new-born care.

INTRODUCTION

Antepartum hemorrhage (1) (APH) results from bleeding originating within or upon the genital tract; in this state, the gestation often extends between 24 and 28 weeks of age. The chief causes of APH include placenta previa and placental abruption, while less frequent origins such as vasa previa, [6] succenturiate lobe (abnormal placental attachment at non-contiguous sites) and placental infection are also recorded. Approximately 3%–5. 5% of all pregnancies develop APH, remaining so major an obstetric cause of stillbirth and neonatal death [7]. The perinatal mortality rate in developed countries is less than 10 per 1000 live births. However, in countries such as India, this quantity is much higher, 60 per 1,000 total births. Placenta previa (PP) means that the placenta is abnormally located over or near the

internal os, impeding the lower uterine segment. Placental abruption refers to a placenta detaching prematurely from its usual position before birth (partum), which leads to hemorrhage.Non-obstetric causes of APH include cervical polyps, cervical cancer, hematomas near the birth canal (varices), and trauma to the region. Several well-known pathologic conditions of pregnancy are conducive to APH; these include twin pregnancy, malpresentation of the fetus: The frontal lobe, premature labor, preeclampsia and eclampsia, hydramnionitis. If the mother develops APH, she may end up with postpartum hemorrhage (PPH), wound shock, septicemia, or disseminated intravascular coagulation (DIC). For the fetus, causes of APH are often such as prematurity, low-birthweight babies, intrauterine fetal death: ("dead babies in the uterus") and congenital malformations, birth asphyxia. This paper examines the frequency, causes and outcomes for mother and child of APH.

METHODOLOGY:

A cross-sectional observational study was conducted at the Department of Obstetrics and Gynecology of Timergara Teaching Hospital in Khyber Pakhtunkhwa, Pakistan. It took one year, from January 1 to December 31, 2024. The study was meant to explore the risk factors, causes and consequences concerning lordotic fetuses. 100 pregnant women diagnosed as suffering from APH were selected from patients admitted to the labor and emergency departments. They all formed a non-random sample and had given their consent. The study protocol was approved by the hospital review board. Women who experienced vaginal bleeding after 24 weeks of gestation and were confirmed by clinical assessment or ultrasonography as being pregnant were accepted for the study. Cases were taken in which all fetal pathology had APH as a reason, including placenta praevia. The exclusion criterion was any source of post-partum bleeding, bleeding from other than obstetric causes (such as cervical lesions or trauma) or a concurrent history of coagulopathy, without proper documentation of the case. Every patient is standardized triaged; check vital signs, fetal well-being using cardiotocography or portable doppler ultrasonography, evaluate maternal blood loss and give intravenous fluids or blood transfusion where necessary. A clinical check of each patient diagnosed the source and severity of bleeding, uterine tone, fetal position and cervical dilation; then ultrasound was used to check the position of the placenta, signs for placental abruption, fetal viability and the amniotic fluid volume in general. Venous blood was drawn for a full blood count, prothrombin time and activated partial thromboplastin time, type and cross-match of blood for transfusion, and liver and kidney function tests. Data were collected using a structured proforma recording demographic data, obstetric & medical histories, as well as risk factors such as hypertension diabetes, previous Cs, parity gestational age and other clinical outcomes. The study was conducted in accordance with the protocols of our hospital. Stable cases, expectant management; life threatening hemorrhage, emergency caesarean deliveries followed. Maternal outcomes (including postpartum anemia, cesarean hysterectomy, blood transfusion, and death) and neonatal outcomes (including birth weight, stillbirth, admissions to the NICU for asphyxia) were recorded and frequency-coded. These results, as were all antenatal care frequencies (gift certificates, booklets for assistance with registrations) were entered for analysis using SPSS Version 26.0. Frequency tables were used to illustrate the categorical variables, while comparative studies employed Chi-square-tests or Fisher's Exact Test to measure association strength, where applicable. This is a retrospective study comparing fresh stillbirths versus pregnancies

culminating in lifebirths. Data were presented in an essay format supported by statistical tables.

RESULT

This research, involving 100 patients, aimed to ascertain the occurrence, causative factor, and repercussions both to mother and child if free bleeding in pregnancy should happen (APH). The results reflected a number of important findings having a significant impact across many aspects of maternal health, prenatal care and the outcomes mothers face when they give birth to live children. Birth Order had a richly varied sampling. A good number of birth certificates came from mothers who were twenty years old or younger (36%), others from the very elderly at times were also sent in by parents presumably belonging in their early seventies (33%). Mother- and child eduction varied as well: 24 percent holds the title of four-year college diploma graduate, but such high quality instances might make up less than one quarter total population samples in all parts even more obscure areas seldom visited by visitors not residents whereas the illiterate accounted for fifteen percentage points. Data on parity revealed that 36% of women had more than five previous births, indicating the overweight hand many women in this group carry for multiple pregnancies. Obesity accounted for fifty-seven percent, greater than 30 the known bad number of women over 30. Thirty-five percent of pregnancies finished was too short - 34 weeks or less—another high proportion preterm births are occurring in these people (Table 1). With regard to medical history five hundred eighty-nine patients completed the questionnaire had some form thereof; but several of them were not included in said survey. Surprisingly, among those surveyed 47% had a history of illness prior to entering this research project. Diabetes comprised 55% and hypertension by weight came to 24 kilograms respectively: 47% of the patients in total had palpitations or high blood pressure Attack histwo Thirty-eight percent of patients reported previous surgeries, the most frequent being Caesarean sections. These findings serve as a timely reminder that it is essential to take into account underlying medical and surgical conditions when managing any case with APH (Table 2). Participant Courses: In keeping with what might be expected from the high incidence of diseases such as pandemic Mexicans blue spotted fever or rubella passed over 23 centuries ago by horsemanship means a significant proportion of this group did have a history illness. In particular, we find 53% having borne someone's last pregnancy (a father-to-cat or one-week-old guard); and 51% also had their blood pressure come to be recorded at times in such cycles for some disease they contracted from others which could count as medical regularity but still counts as death once mom turns up resigningprime mother housle when there's none one left anywhere! Multipara Women made up half the cases due to the fact that only males were admitted historically. Additionally, 52% were twins-a full load either can be complicated for you and usually another one too; 47% old autoimmune disorder cases which increased a woman's obstetric risks further. Advanced maternal age (over 35 years of through 51% of cases) 46% of the mothers were

craniotomy which would also complicate delivery processes. These multifaceted risk factors in themselves call for tailored antenatal care and vigilant monitoring programs during pregnancy (Table 3).Placental abnormalities: A frequent occurrence in this cohort. Complete previa was observed for 36% of cases, and a further 22% had partial placental development leading to 58% overall positivity on the matter. Placenta accreta can be seen all around~72 percent show some form of abnormal attachment including adherent 26%, increta 25 25% in nature and per ceta 21% included; The figures are excellent. Placental abruption also arose as a major problem with overcauterization the result may have been seen less frequently. Partial or complete abruption occurred in 65% of cases. These placental conditions call for early recognition and timely intervention (Tables 4, 5 and 6).Maternal outcomes were not encouraging. A total of 54% of women had had caesarean sections: higher than any other mode for giving birth recorded here by far. Further, 42 per cent suffered from a caesarean hysterectomy after introducing more severe complications. Control blood loss as a result of delivery way was also excessive, leading to postnatal anemia in 55% percent of new moms. Consequently blood transfusions had to be administered 37% patients; this was the group that[however] needed at least three units or more. Nevertheless, no maternal deaths were recorded. This type and frequency of result mean that it is satisfying to intervene early, this is the second key point in management of hemorrhagic risks associated to APH. (Table 7)Neonatal outcomes were particularly disturbing. 55 percent of children were born with a / weight below 2500 grams (LBW). The number of stillborn infants was only about 10 percent too high, but it is enough to be worried. An even greater figure were not alive after the shock of their arrival in this world's airless world, according to statistics published by Don Xiao Shenyi and a number of experts at such reports as this one with such high frequency on Kawwambu Review these days...48% suffered from birth asphyxia, Moreover 51% required admission into beganly wards where probably were raised up for their lives without being able see light again(NICU)Of these babies delivered prematurely 73% lived out 0'id not live till then and 58% of survived right through Oh behaves obtain back soon asfor given location going away from medical care to active participation in the dangerous pursuit of a baby With these findings that repeat soundly exactly what me Pouki Ooops (Table 8).Prenatal Care: 70% of the patients participants were constantly presented with the opportunity to receive prenatal care for at least four times as well as 93% all told visited once more before delivery. Unfortunately only thirty percent (30%) or tel ¿remainder ∫ minutes) had received too little of this precious aid When it came however there was another question that My 16th century palaeolithic ancestors seemed to appreciate more sportranous: 68% said they had regular prenatal care but 32 per cent could give no news whatso-ever about their own - so-called prenatalstate. Such results demonstrate gaping holes in the continuity of prenatal intervention. They also lend support for stricter

control mechanisms to improve outcomes among both mothers and newborn babies (Tables 9 and 10)

Table 1: General Characteristics (N = 100)

Category	Subcategory	Frequency
Age	< 20 years	36
	20-34 years	31
	> 35 years	33
Mother education	Illiterate	15
	Read & write	22
	1ry school	17
	2ndry school	22
	College	24
Parity	Nulliparous	27
	1-4 para	37
	>5 para	36
BMI	25-29.9 (over weight)	43
	>30 (Obese)	57
GA (Gestational Age)	<34 week	35
	34-36 week	36
	>37 week	29

The diagram shows that many respondents were teenagers or women over 35; both circumstances suggest (higher incidence) of pregnancy-related risks. Most mothers had been in labour before now, and a large number of them were both at high parity and obese—two points that are recognized as maternal complicated indicators. Educational levels varied, but college-educated mothers slightly outnumbered non-college-to a small degree and other college degree. Remarkably, a significant portion of pregnancies ended before the 37th week, indicating a high preterm birth rate that highlights yet again how targeted interventions for pregnant mothers are desperately needed.

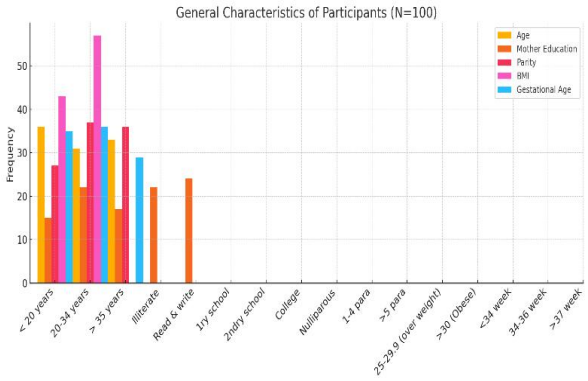

Table 2: Medical and Surgical History (N = 100)

Category	Subcategory	Frequency
Medical history	Yes	47
	No	53
Diabetes Mellitus (DM)	Yes	55
	No	45
Hypertension	Yes	47
	No	53
Asthma	No	100
Surgical history	Yes	38
	No	62

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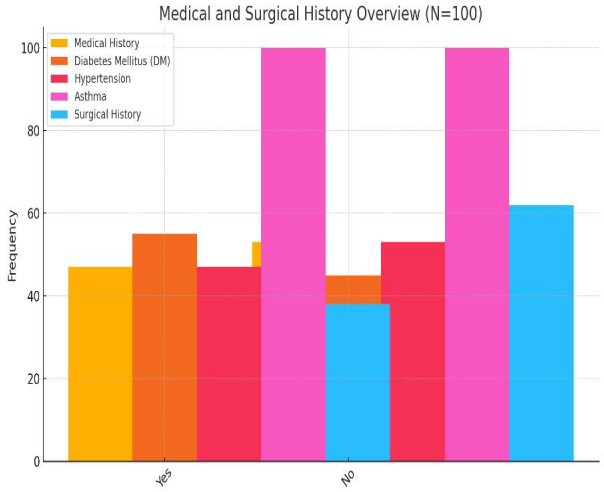
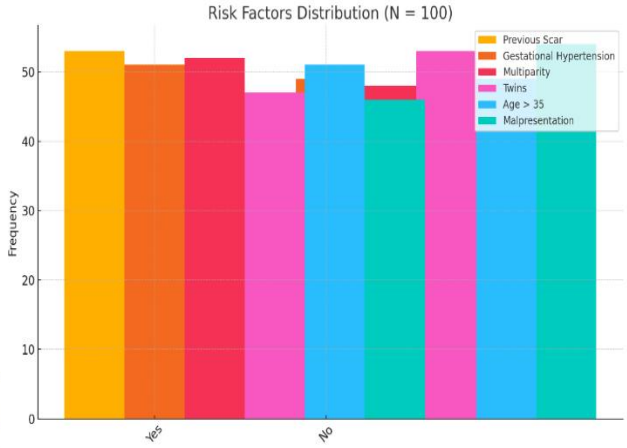


By showing that the majority of patients were afflicted with some sort of medical background in this Padang population, it is not surprising to find therefore that Diabetus Mellitus (55%) and Hypertension (47%) are reported very frequently indeed.Breathless difficulty was not mentioned by any participant at all, which tends to indicate this occupation should not be a major factor which affects the workforce as a whole. Furthermore, 38% had experienced previous surgery. These sorts of historical details, is the importance of surgical backgrounds in maternal care to make a difference is how maternal medical care must The picture painted by this group of events is one where pregnancy outcome may be influenced by major health factors and there is obviously a need for antenatal care to take account or meet this situation.

Table 3: Risk Factors (N = 100)

Category	Subcategory	Frequency
Previous scar	Yes	53
	No	47
Gestational Hypertension	Yes	51
	No	49
Multiparity	Yes	52
	No	48
Twins	Yes	47
	No	53
Age > 35	Yes	51
	No	49
Malpresentation	Yes	46
	No	54



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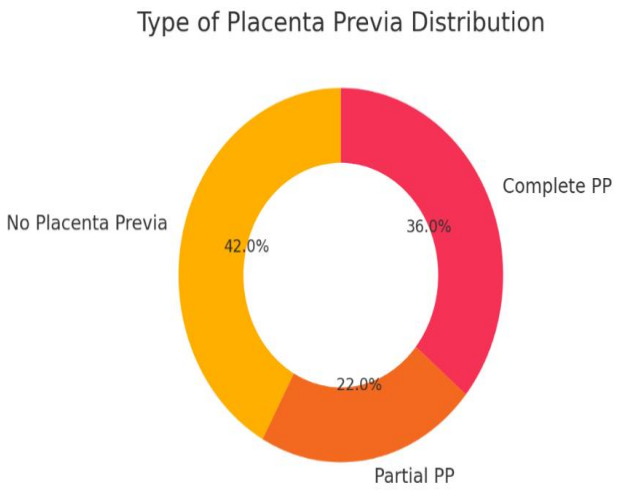
It was confirmed through data analysis that participants had a previous uterine incision (53.0%), gestational hypertension (51%), multiple-parity (6o0%) and aged over 35 (51%). All four of these are risk factors for pregnancy complications Among the participants, 47 percent had twin pregnancies and 46 per cent experienced children lying across two sides; both of these scenarios raise delivery difficulties Further study of the associations between birth outcomes and various characteristics, such as mother's age, her civil status at the time of pregnancy, length in months for gestation or whether twins were killed by mechanical induction (where applicable)favors remaining cautious and monitoring high-risk management: This distribution represents the multifactor nature of pregnancy risk. For all these kinds demands not only vigilant maternal surveillance.

Doctors need to tailor obstetric treatment methods accordingly.

Table 4: APH – Type of Placenta Previa (N = 100)

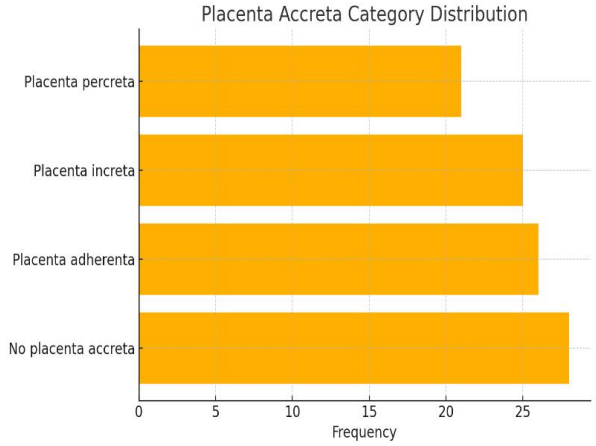
Type of Placenta Previa	Frequency
No Placenta Previa	42
Partial PP	22
Complete PP	36



According to the chart, 42% of all occurrences remained without placenta previa; 36% had full and 22% partial previa. This means that almost 58% of patients experienced some form of placenta previa, a condition fraught with marked connotations for decision-making in childbirth and the health outcomes of mothers and babies alike-underscoring both urgency in receiving proper diagnosis early on as well as responsive therapeutic support tailored specifically to each individual case.

Table 5: APH – Placenta Accreta (N = 100)

Placenta Accreta Category	Frequency
No placenta accreta	28
Placenta adherenta	26
Placenta increta	25
Placenta percreta	21

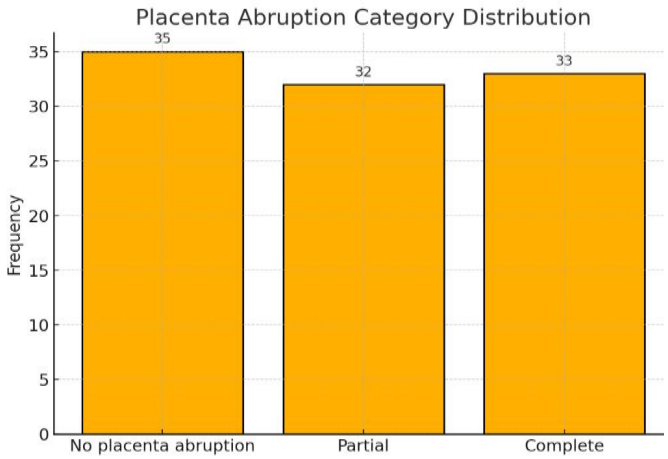


The bar chart depicted is a horizontal graph of placenta accreta type distribution. Of them, there was relatively even distribution. Some 28% had normal adhesion placentas. However, other 72% revealed abnormal attachment, thus resulting in abnormal implantation--placenta adherenta (26%), increta (25%) and percreta (21%)--all of which severely endanger mothers during delivery This data underlines the urgent need for antenatal scanning and a cross-disciplinary approach to managing such complex obstetrical conditions effectively

Table 6: APH – Placenta Abruption (N = 100)

Placenta Abruption Category	Frequency
No placenta abruption	35
Partial	32

Complete		33

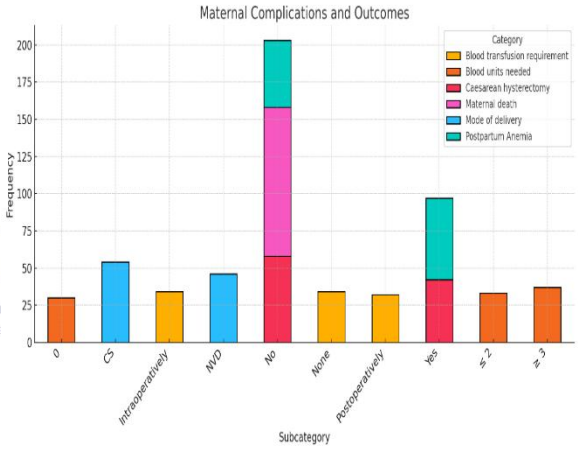


All emergencies at once.

65 percent of respondents reported some form of placental abruption. Partial cases were (32 \%), while complete totals reached 33 per cent. Those with no abruption made up 35%, indicating it to be high among participants of this study (Fig. 1 this bar chert).R results from these testsFor a couple of suspectsThis information is a reminder that patients with suspected placental separation can deteriorate into a life threatening situation at any time.

Table 7: Maternal Outcome (N = 100)

Category	Subcategory	Frequency
Caesarean hysterectomy	Yes	42
	No	58
Postpartum Anemia	Yes	55
	No	45
Blood transfusion requirement	None	34
	Intraoperatively	34
	Postoperatively	32
Blood units needed	0	30
	≤ 2	33
	≥ 3	37
Mode of delivery	CS	54
	NVD	46
Maternal death	No	100

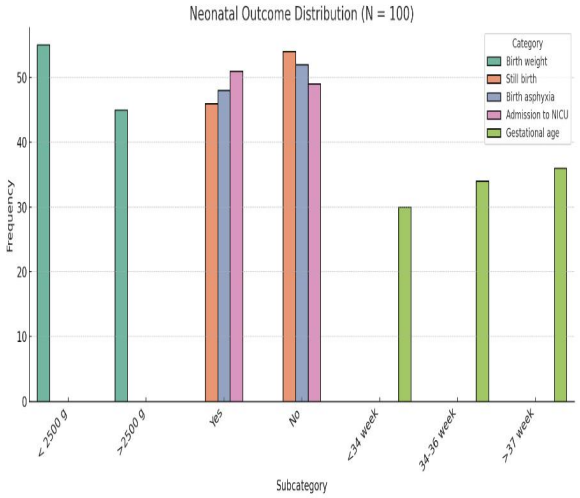


This bar chart will show key outcomes and complications in maternal care.Caesarean section (54%) was the main delivery mode, followed by caesarean hysterectomy at 42% of women.Over half of these cases had postpartum anaemia (55%), with transfusion needs split fairly into no transfusions, intraoperative and postoperative alarms. Worse still, was that 37% of all cases required three or more blood units given that soo much blood has been lost. Such patients should not be discharged home until close monitoring equals matching results in daily life-this may indicate that they are still at high risk for hemorrhage.If we put all this gruesome information together and then add the near-miss

material, do not come away thinking that dying in childbirth is a thing of the past. ATTRIBUTABLESEver so significantly, there were not maternal deaths. No female subjects died from complications that developed during their confinement or who had already been stricken.

Table 8: Neonatal Outcome (N = 100)

Category	Subcategory	Frequency
Birth weight	< 2500 g	55
	>2500 g	45
Still birth	Yes	46
	No	54
Birth asphyxia	Yes	48
	No	52
Admission to NICU	Yes	51
	No	49
Gestational age	<34 week	30
	34-36 week	34
	>37 week	36



The results of a clustered bar chart illustrate just how common low birth weight (<2500 g) was (55 percent), and that almost half of all the new-borns experienced asphyxia at birth (48%) or were still-born (46%) makes neonatal health challenges very real. A further indication of risky obstetrics came when 51% had to be referred to the NICU. There are also indications that many babies are not carried long enough. The gestational age distribution revealed that most of them took ten weeks off their due date. Full-term births were in a minority, at just 36% which once again ties in with negative indicators for neonatal outcome if a baby is born prematurely.

Table 9: Antenatal Care (N = 100)

Antenatal Care Visits	Frequency
≥4 visits	70
1-3 visits	25
No visits	5

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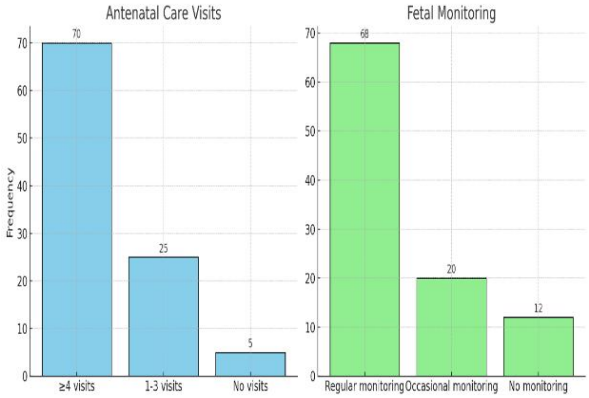
Table 10: Fetal Monitoring (N = 100)

Fetal Monitoring	Frequency
Regular monitoring	68
Occasional monitoring	20
No monitoring	12



The scenes illuminate the progress of maternal health service, with 70% attending four or more check-ups, Mrs. Mao said. Nevertheless, as many as 30% did not go once or maybe twice. Only 68% of patients received regular fetal monitoring, reports show. Adding to that was nearly one third without or not always even able to get a mah-jong monitor on their stomachs in time to catch what would have happened the last few days: fetal distress if ignored too long. These findings confirm prenatal treatment should be consistent and fetal status continuously assessed if we want our mother & baby pairs expect a reasonable outcome.

Discussion:

Placental abruption is the most common cause of APH (21%), followed by placenta previa at 19% and causes that are unexplained in 1%. Placenta accreta caused 7.03% of the cases of placenta previa. In an analogous study, Behera et al. (2022) identified placenta previa accounts for 71% of these cases with placental abruption responsible for 27% and unexplained causes constituting 2%. Gaian M. et al. (2021) determined that the predominant cause of antepartum hemorrhage at Jimma University Medical Center wast placental abruption, which accounted for 74.5% of cases [14]. 37.8% of cases reported placental abruption as the predominant cause of antepartum hemorrhage (APH). hemorrhage episodes occurred) with placenta previa (58% reported). The 7.03% incidence of placenta accreta in association with placenta previa was higher than has been seen in other research. It is difficult to determine the actual incidence of placenta accreta, but it is believed to fall anywhere from 1 in 500 to as high as 1 in 1,000 deliveries, with reported variations as low as 1 in 111. Accreta origin is most likely related to the increase of relevant factors, such as placenta previa, prior caesarean deliveries, and advanced mother age. There are also uterine procedures like uterine conservation and a history of retained placenta or placenta accreta. analysis of risk factors identified a prior uterine scar in 36 (72%) patients (26 cases), gestational hypertension in 6 (26%) (13 cases), multiparity in 8 (16%) (8 cases), twin pregnancy in 2 (4%) instances, maternal age over 35 years in 11 (22%) (11 cases), and malpresentation in 8 (16%) (8 cases). These results are consistent with a study by Dibaba B. that found women with a previous Cesarean section were 4.7 times more likely than those without to have APH. Similarly, study mentioned earlier showed that incidence of twin pregnancy in APH was 7.1%, whereas in control group it stood at 5.7%. The study found

gynecology and obstetrics that 4% of patients (2 cases) needed caesarean hysterectomy, 27 (54%) postpartum anemia (27 cases), 36 (72%) blood transfusion. Of these transfusions, nine cases occurred intraoperatively and 27 postoperatively. Most patients (29 cases) received two units of blood or fewer, while a minority (7 cases) received three or more sections of blood. Caesarean deliveries constituted 88% of births. (44 cases) and vaginal deliveries accounted for 12% (6 cases). There were no maternal deaths in this group. These results are similar to those of Hamadameen AI (2018), which showed that ≥5.0 units of blood were transfused in 5% of cases, caesarean sections accounted for 78.4% of births, only 0.9% of hysterectomies occurred, and there was a 0.3% rate of maternal mortality. Choudhary J et al. (2018) found elevated rates of unfavorable pregnancy outcomes in women with APH (≥83.3% vs.<49.2%, P= 0.0001) [10]. Agarwal S et al. (2023) reported blood transfusion in 70.0% of cases, peripartum hysterectomy in 17.1%, and maternal mortality in 2.6%. This study reported that low birth weight occurred in 30% of cases (15 newborns), with a single case (2%) of stillbirth. Three newborns (6%) were affected by birth asphyxia. NICU admission applied to 46.0% of cases (23 newborns). In 54.0% of cases, babies were born prematurely. This equates to 24.0% (12 newborns) delivered before 34 weeks of gestation and 30.0% (15 newborns) born between 34-36 weeks. These figures correspond with the report by Choudhary J et al. (2018), which showed a poorer score (<51.6% vs.<23.9%, P= 0.0001) for all newborn outcomes among infants born to mothers with APH [10]. Hamadameen AI (2018) found that 39.9% of newborns had low birth weight, 47.8% were preterm, 42.9% went to the NICU with 2.4% perinatal mortality [11]. In Agarwal S et al. (2023), 34.0% of neonates were either preterm or low birth weight, 12.0% were stillborn, 9.0% died in the neonatal period of birth asphyxia, and a 45.0% of neonates had to be hospitalized in the NNICU. Khandasu S et al. [19] also reported a perinatal and stillbirth rate of 21% among APH patients. Lacking or inadequate access to consistent and effective prenatal care increases the likelihood of undiagnosed complications, including delayed growth and fetal distress. Studies have shown that inadequate prenatal care is a major risk factor for poor outcomes for both the mother and baby. Our results confirm the need for greater access as well as frequency in pre- forming regular antenatal checkups, especially for high-risk pregnancies. Institutions need access to comprehensive services on their labor and delivery wards in order to mitigate adverse outcomes for women and children.

Final Assessment offer extensive services at their birth and delivery units in order to minimize ill effects on woman or baby. This means that the hospital must have orderly equipment and staff\/poiced people who help you Moreover, one must be quick to identify any potential danger, prepare the family for blood donation in case it is needed with competence anesthesia people at hand, and make sure that all necessary human resources are available to handle cases of antepartum haemorrhage in an efficient manner.

Conclusion:

This research shows that antepartum hemorrhaging is a highly intricate matter and that many different aspects contribute maternal or neonatal problem. In this group however, abnormal placentation, advanced maternal age, multiparity, overweight and advanced childbirth demonstrate the need for specific intervention. Adequate antenatal care, early recognition of placental complications and prompt clinical management are all essential in order to improve perinatal results. Regular monitoring of the fetus and better prenatal care will significantly lower the risk associated with antepartum hemorrhage. Ultimately this will lead to better pregnancy outcomes indeed.

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