

Etiology, Clinical Manifestations, Diagnosis and Management of Antepartum Hemorrhage in Two Referral Hospitals in Douala-Cameroon

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Abstract

Antepartum hemorrhage certainly has an easy clinical diagnosis, but it is complex because of its complications and multidisciplinary treatment. Despite initial care, some patients are still subject to perinatal and maternal morbidity and mortality. To limit these consequences, our study aims to identify the etiology, clinical manifestations, diagnosis and management of antepartum hemorrhage at the Laquintinie Hospital and the General Hospital of Douala in Cameroon. To achieve this objective, a quantitative descriptive study was conducted from May 1, 2020 to May 1, 2022 and included 166 pregnant women diagnosed with antepartum hemorrhage in the maternity wards of these hospitals. Data was collected by reviewing medical records and interviewing mothers using a questionnaire. We used the convenience sampling technique and the data collected were processed with SPSS 2.3. At the end of this analysis, the study showed that the most recurrent cause of antepartum hemorrhage was placenta abruption (51.81%). The clinical consequence was marked mainly by anemia (50.60%). Caesarean section was the most common method of management (94.20%). The results suggest that antepartum hemorrhage is a public health problem.

Keywords: Antepartum hemorrhage, Clinical manifestation, Diagnosis, Management of antepartum bleeding; public health problem.

Introduction

Antepartum hemorrhage is bleeding from the genital tract from 20 weeks of gestation until delivery in industrialized countries and from 28 weeks in low-resource countries lacking adequate neonatal facilities. It is one of the leading causes of obstetric emergencies in health facilities [1-3]. On average, 0.5% to 5% of all pregnancies are complicated by antepartum hemorrhage, with the incidence of

placenta previa being 0.33% to 0.55% and placenta abruption 0.5% to 1%. It is a major cause of perinatal and maternal morbidity and mortality worldwide [4-6]. In developed countries, antepartum hemorrhage accounts for only 16.3% of maternal deaths, whereas in sub-Saharan Africa the rate remains high (24.5%) [4, 5]. The complications of antepartum hemorrhage vary between 0.5–5% of pregnancies and with sociodemographic variables [4,7,8]. The main cause of antepartum

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hemorrhage are placenta abruption, placenta previa, uterus rupture and unknown etiologic or local causes of genital tract. Placenta previa refers to the condition when the placenta is situated wholly or partially in the lower uterine segment and accounts for one third of all cases of antepartum hemorrhage. It is further classified as type I, if implantation is in lower segment but does not reach the internal os, type II, placenta reaches the internal os but does not cover it, type III, placenta covers the internal os but not at full dilatation and type IV when placenta covers internal os even at full dilatation of cervix.

An Abruptio placenta is the condition whenever bleeding occurs due to premature separation of normally situated placenta and it also contributes to nearly one third of cases. Various extra placental causes are cervical polyp, carcinoma cervix, varicose veins, local trauma, condylomata, cervical erosion etc. The maternal complications in patients with antepartum hemorrhage are malpresentation, premature labor, postpartum hemorrhage, sepsis, shock and retained placenta. Various fetal complications are premature baby, low birth weight, intrauterine death, congenital malformation and birth asphyxia [21]. Maternal and fetal morbidity and mortality due to antepartum hemorrhage are significantly decreased in developed countries due to better obstetrical outcome. In Sud-Sahara Africa, maternal and fetal mortality are unacceptably high. Approximately 295,000 women died during and after pregnancy and childbirth in 2017 with the vast majority of these deaths (94%) occurring in low-resource settings, and most could have been prevented [9]. In Cameroon the maternal mortality ratio still remains high despite its gradual decline from 782/100,000 live births in 2011 to 467/100,000 live births in 2018 [10]. The causes of death are related to obstetric and gynecological conditions which are in turn related to antepartum hemorrhage. All collectivity have played important role in decreasing perinatal as well as

maternal morbidity and mortality [18]. The present study aimed to investigate the causes, clinical, diagnosis and management of antepartum hemorrhage and hence contribute to reducing the rate of perinatal and maternal mortality.

Methodology

This was prospective and retrospective study. It took place in the Gynecology and Obstetrics units of the Douala Laquintinie Hospital and the General Hospital of Douala from 1st May 2020 to 1st May 2022. These are two referral hospital of second and the first category respectively. Both possess well trained and experienced personnel as well as good technical equipment for the best management of various pathologies including antepartum hemorrhage. Ethical clearance was obtained from the ethics committee of the University of Douala. Out of 3400 deliveries at Laquintinie and General Maternity of Douala, 166 pregnant women whose pregnancies were aged 28 weeks or more, presenting with antepartum hemorrhage and who gave their consent were included for the study. Sociodemographic characters like age, ethnicity, matrimonial status, parity...were noted. Women classification into those who never born a child and they were in the first pregnancy, described as multiparous women with history of one to four deliveries and grand multiparity those who have more than five deliveries. Gestational age was calculated by using Naegeles rule or from early ultrasound. Meanwhile, other parameter such as risk factors was also recorded. Pretested questionnaire were used to collect quantitative and descriptive data associated with antepartum hemorrhage. The data collected was analyzed with SPSS version 2.3 statistics.

Results

Etiology of Antepartum Hemorrhage

As shown in Figure 1; the most common etiology of antepartum hemorrhage was

placenta abruption with 86 (51, 81%) of cases. (30, 12%) and finally uterine rupture with 30 Placenta Previa was the second cause with 50 (18.07%).

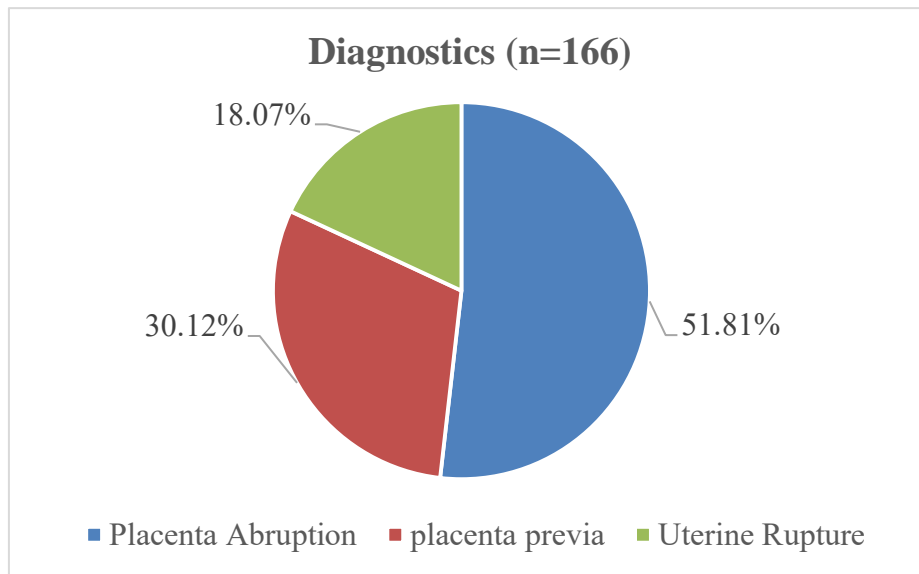


Figure 1. Diagnostic of Antepartum Hemorrhage

Symptoms

The data on the symptoms of antepartum hemorrhage (Table 1) revealed that, patients presented with a wide range of symptoms including vaginal bleeding whose color varied

between bright red and dark red, pelvic pain, dizziness, exhaustion. Vaginal bleeding (97, 60 %) and pelvic pain (71, 08 %) were the most common symptoms.

Table 1. Distribution of Participants According to Symptoms

Diagnostics	Placenta Abruption		placenta Previa		Uterine Rupture		Total	
	N	%	N	%	N	%	N	%
Vaginal bleeding	84	50,60	48	28,92	30	18,07	162	97,59
bleeding occurs After abdomino- pelvic pain	58	34,94	10	6,02	20	12,05	88	53,01
bleeding occurs Spontaneously	28	16,87	40	24,10	10	6,02	78	46,99
Amount of blood lost Less than 1000 cc	58	34,94	40	24,10	12	7,23	110	66,27
Amount of blood lost More than 1000 cc	28	16,87	10	6,02	18	10,84	56	33,73
Colour of blood loss Bright Red	25	15,06	41	24,70	19	11,45	85	51,20
Colour of blood loss Dark Red	61	36,75	9	5,42	11	6,63	81	48,80
Pelvic pain	66	39,76	32	19,28	20	12,05	118	71,08
Hypotension	28	16,87	11	6,63	19	11,45	58	34,94
Exhaustion	47	28,31	11	6,63	26	15,66	84	50,60

Pathologies Diagnosed by Different Methods

Table 2 shows that, emergency ultrasound was done at first intention for most of the patients. Clinical diagnosis together with

Ultrasound revealed pathologies in 92.17% of the patients examined. Ultrasound was the most commonly used diagnostic method and this method alone revealed pathologies in 72,89% of the patients examined.

Table 2. Pathologies Diagnosed by Different Methods

Diagnostics	Placenta Abruption		placenta previa		Uterine Rupture		Total	
	N	%	n	%	N	%	N	%
Obstetrical Ultrasound	66	39,76	44	26,51	11	6,63	121	72,89
Clinical + paraclinical	83	50,00	49	29,52	21	12,65	153	92,17
Clinical only	3	1,81	1	0,60	9	5,42	13	7,83

Mode of Delivery

Delivery was either through cesarean section or through the vaginal route but cesarean

section was the most use method 154 (94, 58%).

Table 3. Distribution of Mode of Delivery

Method of Delivery	Effective	Frequency (%)
Cesarean Section	157	94,58
vaginal delivery	9	5,42
Total	166	100,00

Use of Medications in Management

As shown in Table 4, Oxytocin, Vitamin K, Misoprostole , Tranexamic acid were used in the majority of the patients to reduce the

bleeding and to prevent post-partum hemorrhage . 56 (33, 7%) of the patients were transfused with whole blood for severe anemia.

Table 4. Distribution of the Medication Management

	n (166)	(%)
Global transfusion	56	33,7
Platelets transfusion	3	1,8
Transfusion of fresh frozen plasma	2	1,2
Use of Tranexamic acid	51	30,7
Use of ocytocine	157	94,6
Use of calcium	9	5,4
Use of Vit K	34	20,5
Use of Misoprostole	67	40,4
Use of methylergometrine	3	1,8

Discussion

Upon admission, vaginal bleeding and pelvic pain with clinical anemia were the main symptoms. In this study, Placenta abruption and

praevia were the major causes of significant hemorrhage in the third trimester similar to findings by [11] and findings by [12]. Clinical anaemia has commonly been reported [13]. The incidence of antepartum hemorrhage was more

common in multiparous (63, 85%) than in nulliparous (31,5%); similar to the 64% of antepartum hemorrhage in multiparous women found in India [5]. We found that 30% of antepartum hemorrhage was associated with placenta praevia, of which 8% were primigravida, 46% were 2nd - 4th gravida and 46% were from 5th gravida upwards. We also found that 51, 80% of antepartum hemorrhage were from premature abruption placenta and among these, 15,11% were primigravida, 47,67% were 2nd - 4th gravida and 37,2% were 5th gravida or higher parity. These findings were consistent with the finding in other studies [14 -15]. In the present study 34, 94% of the cases with antepartum hemorrhage had a history of previous abortions, an observation which is lower than the 38% reported in one study [5] but higher than the 20% reported by Tay [16]. The incidence of abruption placenta was 51, 81%, placenta Previa was 30, 12% and uterine rupture was 18, 08%. These results were similar to that reported in the literature where abruption placenta was the leading cause of antepartum hemorrhage followed by placenta Previa [17-18] as opposed to findings in Southwestern Nigeria where placenta Previa was found to be the leading cause [19]. Uterine ruptures were more common in patients with scarred uterus (75%) as opposed to healthy uterus (25%). This difference may be due to the high rate of oxytocin use and also to poor monitoring of labor by unskilled personnel. In some countries, especially developed countries, uterine rupture is rare because risk factors are avoided since prenatal consultations and deliveries are done by qualified personnel.

In this study, the blood transfusion rate was 37, 70%; this result being lower than 66% in one study by [17]. This difference may be due to the rapid intervention by the well trained personnel in our study hospitals. Two patients received fresh frozen plasma for blood clotting disorders. Oxytocin and antibiotics were used in this study like in other studies [20].

In our study, cesarean section was the most used management method with a rate of 94.4%. In another study conducted in Mali, an almost similar rate of cesarean section was found, 93.4% [22]. This was slightly higher than the 53,5% and 87% of cesarean rate reported [17,5]. This difference could be explained by the high rate of placenta abruption and uterine rupture we observed associated with severe materno-fetal distress. Nine women delivered through the vaginal route with no materno-fetal complications. This is similar to the 8 patients reported in Burkina Faso [13]. In the present study, the main morbidity was anemia (50.60%), as described in the literature [14]. Anemia is often part of the complications of pregnancy. The second cause of morbidity was postpartum hemorrhage with disseminated intravascular coagulation (7.7%) which is concomitant with a study conducted in India [14].

Conclusion

Antepartum hemorrhage is a public health problem throughout the world and particularly in Cameroon. Placenta abruption and placenta previa are the major causes of antepartum hemorrhage. Antepartum hemorrhage which often leads to bleeding through the vaginal, is diagnosed clinically and/or by urgent obstetrical ultrasound and is managed by cesarean section in most cases. It is therefore important to pay particular attention to this pathology in order to limit perinatal and maternal mortality.

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Conflict of Interest

We (all authors) declare that we do not have any conflict of interest.

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