

Prevalence of Antepartum Hemorrhage in Two Referral Hospitals in Douala-Cameroon

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Abstract

A few years after the implementation of policies to combat maternal mortality, antepartum hemorrhage, which is one of the main causes, is not systematically documented to the point where we are left to wonder what its prevalence is in the major cities of Cameroon. This study was conducted in the Gynecological and Obstetric units of the Laquintinie hospital and the General hospital of the city of Douala, from May 01, 2020, to April 30, 2022, has been to determine the prevalence of antepartum hemorrhage in Douala. It included 166 women who had had antepartum hemorrhage. The data collected with an indirect self-administered questionnaire was processed by SPSS 23. Following this treatment, participants had an average age of 31.28 ± 6.33 years. The prevalence of antepartum hemorrhage in the two hospitals was 3.47% and of 166 cases, 51.80% had placenta abruption.

Keywords: Antepartum Hemorrhage, Prevalence, Pregnancy.

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. Antepartum hemorrhage is one of the leading causes of obstetric emergencies in health facilities [1-3] and accounts for a high percentage of maternal and neonatal morbidity and mortality [4-7]. On an average 0.5 to 5% of all pregnancies are complicated by antepartum haemorrhage, [8, 9]. The main cause of antepartum hemorrhage is placenta abruption, placenta previa, uterus rupture and unknown etiologie 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. The etiology of placenta previa remains controversial. The major theories focus on endometrial damage in the corpus and defective genetics or placental mechanism. In humans the blastocyst is completely embedded in the substance of endometrium so abnormalities of endometrial vascularization, delayed ovulation, and prior trauma to the endometrium appear to influence the site of implantation, therefore contributing to the probability of Placenta Previa [15].

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, placenta covers internal os even at full dilatation of cervix.

The Placental abruption is the separation of placenta either partially or totally from its implantation site before delivery. It is initiated by hemorrhage into the decidual basalis which results in retroplacental hematoma. The phenomenon of impaired trophoblastic invasion with subsequent atherosclerosis is related and inflammation or infection may also be contributory. Risk factors for placental abruption include advanced maternal age, multiparity, low body mass index, abruption in a previous pregnancy, pre-eclampsia, polyhydramnios, intrauterine infection, premature rupture of membranes, abdominal trauma, smoking, drug misuse (cocaine and amphetamines), pregnancy following assisted reproductive techniques and maternal thrombophilia's [15]. Various extra placental causes are cervical polyp, carcinoma cervix, local trauma, cervical erosion etc.

Uterus rupture is the solution of non-surgical continuity of all or part of the uterus occurring in a pregnant uterus. It can be provoked (various trauma), spontaneous (occurring on a scarred uterus). Uterine ruptures occurring during labor can affect both types (spontaneous and provoked).

The maternal complications in patients with antepartum hemorrhage are, disseminated intravascular coagulation, anemia, hypovolemic shock, respiratory distress. Various fetal complications are premature babies, low birth weight, intrauterine death, and birth asphyxia [10,24]. Maternal and fetal morbidity and mortality due to Antepartum hemorrhage are significantly decreased in developed countries due to better obstetrical outcome. As antepartum hemorrhage 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. This study was to determine the prevalence of antepartum hemorrhage in the two referral hospitals in the city of Douala- Cameroon.

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 the 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 who's pregnant cies 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 Naegele's rule or from early ultrasound. Meanwhile, other parameters such as risks factors was also recorded. Data was collected by reviewing medical records and interviewing mothers using a questionnaire. Pretested questionnaires were used to collect quantitative and descriptive data associated with antepartum hemorrhage. Data relating to sociodemographic information, etiology, parity, gestational age, investigation, mode of delivery were collected and entered into a questionnaire designed for the study. Those Data was

analyzed using SPSS statistical package version 23. A chi-squared test was used to find the association between the variables. The association was judged significant for a p value less than or equal to 5 % were considered significant at 95% confidence interval.

Quantitative univariate variables were presented as means and standard deviations if the distribution was normal or as median and interquartile range if the distribution was not normal. Qualitative univariate variables were

presented as frequencies and proportions. The Results were presented in tabular and figure forms.

Result

Socio-demographic characteristics: The maternal ages ranged from 15 years to 50 years, with a mean of 31.28 +_6.33 years (Figure 1). Most of the participants were aged 25 – 30 years.

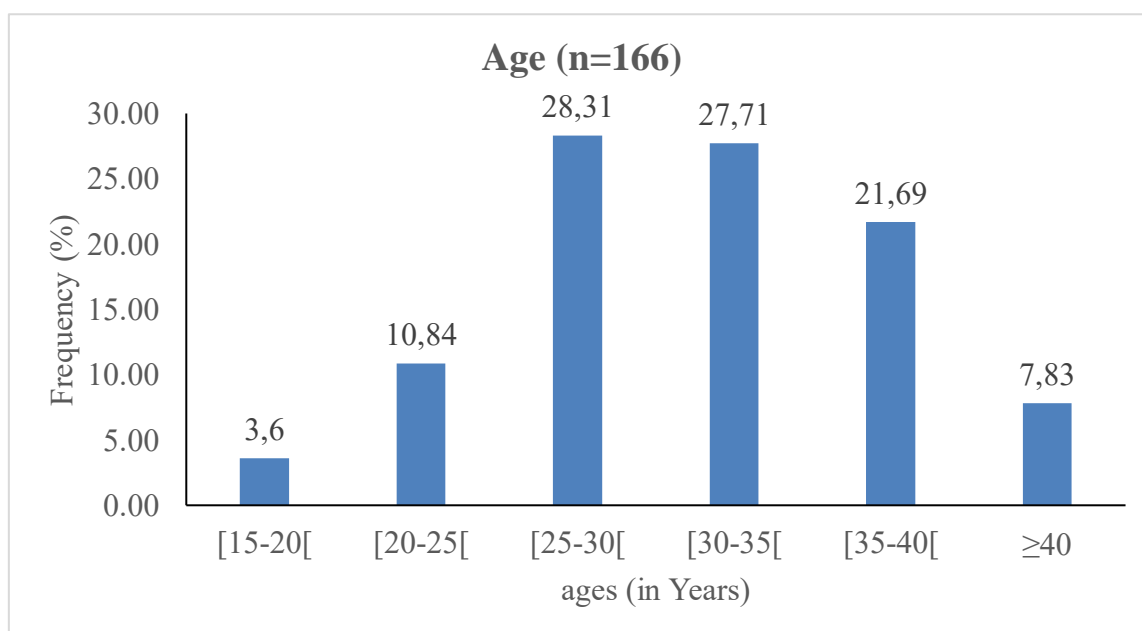


Figure 1. Distribution According to Age

Marital Status and other Socio-Demographic Characteristics

Out of the 166 participants, more than half (50, 60%) of them were married and 49, 40%

were single. Most of them (61.45%) were catholic Christians. Among all the participants, 81(48, 80 %) of the women were housewives (Table 1).

Table 1. Distribution of Respondents by other Socio-demographic Characteristics

Characteristics		Frequency	Percentage (%)
Marital status	Married	84	50,60
	Single	82	49,40
Religion	Catholic	102	61,45
	Protestant	48	28,91
	Muslun	16	9,64
Profession	Housewife	81	48,80
	Manual profession	40	24,10
	Sedentary profession	31	18,67
	Student	14	8,43

Prevalence of Antepartum Hemorrhage and Associated Pathologies

The prevalence of antepartum hemorrhage and associated pathologies is presented in Table

2: We had a hospital prevalence of 3, 47% (Table 3).

Table 2. Prevalence of Antepartum Hemorrhage

	Prevalence DGH		Prevalence DLH		General prevalence	
	N	%	N	%	Total	%
Placenta Abruption	9	0,63	77	2,31	86	1,80
placenta previa	10	0,69	40	1,20	50	1,05
Uterine Rupture	3	0,21	27	0,81	30	0,63
Total	22	1,53	144	4,31	166	3,47
Number of deliveries	1440	-	3340	-	4780	-

Parameters Associated with Antepartum Hemorrhage

The distribution of participants according to their gestational ages is shown in table 3. The gestational age ranged from 24 to 42 weeks, with a mean of 34.09 ±3.94 weeks. Gravity

ranged from 1 to 10 past pregnancies, with a mean of 3.96 ±2.04. Most of the women (84) of the 166 had had 2 to 4 pregnancies before. Parity ranged from 0 to 7, with a mean of 2.43 ±1.85.

Table 3. Parameters Associated with Antepartum Hemorrhage

Parameters associated with antepartum hemorrhage		Frequency	Percentage (%)
Gestational age	24-29	17	10,24
	30-34	51	30,72
	35-39	79	47,59
	40-42	19	11,45
Gravity	G1	17	10,24
	G2 à G4	84	50,60
	≥ G5	65	39,16
Parity	Nulliparity	27	16,27
	Primiparity	33	19,88
	Pauciparity	57	34,34
	Multiparity	39	23,49
	Grand multiparity	10	6,02

Discussion

In the present study, the prevalence of antepartum hemorrhage was 3, 47%, which is comparable to data obtained from other studies [6, 12, and 13]. Other studies elsewhere have however found higher prevalence of up to 5.8% in Nigeria and 15.3% in Qatar [11, 14]. This difference may be due to socio-cultural,

demographic, environmental and genetic variations. The difference may also be since the other studies included more patients of the age group that is most affected by placenta previa, one of the leading pathologies responsible for antepartum hemorrhage [15]. The prevalence of antepartum hemorrhage found in this study was however slightly higher than many other findings from many other studies [16-19]. This

difference may be since our study included a slightly higher proportion of participants in the age group most affected by placenta previa. The difference may also be due to socio-cultural, economic, and environmental factors that do not allow most women to seek medical attention unless when in direct need. Many cases may not even report to the hospital at all. Another possible reason for the slightly higher prevalence of antepartum hemorrhage in this study may also be explained by the fact that this study was conducted in the two main referral hospitals of the city and received many participants that first reported in other health centres and were later referred to our study hospitals. Such participants would have been missed if our study had not been conducted in referral hospitals. In Burkina Faso, [20] also found that a majority (91.8%) of participants with antepartum hemorrhage were evacuated from other hospitals. A higher prevalence rate of up to 8% has been observed elsewhere (in Brazil) where many more referral hospitals were used for similar studies [21]. In the other hand this prevalence high than 1,09%;2,9% and 2,34% respectively on other studies conducted by [19] in India, [3] in Iraq and [17] in India. The lower prevalence of some studies may be since in some countries certain diseases are rare or absent, such as cases of uterine rupture, thanks to effective management of patients with risk factors. This may also be since some patients refuse to be referred to the referral hospitals because of poor access to the staff of these structures or because of the coded management by payment before care.

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The average age of patients in this study was 31, 28 years which is slightly higher than 27, 28 years reported by a study in Burkina Faso [13]. This could be since in Burkina Faso, half of women marry before 17.5 years old, and most women give birth to their first child before 20 years old [22]. The commonest age group affected in our study was 25- 30 years which is like the 25 – 29 years old reported in literature [23].

Conclusion

Our study concluded that antepartum hemorrhage remains a major cause of maternofetal morbidity and mortality in our country. The most frequent cause of antepartum hemorrhage was placental abruption, followed by placenta previa.

Ethical Clearance

This study received ethical clearance from the ethics committee of the University of Douala-Cameroon.

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Conflict of Interest

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

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