

Delivery Hemorrhage in Tropical Environment University Hospital: Risk Factors and Maternal Prognosis

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Abstract

Introduction: Pregnancy and childbirth pose significant risks to the woman. Among these, the most common are post-partum hemorrhage.

Objective: Determine the risk factors of patients with delivery postpartum and establish the maternal prognosis.

Patients and methods: Our study was realized in the University Clinic of Gynecology and Obstetrics (CUGO) of CNHU-HKM (Benin). This was a cross-sectional, retrospective descriptive study conducted over 36 months. All patients admitted and who experienced delivery hemorrhage were included. Sampling was comprehensive. Data were processed and analyzed using the EPI DATA version 3.1 software. Anonymity and confidentiality of data were rigorously respected.

Results: 179 cases of delivery hemorrhage were identified to be 40.59% of admissions during the study period. The mean age was 26.60 years, ranging from 17 years to 45 years. The predominant age group was the 25 to 29 years. The women retailers were the most affected in 41.34%. The cohabiting women represented 51.40% and the married, 45.25%. The paucigestous were most numerous with 59.78%, followed by multigravida 21.23%. The pauciparous predominated with 61.45%. Of reported cases, 16.20% had a history of miscarriage and 15.08% had a history of induced miscarriage. 94.97% of the cases were referred women and 86.59% had not had all the elements of the refocused prenatal visit. Women wore a single fetal pregnancy in 96.64% of cases and a twin pregnancy in 03.35% of cases. 48 women or 26.82% had at least one complication. The case fatality rate was 0.05%.

Conclusion: Delivery hemorrhage remains a public health problem.

Keywords: Bleeding; Delivery; Risk factors; Prognosis

Introduction

Pregnancy and childbirth, since the beginning of time, puts the woman a fatal risk [1]. The fear of this drama explains the growing concerns of parents and families when one of their ladies is pregnant. Indeed, many are the complications of childbirth which can be fatal. Among these complications, the most common are postpartum hemorrhage, eclampsia and infections. Postpartum hemorrhage remains a public health problem in developing countries. In developed countries, particularly in France, according to the report of the National Expert Committee on Maternal Mortality, these hemorrhages were the leading cause of maternal mortality in 2010. This complication involved about 5-10% of deliveries in 2012 [2]. In Africa, they were responsible for 40% of maternal death in Burkina Faso and 67% of maternal death in Ivory Coast. In Tunisia, they were in 2004, the leading cause of maternal death with a frequency of 30% [3]. In Benin, ALIHONOU in 1987, found that these hemorrhages occupied the leading cause of maternal death [4]. Moreover, their frequency was 03.29% in 2004 and fatality rate was very high 03.1% at the University

Clinic of Gynecology and Obstetrics, three times the fatality rate internationally accepted [5]. In 2006, they caused 32.2% of maternal deaths in Benin [6]. Postpartum hemorrhage remains a concern in developing countries and offending factor in the causes of maternal death.

Objective

Identify the risk factors of patients who experienced delivery hemorrhage and to establish the maternal prognosis.

Patients and Method

Our study was to frame the University Clinic of Gynecology and Obstetrics (CUGO) of CNHU HKM, Cotonou (Benin). This was a cross-sectional descriptive and retrospective study conducted over a period from March 1st 2010 to March 1st 2013 or 36 months. It included patients in whom the diagnosis of delivery hemorrhage was made within 48 hours of admission. These patients are referred or have given birth in the CUGO. Were not included cases of immediate post-partum hemorrhage related soft tissue injury. Sampling was comprehensive (n=179). Our cases were reported from the home

emergency records, delivery records, records of operative reports, and anesthesia protocol records and files numbers of patients that meet our selection criteria. A count sheet allowed collecting the necessary data, which were processed and analyzed with the EPI DATA version 3.1 software. Anonymity and confidentiality of the data had been strictly observed.

Results

	Primigestous	Paucigestous	Multi gravida	Great multigestous	Total**
15-19 years	9	6	0	0	15
	(45%)*	(05,71%)*			
	(60%)**	(40%)**			
20-24 years	7	39	3	0	49
	(35%)*	(37,14%)*	(07,89%)*		
	(14,28%)**	(79,59%)**	(06,12%)**		
25-29 years	4	44	13	1	62
	(20%)*	(41,90%)*	(34,21%)*	(06,25%)*	
	(06,45%)**	(70,97%)**	(20,97%)**	(01,61%)**	
30-34 years	0	13	14	4	31
		(12,38%)*	(36,84%)*	(25%)*	
		(41,94%)**	(45,16%)**	(12,90%)**	
35-39 years	0	3	7	5	15
		(02,86%)*	(18,42%)*	(31,25%)*	
		(20%)**	(46,66%)**	(33,33%)**	
40-44 years	0	0	1	5	6
			(02,63%)*	(31,25%)*	
			(16,67%)**	(83,33%)**	
45-49 years	0	0	0	1	1
				(06,25%)*	
				(100%)**	
Total*	20	105	38	16	179

Correspond to the percentage calculated from the values of vertical total column (Total). *Correspond to the percentage calculated from the values of de la horizontal Total column (Total*)

Table 1: Gestity distribution depending on the age of the patients

A total of 441 cases of immediate post-partum hemorrhage were numbered in which there was 179 cases of delivery hemorrhage 40.59%. They Accounted for 0.73% (n=179/24413) of delivery hemorrhage of all obstetric emergencies. Among obstetric emergencies Referred (n=5202), we recorded 03.27% delivery hemorrhage (n=170). From the deliveries made in CUGO (n=11762), we recorded 0.08% delivery hemorrhage (n=9). The most Affected age group was the 25 to 29 years in 34.64%. The mean age 26.60 years with extremes was of 17

and 45 years. Women retailers predominated with 41.34% of cases followed by 24.02% household women. Cohabiting women represented 51.40% (n=92), the married in 45.25% (n=81) and 03.35% were single women (n=06). Paucigestous were the most concerned followed multigravida. The pauciparous were the most numerous in 61.45% followed by primiparous 17.88% (Table 1). Of reported cases, 68.71% (n=123) had no history of miscarriage but 16.20% (n=29) had a history of miscarriage and 15.08% (n=27) a history of induced miscarriage. We recorded 16.20% of cases with history of curettage and 26.82% (n=48) cases of delivery hemorrhage history. Only 02.23% (n=04) patients had a cesarean. In 94.97% (n=170) of the reported cases, it was the women referred. 86.59% (n=155) had not had all the elements of the refocused prenatal visit. 08 patients had developed high blood pressure during pregnancy, and 02 had chronic hypertension. Women wore a singleton pregnancy in 96.64% (n=173) and twin pregnancy in 03.35% (n=06). Seat and transverse presentations were found in 19.55%, respectively (n=35) and 05.59% (n=10) of cases. 26.82% (n=48) had experienced at least of one complication after delivery hemorrhage. The decompensate anemia and unexplained fever were the most encountered complications respectively in 18.99% and 13.97%. One (1) maternal death (0.56%) was recorded (Table 2). The risk factors identified in our study for delivery hemorrhage were the age group 25 to 29 years, low socioeconomic level (41.34%), paucigestity, the pauciparity, reference, history of curettage, of caesarean section, of delivery hemorrhage, of miscarriage and finally the lack of antenatal refocused consultations.

Complications	Number (N=179)	Percentage (%)
Decompensated Anemia	34	18,99
Endometritis	1	00,56
State of shock	1	00,56
Unexplained fever	25	13,97
Deaths	1	00,56

Table 2: Distribution by type of complications after care

Discussion

SOSSOU - GLO.A. in Benin in 2004, found that women in the age of 25 to 29 were the most affected by the Delivery Hemorrhage to a rate of 31.8%; the mean age was 28.19 years, ranging from 16 to 45 years [5]. MAMANI in Tunisia in 2004 had found a predominance of delivery hemorrhage in women aged from 21 to 30 years, 57.14%; the average age was equal to 30.97 years, ranging from 20 to 41 years [7]. In our study, this complication of childbirth concerned the age group 25 to 29 years at a rate of 34.64% with a mean age of 26.60 years. We can explain the fact that this age group would be the period of maximum genital activity and desire for motherhood. The socio-economic level was predominant in our study. The 2002 report on world health Organization, WHO had estimated that it was in these vulnerable groups weighed the health-related risks [8]. Indeed, the low socioeconomic level forms a portion of the vulnerable population that income does not allow to meet all basic needs. Therefore, access to health care is difficult, prenatal assessments and monitoring of pregnancy are often not realized. Thus, the delivery hemorrhage risk factors are not detected before birth. In our study, patients paucigestous were most affected by delivery hemorrhage 59.78%, the multigravida group was represented in 21.23% and 61.45% were

pauciparous. Paucigestity, Multigravida and pauciparity have a share of impaired quality of the uterine muscle that gradually distends as pregnancy comes up. This results in a secondary uterine inertia which would cause abnormal contraction of the uterine muscle. These anomalies will cause a failure of the placental separation responsible of Delivery Hemorrhage. Paucigestity, multigravida and pauciparity would therefore be the risk factors of this obstetrical complication. We found 16.20% with a spontaneous miscarriage antecedent and 15.08% with a history of induced miscarriage. This could be explained by the fact that the management miscarriages uses endo-uterine maneuvers may alter the uterine lining. The placenta (the first stage of the delivery mechanism) occurs within that uterine lining. An alteration of the uterus lining could prevent proper placental abruption therefore totally or partially retained placenta, due to the delivery hemorrhage. Again because of the alteration of the uterine lining, uterine revisions or artificial deliveries on previous pregnancies, antecedent of delivery hemorrhage becomes a risk factor. Our study had found in 26.82% of our patients. As for the caesarean section antecedent, GARDEIL found it in 35.20% [9] and in our series; only a proportion of 02.23% had a uterus scar. Healing of the hysterectomy repair can cause placental abnormal adhesions, which in subsequent pregnancies could be responsible for retained placenta, or accrete placenta, source delivery hemorrhage. In our study, 94.97% were referred. The women referred therefore had 18.88 times more risk of this complication of childbirth according to our study. With this high rate of referrals, we can say that delivery hemorrhage is a significant reason reference. This can be explained by the paucity of adequate technical facilities for proper management of obstetrical emergency in the health centers and often associated with the shortage of qualified staff and the fear of the frequent breakdown of stock products blood forcing a reference. We had a high proportion of patients who did not receive antenatal refocused consultation (ARC) 86.59%. These figures could be explained by the fact that the majority of our patients were women with low socioeconomic level preventing access to quality health care that enable the implementation of safe interventions, simple and cost effective to avoid pregnancy and childbirth complications. The lack of attendance to ARC centers can promote the onset or persistence of conditions such as anemia that is a risk factor for delivery hemorrhage. We identified 06 cases of multiple pregnancies and one case of macrosomy which were risk factors because of uterine distension that promotes uterine atone, a significant cause of delivery hemorrhage. The maternal prognosis was revealed improved because SOSSOU - GLO in 2004 had 3.1% of maternal death in CUGO [2] and TAWO in 2003, found 8.9% of deaths from post-partum immediate hemorrhage at HOMEL [10,11] while our series of 179 cases of delivery hemorrhage, we have registered a case of death or 0.56%. We can say that the prognosis of the disease has greatly improved over the years in the CUGO. The application of obstetrical emergency care protocols could be the source of the improvement of case fatality rate. The majority of these deaths occur within four hours of delivery [12]

indicating that they are a consequence of events in the third stage of labour. Further-more, a significant predisposing factor, anemia, has a high prevalence in developing countries. The management of hemorrhage post delivery is the rapid recognition and restoration of circulating blood volume and simultaneous identification and treatment of cause is the key

Suggestions

The risk factors must be such at the antenatal consultation. All hospital must use the care protocols to avoid the problem of post delivery hemorrhage. Because immediate and effective professional care during and after labour and delivery can mean the difference between life and death.

Conclusion

Delivery hemorrhage remains a public health problem, although the fatality rate was significantly reduced in CUGO. Their reduction will depend on the early detection of risk factors. The application of obstetrical emergency care in maternity becomes capital.

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