

# Management of Immediate Postpartum Hemorrhage at the University Hospital Center of the Sino-Central African Friendship

Roch M'betid-Degana<sup>1</sup>, Gilles-Davy Kossa-Ko-Ouakoua<sup>2\*</sup>,  
Geniva Gracelia Vanciane M'betid-Degana<sup>1</sup>, Gamaliel Kerebi<sup>1</sup>, Sandrine Sana-Ozako<sup>1</sup>,  
Durant Poutou-Piri<sup>1</sup>, Samuel Gondje<sup>2</sup>, Appolinaire Hepatraud<sup>1</sup>, Eugène Serdouma<sup>1</sup>,  
Antoine Doui-Doumouba<sup>3</sup>

<sup>1</sup>Department of Gynecology and Obstetrics, University Hospital Center of the Sino-Central African Friendship, Bangui, Central African Republic

<sup>2</sup>Department of Gynecology and Obstetrics, Camp Henri IZAMO Hospital (National Gendarmerie), Bangui, Central African Republic

<sup>3</sup>General Surgery Department, University Hospital Center of the Sino-Central African Friendship, Bangui, Central African Republic

Email: \*kossa2002fr@yahoo.fr

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## Abstract

**Introduction:** Immediate postpartum hemorrhages constitute a frequent maternal complication and remain at the forefront of maternal death in our countries. **Objective:** Contribute to improving the management of immediate postpartum hemorrhage in our context with a view to reducing maternal mortality. **Patients and Methods:** We conducted a retrospective descriptive and analytical study over a period of 12 months from January 1<sup>st</sup> to December 31<sup>st</sup> 2020. **Results:** We collected a total of 109 files on a total of 4360 deliveries. The frequency of postpartum haemorrhages was of the order of 2.5%. The most represented age group was between 20 and 24 years old. Pauciparas represented the majority of our study population. 64.5% of patients were uneducated. These hemorrhages occurred in patients who often gave birth outside the department with 63.8%. The main causes of postpartum hemorrhage were cervical tears (51.2%) and partial placental retention (30.7%). The majority of these deliveries (48.8%) were carried out by midwives followed by assistant midwives (33.2%). Active management of the third period of delivery was systematic and immediate followed by the valve examination completed by the infusion of oxytocin in case of uterine atony, tranexamic acid and misoprostol intrarectally. In the event of persistent hemorrhage, suture of the cervical lesions, ligation of the cervical vessels or even laparotomy either for the selective ligation of the blood vessels or for the hysterectomy for he-

mostasis were practiced. We do not have a Nalador, nor a Bakry balloon, nor an Interventional Radiology service for embolization of the uterine arteries. We deplore 1.3% of deaths from afibrinogenemia. **Conclusion:** The frequency of immediate postpartum hemorrhages is lower in our health facility. This is due to the rapid handling of cases. Improving the quality of services offered to women during childbirth can further help reduce the frequency of these hemorrhages.

## Keywords

Haemorrhage, Postpartum Immediate, University Hospital Center of the Sino-Central African Friendship

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## 1. Introduction

Postpartum hemorrhage is loss of blood from the genital tract, in quantities greater than 500 ml in the case of vaginal delivery or greater than or equal to 1000 ml in the case of cesarean section and/or having an impact on the mother's condition [1] [2] [3] [4]. There are two types:

- Immediate postpartum hemorrhages which include hemorrhages during delivery and hemorrhages contemporary with delivery which occur within 24 hours following delivery;
- And late postpartum hemorrhages which occur beyond 24 hours after delivery and within 45 days following delivery.

The most common cause regardless of the route of delivery is uterine atony, representing up to 70% of cases of postpartum hemorrhage (PPH), followed by retained placentas, wounds of the genital tract, abnormalities of placental insertion (placenta previa and placenta accreta), and primary or secondary coagulation abnormalities [5] [6] [7] [8].

In recent years, new techniques and therapies have been adopted in developed countries to deal with it; which has made it possible to considerably reduce its frequency in these countries.

However, in sub-Saharan Africa in general and in the Central African Republic (CAR) in particular, the situation remains very worrying [9] with little data on the issue, hence the objective of our study which is to contribute to improving the intake in charge of immediate postpartum hemorrhages with a view to reducing maternal mortality in our country.

## 2. Patients and Methods

We conducted a retrospective descriptive analytical study over a period of 12 months from January 1st to December 31st, 2020 at the maternity ward of the University Hospital Center of the Sino-Central African Friendship. Our study population consisted on the one hand of all patients who gave birth in the department and then presented blood loss of more than 500 cc with repercussions

on the general condition following childbirth and, on the other hand, of those referred from neighboring health centers or from home for the same reason. All women giving birth with hemorrhages less than 500 cc without repercussions on the general condition were systematically excluded from the study. Information collected from a pre-established questionnaire was collected in the delivery room from partogram cards, patient files and operating room registers. The results were processed by Epi Info 7.2.5.0.

### 3. Results

#### 3.1. Frequency

We collected a total of 109 files on a total of 4,360 deliveries. The frequency of immediate postpartum hemorrhages was around 2.5%.

#### 3.2. Age Group

The most represented age group was 20 to 24 years old 31.5% (**Table 1**).

#### 3.3. Parity

Nearly 75% of patients were pauciparous (**Table 2**).

#### 3.4. Educational Level

The study population consisted largely of uneducated women 64.5% (**Table 3**).

**Table 1.** Distribution of cases according to age group.

Age group	Numbers (n)	Percentage (%)
<15	2	2
15 - 19	25	23
20 - 24	34	31.5
25 - 29	23	21
30 - 34	16	14.5
>35	9	8
<b>Total</b>	<b>109</b>	<b>100</b>

**Table 2.** Distribution of patients according to parity.

Parity	Numbers (n)	Percentage (%)
Primiparous (1 childbirth)	4	3.5
Pauciparous (2 to 3 childbirths)	82	75
Multiparous (4 to 6 childbirths)	10	9
Big multiparous ( $\geq 7$ childbirths)	13	12.5
<b>Total</b>	<b>109</b>	<b>100</b>

**Table 3.** Distribution of patients according to educational levels.

Educational level	Numbers (n)	Percentage (%)
None	70	64.5
Primary	17	15.5
Secondary	13	12
Superior	9	8
<b>Total</b>	<b>109</b>	<b>100%</b>

### 3.5. Birthing Places

63.8% of postpartum hemorrhages occurred in parturients who gave birth outside the service (maternity wards or peripheral practices, home, road, fields, others) (Table 4).

### 3.6. Main Causes

The main causes of immediate postpartum hemorrhage were represented in our study by cervical tears with 56 cases or 51.2% followed by partial retained placentas with 33 cases or 30.7% (Table 5).

### 3.7. Providers Profile

48.8% of these deliveries were carried out by midwives and 33.2% by assistant midwives (Table 6).

### 3.8. Management

Active Management of the Third Period of Delivery (AMTPD) was systematic and immediate followed by the valve examination supplemented by Oxytocin infusion in the event of uterine atony; tranexamic acid and misoprostole intra-rectally. If the hemorrhage persists, suture the cervical lesions; ligation of the cervical vessels or even laparotomy either for selective ligation of the uterine vessels or for hemostasis hysterectomy were performed. Some cases required blood transfusions. We do not have a Nalador, nor a Bakry balloon, nor an Interventional Radiology service for embolization of the uterine arteries.

### 3.9. Death

We deplored 1.3% of deaths following coagulation disorders (Table 7).

## 4. Discussion

Our study was limited by the fact that it was not multicenter. Additionally, this was a retrospective study. However, it took place in a reference center and offers us the possibility of understanding the causes and management of immediate postpartum hemorrhage in our context as well as the related difficulties.

**Table 4.** Distribution of patients according to place of delivery.

Place of delivery	Numbers (n)	Percentage (%)
Excluding maternity	70	63.8
In the maternity	39	36.2
<b>Total</b>	<b>109</b>	<b>100</b>

**Table 5.** Distribution of patients according to the causes of immediate postpartum hemorrhage.

Causes	Numbers (n)	Percentage (%)
Cervical tears	56	51.2
Partial retained placenta	33	30.7
Total retention of the placenta	5	4.5
Vaginal tear	3	2.75
Perineal tear	4	3.66
Uterine inertia	6	5.5
Puerperal infection	2	1.69
<b>Total</b>	<b>109</b>	<b>100</b>

**Table 6.** Distribution of patients according to the status of the providers who carried out the deliveries.

Providers	Numbers (n)	Percentage (%)
Midwives	53	48.8
Assistant midwives	33	33.2
Résident doctors	4	3
Students	7	6
Obstetricians	2	1
Stangers	10	8
<b>Total</b>	<b>109</b>	<b>100</b>

**Table 7.** Distribution of patients according to the number of deaths.

Status	Numbers (n)	Percentage (%)
Alive	108	98.7
Deceased	1	1.3
<b>Total</b>	<b>109</b>	<b>100</b>

#### 4.1. Frequency

Out of a total of 4,360 deliveries in 12 months, we recorded 109 cases of immediate postpartum hemorrhage, representing a frequency of around 2.5%. Our data are superior to those of Keita S [10] and Ongoiba I.H. [11] in Bamako in Mali

who found frequencies of 1.38% and 1.85% respectively.

#### 4.2. Age

In our study, the most represented age group was 20 to 24 years old, *i.e.* 31.5%. This age group corresponds to that where obstetric activity is intense in the CAR, as demonstrated by previous work carried out in the country by Sepou and colleagues [12].

#### 4.3. Parity

Nearly 75% of patients were pauciparous (2 to 3 deliveries). Alihonou E *et al.* found 36.7% of pauciparians [13].

#### 4.4. Educational Level

The study population consisted largely of uneducated women 64.5%. This could be explained by the fact that uneducated women hardly carry out prenatal follow-up and are therefore exposed to risk factors. Our results are similar to those of Coulibaly [14] in Bamako, Mali.

#### 4.5. Main Causes

With a frequency of 51.2%, cervical lesions represented the first cause of immediate postpartum hemorrhages in our series. Nguembi *et al.* [15] found a rate of 59.7%. Retained placenta constitutes the second cause with 30.7%. It was also highlighted by Pambou *et al.* [16] in Brazzaville in Congo and Akpadza [17] in Lome in Togo.

#### 4.6. Medical Care

It depends on the etiologies. The cervical lesions representing the first etiology in our series were sutured. In the case of retained placenta, artificial delivery and/or uterine revision were performed. Additional measures were also taken such as the administration of uterotonics and misoprostol and blood transfusion. We deplore the lack of Nalador, Bakry balloon and interventional radiology service.

#### 4.7. Death

We recorded a death rate of 1.3%. Akpadza in Lomé, Togo [17] had 3.8%. Our case of death was linked to the onset of coagulation disorders in a parturient referred late.

### 5. Conclusion

Ultimately, the proportion of immediate postpartum hemorrhages is not high in our health facility compared to other health facilities in the country. The rapid handling of cases on arrival would probably be the main reason. The faster it is, the better results we obtain. Improving the quality of services offered to women during childbirth can further reduce the frequency of these hemorrhages.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- [1] World Health Organization (1990) The Prevention and Management of Postpartum Haemorrhage. Report of a Technical Working Group. WHO, Geneva.
- [2] Oyelese, Y. and Ananth, C.V. (2010) Postpartum Haemorrhage: Epidemiology, Risk Factors, and Causes. *Clinical Obstetrics and Gynecology*, **53**, 147-156. <https://doi.org/10.1097/GRF.0b013e3181cc406d>
- [3] Newton, M., Mosey, L.M., Egli, G.E., Gifford, W.B. and Hull, C.T. (1961) Blood Loss during and Immediately after Delivery. *Obstetrics and Gynecology*, **17**, 9-18.
- [4] Pritchard, J.A. (1965) Changes in the Blood Volume during Pregnancy and Delivery. *Anesthesiology*, **26**, 393-399. <https://doi.org/10.1097/00000542-196507000-00004>
- [5] Joseph, K.S., Rouleau, J., Kramer, M.S., Young, D.C., Liston, R.M. and Baskett, T.F. (2007) Investigation of an Increase in Postpartum Haemorrhage in Canada. *BJOG*, **114**, 751-759. <https://doi.org/10.1111/j.1471-0528.2007.01316.x>
- [6] Callaghan, W.M., Kuklina, E.V. and Berg, C.J. (2010) 1994-2006 Trends in Postpartum Hemorrhage: United States. *American Journal of Obstetrics and Gynecology*, **202**, 353e1-6. <https://doi.org/10.1016/j.ajog.2010.01.011>
- [7] Dupont, C., Rudigoz, R.C., Cortet, M., Touzet, S., Colin, C., Rabilloud, M., *et al.* (2014) [Frequency, Causes and Risk Factors of Postpartum Haemorrhage: A Population-Based Study in 106 French Maternity Units]. *Journal de Gynécologie Obstétrique et Biologie de la Reproduction*, **43**, 244-253. <https://doi.org/10.1016/j.jgyn.2013.05.003>
- [8] Tessier, V. and Pierre, F. (2004) [Risk Factors of Postpartum Hemorrhage during Labor and Clinical and Pharmacological Prevention]. *Journal de Gynécologie Obstétrique et Biologie de la Reproduction*, **33**, 4S29-4S56.
- [9] WHO (2012) WHO Recommendations for the Prevention and Treatment of Postpartum Hemorrhage. World Health Organization, Geneva.
- [10] Keita, S. (2003) Etude des hémorragies du post partum dans le service de gynécologie et d'obstétrique de l'hôpital du point G. Bamako 1991-2001. *Thèse Méd Bamako*, **99**, 47.
- [11] Ongoiba, I.H. (2006) Hémorragies du post partum immédiat au centre de santé de référence de la Commune V du District de Bamako. Thèse Méd Bamako, N° 96.
- [12] Sepou, A., Nguembi, E., Koyazegbe, T.D., Ngbale, R., Penguele, A., Kouabosso, A. and Yanza, M.C. (2002) Les hémorragies du troisième trimestre de grossesse jusqu'à la période de la délivrance. *Med. Afr. Noire*, **49**, 185-189.
- [13] Alihonou, E., *et al.* (2002) Les hémorragies de la délivrance. Etude statistique et étiologique (A propos de 151 cas réécensés en 5 ans). *Publication Médicale Africaine*, **121**, 8-11.
- [14] Coulibaly, S.S. (2007) Hémorragies du post-partum immédiat au centre de santé de référence de la commune II du District de Bamako. Thèse Méd Bamako.
- [15] Nguembi, E., Sepou, A., Ngbale, R., Yanzino, Y., Nzimbi, F. and Nali, M.N. (2004) Les lésions des parties molles au cours de l'accouchement dans les maternités de Bangui. *Med. Afr. Noire*, **51**, 83-86.

- [16] Pambou, O., Ekoundzola, Y.R., Yoca, G. and Uzan, S. (1996) Les hémorragies graves de la délivrance au CHU de Brazzaville. *Med. Afr. Noire*, **43**, 418-422.
- [17] Akpadza, K. and Kofor, K.T. (1994) Les hémorragies de la délivrance à la clinique de Gynécologie-Obstétrique du Chu de Tokoin à Lomé (Togo) de 1988-1992. *Med. Afr. Noire*, **41**, 601-603.