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Materno-Fetal Prognosis of Retro-Placental Hematoma at the Centre Hospitalier Universitaire Communautaire

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Abstract

Introduction: The majority of pregnancies and births go off without incident even though they all present risks. Retro-placental hematoma (RPH) is an extreme obstetric emergency. The aim of our study was to assess the maternal-fetal prognosis of this pathology in our patients. **Patients and Methods:** This is a retrospective descriptive and analytical study over 5 years ranging from the period from January 1st, 2015 to December 31st, 2019. The study's population consisted of pregnant women, in the 3rd trimester, who were presented with the retro-placental hematoma during the pregnancy or childbirth and taken care of in the maternity ward of the Centre Hospitalier Universitaire Communautaire. **Results:** During our study period, we recorded 87 cases of retro-placental hematoma, and 40,763 deliveries. The frequency of retro-placental hematoma was 0.21% at delivery. The average maternal age was 26.4 years with extremes of 16 and 40 years. The parity's average was 3.8 with extremes of 1 and 13. The mean gestational age at the time of the onset of the accident was 35.9 amenorrhea weeks (AW) with extremes of 28 and 40 AW. We performed 4 cases of hysterectomy (4.5%). We recorded 8 maternal deaths (9.2%) and 60 newborn deaths (69%). The causes of maternal death were dominated by afibrinogenemia 62.5%, followed by renal failure in 25%. **Conclusion:** Retro-placental hematoma is a serious pathology during the pregnancy.

Keywords

Prognosis, Retro-Placental Hematoma (RPH), Bangui

1. Introduction

The majority of pregnancies and births go off without incident even though they all present risks [1]. Among these risks there is retro-placental hematoma (RPH), an extreme obstetric emergency. RPH, and placental insertion anomalies, are the two main etiologies of bleeding in the third trimester of pregnancy [2] [3]. RPH is a major cause of perinatal mortality and morbidity [4].

In general, 30% of HRP cases can be iatrogenic origin [2]. The proportion of RPH in the population is estimated at 0.8%, 0.7% and 1.0%, respectively in all races, white and black [5]. But its frequency is variously appreciated. Globally, some authors estimate it to be 0.25% to 0.50% of cases on average [2]. In the USA, its incidence is estimated between 0.6% and 1.2% of all pregnancies [6]. In 80,000 deliveries, 181 cases (0.23%) of RPH were observed by Merger [7]. In Africa, the Akpadza study in Togo estimated its frequency at 0.47% [8]. Other African authors have reported higher RPH frequencies ranging from 1.97% to 3.6% [9] [10] [11].

In the Central African Republic (CAR), no specific study has been carried out on the subject. In the studies by Sépou and Coll on bleeding in the third trimester of pregnancy, 0.23% of RPH cases (17 cases/7164 deliveries) were observed [12]. In another Central African study, these bleedings are due to RPH in 0.16% of cases [13]. The proportions of maternal and neonatal deaths from RPH were 5.3% and 71.4%, respectively [14]. Other studies report 1.2% and 6.2% respectively of maternal deaths from RPH [14] [15]. The purpose of our study was to assess the maternal-fetal prognosis of this pathology in our patients.

2. Patients and Methods

This is a retrospective descriptive and analytical study over 5 years ranging from the period from January 1st, 2015 to December 31st, 2019. The study population consisted of pregnant women, in the 3rd trimester who presented with the retro-placental hematoma during the pregnancy or childbirth and taken care in the maternity ward of the Centre Hospitalier Universitaire Communautaire. The RPH diagnosis was clinically done and confirmed after the childbirth. Our sample was comprehensive, including all retro-placental hematoma cases. The variables studied on each patient were: Age, parity, gestational age, history of toxemia of pregnancy, clinical signs, association with placenta previa, route of delivery and maternal-fetal complications.

The data were collected on a pre-established form, tested and validated during the pre-survey phase. After the analysis and coding of the survey forms, data entry and analysis were done with Epi Info software version 3.5.3. We received the ethical clearance before realizing the study.

3. Results

During our study period, we recorded 87 cases of retro-placental hematoma, and 40,763 deliveries. The frequency of retro-placental hematoma was 0.21% at deli-

very. The average maternal age was 26.4 years with extremes of 16 and 40 years. The average parity was 3.8 with extremes of 1 and 13 (Table 1).

The mean gestational age at the time of the onset of the accident was 35.9 amenorrhea weeks (AW) with extremes of 28 and 40 AW. The majority of patients, 63 cases (72.4%), were seen after 37 AW while in 27.6% (24 cases) the gestational age ranged from 28 to 36 AW. The high blood pressure history on the pregnancy was found in 43% of the patients. Clinically 17.3% had altered consciousness, and 81.6% had conjunctival pallor (Table 2).

Table 1. Distribution according to the age and the parity of patients.

Parameters	Rate (n = 87)	Percentage
Age		
15 - 19 years old	12	13.8
20 - 24 years old	27	31
25 - 29 years old	22	25.3
30 - 34 years old	15	17.2
≥35 years old	11	12.7
Parity		
Primiparous	22	25.3
Pauciparous	26	29.9
Multiparous	19	21.8
Bigmultiparous	20	23
Total	**87**	**100**

Table 2. Distribution according to the general signs.

General signs	Workforce (n = 87)	Percentage
State of mind		
Good	72	82.7
Altered	15	17.3
Conjunctiva		
Pale	71	81.6
Normo-colored	16	18.4
Blood pressure(BP)		
SBP ≤ 90 mm Hg	39	44.8
DBP < 90 mm Hg and SBP ≥ 100 mm Hg	31	35.6
DBP ≥ 90 mm Hg	17	19.6

SBP = Systolic Blood Pressure and DBP = Diastolic Blood Pressure.

The combination of retro-placental hematoma and placenta previa was found in 5 patients (5.7%). The diagnosis of retro-placental hematoma was clinical in 84 patients (96.5%) compared to 3 cases (3.5%) diagnosed after emergency ultrasound.

The proportion of vaginal deliveries was 45 cases (51.7%), and caesarean section 42 cases (48.3%). We performed 4 cases of hysterectomy (4.5%). We recorded 8 maternal deaths (9.2%) (Table 3) and 60 newborn deaths (69%).

The causes of maternal death were dominated by afibrinogenemia 62.5%, followed by renal failure in 25%. Factors influencing maternal death were referred parturients and those who developed afibrinogenemia with a statistically significant difference (Table 4).

4. Discussion

We did a hospital study that cannot be extrapolated to the whole country. This is the limit of the study. The frequency of cases of retro-placental hematoma in our series was 0.21% of delivery. This frequency is similar to that of several authors who respectively reported 0.47%, 0.34%, 0.65%, and 0.23% [8] [12] [16] [17].

This frequency follows the trend of high blood pressure during pregnancy. Patients in the 20 to 24 age group were found in 31% of cases in our study. This proportion is identical to that reported by Akpadza in Togo and Mezane in Morocco, with respectively 29.86% and 29.8% of cases [8] [18].

Table 3. Distribution according to the types of maternal complications.

Complication	Workforce (n = 87)	Percentage
Death	8	9.2
Anemia	71	81.6
Hypovolemic Shock	39	44.8
Bleeding disorders	12	13.8
Acute renal Failure	5	5.7

Table 4. Distribution according to the admission mode and the causes of death.

	Maternal Prognosis		OR (IC at 95%)	Chi² of Yates	p
	Death	Survival			
Admission mode					
Coming from home	3	64	0.14 [0.026 - 0.69]	5.5055	0.018
Referred	5	15	1		
Causes of death					
Afibrinogenemia	5	7	9.18 [1.74 - 56.38]	6.72	0.0095
Acute renal failure	3	41	1		

Then, teenage girls had also occupied a significant place with 13.8% of cases. In Chad, Foumsou found 10.9% of HRP cases in obstetric complications in adolescent girls during labor [19]. The proportion of teenage girls found by Akpadza and Mezane is lower than that of our study, respectively 5.22% and 8.5% [8].

This is explained by the fact that girls enter sex life in Bangui at an early age, as Sépou has pointed out [20]. Even if multiparity is incriminated as a factor in the onset of retro-placental hematoma due to vascular fragility due to microangiopathy, as is also found in twin pregnancy and hydramnios [3].

In our series; it occurs regardless of the parity. Retro-placental hematoma most often occurs after high blood pressure in pregnancy [3]. If it is diagnosed and managed correctly, during pregnancy the chance of having RPH decreases. The mean gestational age reported by our study (35.9 AW) was close to those found by Diouf and Hossain, respectively 36 WA and 34 AW [21] [22]. Conjunctival pallor was found in 81.6% of cases (71/87) in our study. In Togo, Akpadza had a similar result with 76.3% of cases of paleness of the conjunctiva [8].

In addition, Konaté observed a rate of conjunctival pallor close to the half to the one of our study (43.1% of cases) [17]. The high rate of conjunctival pallor is thought to be linked to the late diagnosis of retro-placental hematoma. The association of retro-placental hematoma and placenta previa was identified by Akpadza and Konaté in 4.74% and 17.24% respectively [8] [17].

We found this association in 5.5% of cases. This combination often worsens the risk of bleeding. RPH is a life-threatening emergency for both the mother and the fetus if it is still alive. The management depends on the severity of the RPH, the gestational age, the immediate risks (maternal and fetal) and the anticipation of these risks [23]. It should always be remembered that the care must not delay. Vaginal delivery, after direction of labor (in the absence of contraindication), was performed in 51.7% of cases.

Caesarean section was performed in 48.3% of cases in our series. Her decision had been made straight away whether the child was alive and whether the vaginal birth had maternal and fetal risks or after a failure of the labor management. The caesarean section rate in our study is within the range of those in the literature [17] [22]. Maternal morbidity was marked by acute anemia of hemorrhagic origin in 81.6%, hypovolemic shock in 44.8%, coagulation disorders which were found in 12 patients (13.8%), acute renal disease in 5.7% (our results are consistent with the one of Akpadza [8].

The parameters of poor maternal prognosis were afibrinogenemia and the baseline with a statistically significant difference ($p < 0.00$). Several authors have reported high perinatal mortality rates [6] [8] [21]. In our series, we recorded 69% of deaths among newborns.

5. Conclusion

At the end of this 5-year study on the retro-placental hematoma, in the Department of Gynecology and Obstetrics, it appears that this pathology has a high

maternal and fetal mortality.

Conflicts of Interest

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

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