

Hypertensive Disorders of Pregnancy at Chu Point G

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Abstract

Introduction: Hypertension during pregnancy remains one of the main causes of maternal and perinatal morbidity and mortality in the world, especially in developing countries. The objective was to evaluate the clinical and paraclinical aspects of hypertensive disorders of pregnancy in the obstetrics and gynecology and cardiology departments of the Point G University Hospital.

Methodology: This was a cross-sectional descriptive study with prospective recruitment over 7 months from July 1, 2023, to January 31, 2024, including hypertensive pregnant women admitted and followed in the obstetrics and gynecology and cardiology departments during the study period.

Results: Out of 686 pregnancies, 325 had arterial hypertension, giving a hospital frequency of 47.3%. The most represented age group was that of 20 to 30 years old, accounting for 44.4% of cases. Housewives were the most represented (62.8%) and nulliparity was at 36.9%. Prenatal consultations (PC) were carried out once or twice in 48.9% of cases, and only 6.66% of these PCs were done by an obstetrician-gynecologist. A history of hypertension before pregnancy was found in 13.53%. The dominant functional signs upon admission were headaches (31.94%), convulsions (21.18%), bleeding (18.75%), and dyspnea (6.94%). There was severe hypertension in more than half (58.50%). We noted anemia, hypercreatininemia, and significant proteinuria in 30.8%, 6.46%, and 70% respectively. The ECG showed regular sinus tachycardia in 22% and left ventricular hypertrophy in 11.48%. The main hypertensive disorder was preeclampsia, accounting for 75.7% of cases, followed by added preeclampsia at 12.3%, gestational hypertension at 6.5%, and chronic hypertension at 5.5% of cases. Overall, 85% of patients experienced complications dominated by eclampsia (44.60%), retroplacental hematoma HRP (38.12%), acute renal injury (4.31%), and OAP (3.95%). Intrauterine fetal death (IUFD), prematurity, and abortion were the main fetal complications, accounting for 61.70%, 16.59%, and 14.04% respectively.

Conclusion: hypertension associated with pregnancy remains dominated by multiple maternal-fetal complications whose management requires multidisciplinary collaboration.

Keywords

Hypertensive disorders, Pregnancy, Point G Hospital.

INTRODUCTION

Pregnancy leads to physiological modifications of the entire maternal organism allowing for harmonious fetal growth. This phenomenon sometimes endangers the life of the mother and/or the newborn when it is mainly associated with certain pathologies. This is the case with hypertension (HTA) during pregnancy. This association remains one of the main causes of maternal and perinatal morbidity and mortality worldwide, especially in developing countries [1]. According to the WHO, hypertension is defined by a systolic blood pressure (SBP) \geq 140 mm Hg and/or a diastolic blood pressure (DBP) \geq 90 mm Hg [2]. In 2008, the prevalence of hypertension during pregnancy was 9.3% in France; 10.8% in the United

Kingdom; 10 to 15% in the United States; and 10% in Australia [3]. There is also a significant difference between frequencies in African countries, with 9.6% in Guinea Conakry; 17.05% in Niger; and 3% in Dakar [4-6]. In Mali, the frequencies were 2.12% in a multicentric survey in Bamako in 1984 [7]; 7.05% in 1996 at the Point G University Hospital [8], and 7.3% in 2019 at Luxembourg University Hospital [9]. The frequency of this association at the Point G University Hospital, especially with these fearsome complications, led us to initiate this work jointly between the obstetrics and gynecology department and the cardiology department.

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MATERIALS AND METHODS

This was a descriptive cross-sectional study with prospective recruitment conducted over 7 months from July 1, 2023, to January 31, 2024, including hypertensive pregnant women admitted to the obstetrics and gynecology and cardiology departments of Point G hospital during the study period. A questionnaire was given to each pregnant woman included in our study, along with certain additional examinations performed:

- The complete blood count, blood type/Rh factor
- Urea and creatinine levels (with clearance calculation).
- 24-hour proteinuria
- Transaminases and uric acid levels
- Fundus examination
- ECG, echocardiography, and X-ray as needed.

The criteria for defining hypertensive disorders were:

- **Chronic hypertension:** the hypertension was present before pregnancy
- **Gestational hypertension:** hypertension that appeared for the first time after 20 weeks of pregnancy and disappeared within 6 weeks after delivery.
- **Preeclampsia:** hypertension that appeared after 20 weeks of pregnancy associated with proteinuria
- **Added pre-eclampsia:** chronic hypertension associated with proteinuria during pregnancy

Table 1

Variables	Effectif	Pourcentage
Age (ans)		
< 20	106	32,2
20 à 30	139	44,4
31 à 40	71	21,6
> 40	9	2,7
Gestité -Parité		
Primigravida-Nulliparous	120	36,9
Primiparous	89	27,40
Pauciparous	39	12,0
Multiparous	77	23,7

Out of 686 pregnancies, 325 had arterial hypertension, giving a hospital frequency of 47.3%. The most represented age group was that of 20 to 30 years old, accounting for 44.4% of cases (Table 1). Housewives were the most represented (62.8%) and nulliparity was at 36.9% (Table 1). Prenatal consultations (PC) were carried out once or twice in 48.9% of cases, and only 6.66% of these PCs were done by an obstetrician-gynecologist. A history of hypertension before pregnancy was found in 13.53%. The dominant functional signs upon admission were headaches (31.94%), convulsions (21.18%), bleeding (18.75%), and dyspnea (6.94%). There was severe hypertension in more than half (58.50%). We noted anemia, hypercreatininemia, and significant proteinuria in 30.8%, 6.46%, and 70% respectively. The electrocardiogram (ECG) showed regular sinus tachycardia in 22% and left ventricular hypertrophy in 11.48%. Among the 231 patients who underwent echocardiography, 100% were normal. The main hypertensive disorder was preeclampsia, accounting for 75.7% of cases, followed by added preeclampsia at 12.3%, gestational hypertension at 6.5%, and chronic hypertension at 5.5% of cases (Table 2). Overall, 85% of patients experienced complications dominated by eclampsia (44.60%), retroplacental hematoma HRP (38.12%), acute renal injury (4.31%), and OAP (3.95%) (Table 3). Intrauterine fetal death (IUFD), prematurity, and abortion were the main fetal complications, accounting for 61.70%, 16.59%, and 14.04% respectively (Table 3).

Table 2

Type de troubles hypertensifs	Effectif	Pourcentage
Pré éclampsia	246	75,7
Added -Pré éclampsia	40	12,3
Gestationnel Hypertension	21	6,5
Chronic Hypertension	18	5,5
Total	325	100,0

Table 3

Complications	Effectif	Pourcentage
Maternal 278/325 (85,5%)		
Eclampsia	124	44,60
HRP	106	38,12
Acute renal failure	12	4,31
Acute pulmonary edema	11	3,95
HELLP syndrome	9	3,23
Maternal death	7	2,51
Cerebral vascular accident (AVC)	5	1,79
Resistant Hypertension	4	1,43
Fœtales 100 %		
IUFD	145	61,70
Prematurity	39	16,59
Abortion	33	14,04
Hypotrophy	10	4,25
Acute fetal suffering	8	3,40

DISCUSSION

The frequency of the association between hypertension and pregnancy varies according to different authors; it depends on the inclusion criteria in the various studies. Our rate of 47.3% appears to be higher compared to all studies reported in Mali. Diallo FD [10] from 2003 to 2006 and Kembou FF [3] from 2003 to 2012 found respective frequencies of 16% and 16.5%, all at CHU GT. This high frequency is due to the methodological approach, but also because the CHU of Point G is a tertiary hospital receiving emergencies from all healthcare facilities in the city of Bamako and outside Bamako. The age group of 20 to 30 years, with 44.4%, was the most represented in our study, with extremes of 15 years and 44 years. Our rates are lower than those of Diallo BD [11], who reported 66% of ages between 15 to 29 at the CSREF of Ségou, and those of Dao SZ [12], who reported 63.4% between 20 to 34 years at the CHU GT. This high frequency of young pregnant women in our population may be explained by the lack of necessary resources for proper pregnancy monitoring, early marriage, inadequate nutrition, and especially unwanted pregnancies. Married women (90%) and housewives (62.8%) predominated. This result is close to those of Keita D [9] at CHU Luxembourg, Coulibaly B [13], and Fomba DN [14] with respective rates of 91.7%, 85.8%, and 88% of married women. Unlike other authors, Traoré BN [15] and Sangaré AG [7] who consider that being single is a risk factor. The housewife profession is a socio-professional category linked to physical overexertion. Primiparous-nulliparous (39.6%) predominated, a similar finding by Keita D [9] who reported 38.9% of primiparous women, and preeclampsia was the most observed hypertensive disorder (75.7%). The lack of exposure to the husband's sperm and poorly developed uterine vessels with reduced vascular compliance would explain this predominance among primiparous and nulliparous women. In our study, most of the patients were admitted due to their complications, with eclampsia being the most common at 44.60% of the complications, followed by retroplacental hematoma at 38.12%, acute renal failure (4.31%),

and pulmonary edema (3.95%); these results are higher than those reported by Dao ZS [12], who noted 19.2% eclampsia, 3.3% heart failure, 1.7% stroke, and 1.7% pulmonary edema. This significant discrepancy can be explained by the position of the CHU Point, which is the referral hospital where patients are sent at the stage of complications in most cases and a lack of prenatal consultations to detect these hypertensive disorders early. Intrauterine fetal death was the main fetal complication, occurring at a rate of 61.70%, which is significantly higher than the rates found by Fomba DN [14], Diallo FD [10], and Keita D [9], who reported rates of 20%, 10.9%, and 5.5% respectively; it would be the result of severe hypoxia due to delayed diagnosis, referral, and management in these patients. The maternal mortality rate was 2.52%, a rate comparable to those of Fomba DN [14] and Dao SZ [12] who recorded 2.4% and 3.3% mortality, respectively. These deaths can be explained first by a diagnostic delay, a lack of available intensive care beds for those in need, and/or delays in management due to financial limitations.

CONCLUSION

hypertensive disorders of pregnancy with their multiple complications remain a major health issue in our context. They are mostly linked to early pregnancies, a lack of monitoring, and delayed diagnosis, hence the need for awareness among women and health workers.

REFERENCES

1. National high blood pressure education program working group report on high. Blood pressure in pregnancy. Am J Obstet Gynecol. 1990; 163(5):1691-1712.
2. American College of Obstetricians and Gynecologists 2002. Diagnosis and management of preeclampsia and eclampsia. ACOG Practice. 2002; 99:159-167.
3. Kembou FF. HTA et grossesse au service de gynécologie obstétrique du CHU Gabriel Toure Thèse de doctorat de médecine. Bamako FMOS. 2014; 13.
4. Touré IA, Brah F, Prual A. Hypertension artérielle HTA et grossesse au Niger Etudes cas/témoins à propos de 70 cas. Médecine d'Afrique noire. 1997; 44(4):205-208.
5. Bah AO, Diallo MH, Conde AM, Keita N. Hypertension artérielle et grossesse Mortalité maternelle et périnatale. Médecine d'Afrique Noire 2001; 48(11):461-464.
6. Palot M, Kessler P, Visseaux H, Botmans C. Toxémie gravidique Département d'anesthésie réanimation. CHU de Reims.
7. Sangaré AG. Hypertension artérielle gravidique et éclampsie à Bamako Thèse de doctorat de médecine. Bamako. 1985; 15.
8. Traore A, Kobinski et. Bilan de l'activité chirurgicale du service de gynécologie obstétrique de l'hôpital National du Point G National du Point G Thèse de doctorat de Médecine. Bamako. 1989; N°9.
9. Keïta D. Prise en charge des hypertensions artérielles de la grossesse au CHU ME « Le Luxembourg » Pronostic. Thèse de doctorat de médecine. Bamako. 2019; 36.
10. Diallo FD. Hypertension artérielle et grossesse au CHU Gabriel Touré Thèse de doctorat de médecine. Bamako FMOS. 2012.
11. Diallo BD. HTA et grossesse à l'hôpital Nianankoro FOMBA de Ségou Thèse de doctorat de médecine. Bamako FMOS. 2012; 23.
12. Dao ZS. Hypertension artérielle et grossesse dans le service de gynéco-obstétrique du CHU Gabriel Touré à propos de 120 cas Thèse de doctorat de médecine. Bamako FMOS. 2005; 72.
13. Coulibaly B. Hypertension artérielle de la femme enceinte dans le district de Bamako à propos de 240 cas Thèse de doctorat de médecine. Bamako FMOS. 2008; 18.
14. Fomba DN. Hypertension Artérielle et Grossesse au service de gynécologie obstétrique du CSREF de la C II Thèse de doctorat de médecine. Bamako. 2005; 97.
15. Traoré BN. Contribution à l'étude de la toxémie gravidique dans le service de gynécologie-obstétrique de l'Hôpital Gabriel Touré de novembre 1988 à octobre 1989 Thèse de doctorat de médecine. Bamako. 1989; 9.