Acta Scientific MEDICAL SCIENCES (ISSN: 2582-0931)

Volume 4 Issue 10 October 2020

Research Article

Circumstances of Discovery of Arterial Hypertension (AHT) in a Department of Internal Medicine in Lomé (Togo)

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Received: July 20, 2020

Published: September 25, 2020

Abstract

The aim of this study was to describe the circumstances in which arterial hypertension was discovered in known non-hypertensive patients admitted to the Internal Medicine department of the Sylvanus Olympio teaching hospital of Lomé. It is a retrospective and descriptive study conducted from 1st January 2015 to 31 December 2017 from the files of patients with hypertension in whom the diagnosis of hypertension was made in the Internal Medicine department. During the period of study, 176 patients suffering from arterial hypertension were received in the department. Among them, 105 were not known to have hypertension. The average age was 55, 69 years (extremes of 20 and 89 years) with a sex ratio (M/F) of 0, 90. Hypertension was essential in 97, 14% (N = 102) and secondary in 2.85% of cases (N = 3). It was grade 1 in 28, 57% (N = 30); grade 2 in 44, 76% (N = 47) and grade 3 in 26, 66% of cases (N = 28). Cardiovascular risk factors associated with hypertension were diabetes mellitus (55, 23%), obesity (15, 23%), dyslipidaemia (8, 57%, family history of hypertension (7, 62%) and alcoholism (6, 67%). The discovery of hypertension has been fortuitous in 79, 19% of cases (N = 80). It has been revealed by symptoms in 13, 33% (N = 14) and by complications in 10.47% of cases (N = 11). hypertension unknown is frequent in the Internal Medicine department of the Sylvanus Olympio Teaching Hospital, especially in diabetics. More emphasis must be placed on its prevention in our country by promoting new methods of raising awareness and educating the population.

Keywords: High Blood Pressure; Fortuitous Discovery; Diabetes Mellitus; Lomé (Togo)

Introduction

A major cardiovascular risk factor in the world, arterial hypertension is defined by systolic blood pressure (SBP) ≥ 140 mmHg and/or diastolic blood pressure (DBP) ≥ 90 [1]. For a long time, hypertension was considered as a rare or even non-existent pathology among the populations of the various African States [2]. Then, from 1944 and gradually, another current of opinion, quite opposite, emerged [2]. Today, it is a major concern in developing countries and particularly in Sub-Saharan Africa, no doubt due to the aging of the population, the phenomenon of urbanization and changes in lifestyle [3,4]. Togo is no exception. In our country, hypertension affects all races, all ethnic groups and all socio-profes-

sional strata [5] and its prevalence was estimated at 22% in urban and suburban areas in the south of the country in 2008 [6], 41.6% in the northern region in 2009 [7] and 19% across the country in 2010 [8]. But in most cases, it remains asymptomatic for a long time and therefore often goes unrecognized [6] and often reveals itself through complications [9]. This work aims to describe the different circumstances of discovery of the disease in an Internal Medicine environment in Lomé.

Patients and Methods

It is a retrospective and descriptive study which was held in the department of Internal Medicine of the Sylvanus Olympio teaching hospital of Lomé. It has extended over a period of three years from 1 January 2015 to 31 December 2017. Have been included in this study, patients with hypertension whose diagnosis has been made in the service. The diagnosis of hypertension has been made on the basis of a blood pressure in both arms with a systolic greater than or equal to 140 mmHg and/or the diastolic greater than or equal to 90 mmHg twice. The parameters studied were epidemiological data (prevalence, age, sex, risk factors), grades and types of hypertension and the different circumstances of discovery of hypertension.

Results

Epidemiology

During our study period, 176 patients with hypertension have been recorded in the service. Among them 105 were not known hypertensive, a prevalence of 59.65% of unknown hypertension. The average age was 55.69 years (range: 20 and 89 years). The sex ratio (M/F) was 0.90.

Other cardiovascular risk factors associated

The diabetes was the first cardiovascular risk factors associated (55, 23%) followed by obesity (15, 23%) and dyslipidaemia (8, 57%) (Table 1).

Grades of hypertension

Hypertension was grade 1 in 28.57% (N = 30); grade 2 in 44.76% (N = 47) and grade 3 in 26.66% of cases (N = 28).

Type of hypertension

Hypertension was essential in 97.14% (N = 102) and secondary in 2.85% of cases (N = 3).

	Effective	Percentage
Diabetes	17	16.19
Diabetes + obesity	7	6.7
Diabetes + dyslipidaemia	5	4.76
Diabetes + family history of hypertension	4	3.81
Diabetes + alcohol	7	6.7
Diabetes + microproteinuria	6	5.71
Diabetes + macroproteinuria	3	2.85
Obesity + dyslipidaemia	4	3.81
Obesity + family history of hypertension	4	3.81
Obesity + hyperuricemia	1	0.95
HIV	4	3.81
Stress	3	2.85
Tobacco	2	1.91
Hyperuricemia	1	0.95
Lack of risk factor	5	4.76
Unspecified	32	30.47
Total	105	100

Table 1: Distribution of patients according to the cardiovascular risk factors associated.

Circumstances of discovery

The discovery of hypertension has been fortuitous in 79, 19% of cases (N = 80) (Table 2).

	Effective	Percentage
Complicated diabetes	25	31.25
Unbalanced diabetes	25	31.25
Diabetic follow-up visit	8	10
Abdominal pain	9	11.25
Infectious syndrome	8	10
Low back pain	2	2.5
Liver cirrhosis	2	2.5
Pleurisy	1	1.25
Total	80	100

Table 2: Distribution of patients according to the fortuitous discovery of hypertension.

Hypertension was revealed by symptoms in 13, 33% (N = 14): Table 3 and by complications in 10, 47% (N = 11) (Table 4).

	Effective	Percentage
Headache	9	64.3
Headache + dizziness	3	21.4
Headache + vertigo + tinnitus	1	7.1
Palpitation	1	7.1
Total	14	100

Table 3: Distribution of patients in function of symptoms revealing hypertension**.**

	Effective	Percentage
Ischemic stroke	2	18.18
Haemorrhagic stroke	1	9.09
Hypertension encephalopathy	2	18.18
Heart failure	4	36.36
Chronic renal failure	2	18.18
Total	11	100

Table 4: Breakdown of patients in function of complications revealing hypertension**.**

Discussion

We noted a prevalence of 59.65% for the unknown hypertension compared to all hypertensive patients admitted to our department. This prevalence is close to that reported in the French population in 2015, i.e. 55% [10]. On the other hand, it is clearly higher than the 26% reported by Yao., *et al*. in an Internal Medicine department in Côte d'Ivoire [9]. This difference could be explained by the particularity of the Ivorian study which concerned only de novo complicated hypertension. Our study population consisted mainly of young adults, as in most series regardless of the types of work in the general population [3,6,8-11]. A slight female predominance was observed in our patients. The sex ratio is variously reported by the authors [3,6,9,11-14]. However, the prevalence of hypertension would be higher in the black Caribbean [13,14] and sub-Saharan African [3,11] female population than in the white population [10,13] suggesting the existence of a racial and cultural factor. In our series, diabetes mellitus was the main cardiovascular risk factor associated with hypertension in 55.23% of cases. In fact, hypertension is frequent in type 2 diabetes [15,16]. Prevalences reported in Africa vary from 40.67 to 81% [16]. Obesity was the second cardiovascular risk factor associated with hypertension in our patients. In fact, the risk of developing hypertension appears to be significantly greater in the overweight or obese population [3,17] and the proportional increase in the body mass index and the prevalence of hypertension generally follows the degree of westernization and way of life [17]. In Togo, obesity is considered a criterion of beauty and a sign of ease. This would partly explain the predominance of hypertension in women in our country [6,8]. The other cardiovascular risk factors observed in our patients notably dyslipidaemia, family history of hypertension, alcohol, microproteinuria/proteinuria, HIV infection, stress and smoking have also been reported by authors but with various frequency [6,18-22]. Grade 2 hypertension was predominant in our study (44.76%), confirming data from two other Togolese series [6,20]. Regarding type, hypertension was essential in the majority of cases in our series. This is classically known [18].

The discovery of hypertension was fortuitous in 79, 19% of cases in our study population. It was in the majority of cases (72.5%) in diabetics. As pointed out above, hypertension is one of the most frequent macroangiopathic complications of diabetes mellitus [23,24]. The association of these two pathologies increases the cardiovascular risk [15,16] hence the need not only for regular monitoring of blood pressure and other cardiovascular risk factors in diabetics but also for diabetic education quality in order to avoid or delay the onset of hypertension in these patients. The discovery was also fortuitous in our series in 27.5% of cases in patients hospitalized or received in outpatient for various pathologies. This shows the importance of the systematic taking of blood pressure to any patient received in consultation since some of our patients have benefited from recent specialized consultations before their admission to our service. Hypertension was revealed by symptoms in 13.33% of cases in our series with headaches as the leader. Our results are in agreement with the data of the Togolese [6,20] and Rwanda [21] series. The other symptoms revealing hypertension in our study were vertigo, palpitations, and tinnitus. These symptoms have also been reported by authors, but with varying frequencies [18,20,21]. The complications that reveal the disease are classic. It is essentially about the attack of the target organs like the brain, the eye, the heart and the kidney. However, the frequency of impact of hypertension on these organs differs from one study to another. In our work, the various complications revealing it were respectively neurological, cardiac and renal, thus joining the data of the series of Ukoh., *et al.* in 2007 in Nigeria [25]. In Côte d'Ivoire [9], the main complications of de novo hypertension were respec-

tively renal, neurological, and cardiac. In Burkina Faso, cardiac complications came first, followed by kidney damage [26]. In our series, among the neurological complications, the ischemic stroke was predominant confirming the data from the literature according to which arterial hypertension puts more at risk of ischemic stroke than haemorrhagic [27,28]. Renal impairment in our patients was represented by renal failure as in most series [9,11,25-27]. Concerning heart attacks, it was about heart failure. Pio., *et al.* made the same observation in our hospital in 2014 but in a cardiological environment [29].

Conclusion

The unknown hypertension is frequent in the department of internal medicine (Medicine B) of the Sylvanus Olympio teaching hospital of Lomé. Its gravity is linked to its impact on organs targets hence the need to emphasize more not only on its prevention but also on that of the other cardiovascular risk factors through the use of new methods of information and education of the Togolese population in general and diabetics in particular.

Conflicts of Interest

None.

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