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Research Article

Clinical Profile of Hypertensives at The Cardiology Consultation

M. ABDELBAKI, N. KHELAFI, A. EL HACHEMI, H. BEN MESSAOUD.

EPH Mixed from LAGHOUAT (ALGERIA).

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Introduction

Systemic hypertension is a global public health problem. It affects all parts of the population. In Algeria, according to the TAHINA [1] study, high blood pressure is the most common chronic pathology (24.8%). Despite numerous recommendations from learned societies [2.3.4.5] and the existence of effective therapies, a high percentage of patients remains uncontrolled [6.7.8]. Our work aimed to study the clinical profile of hypertensives who presented to our cardiology consultation at the EPH in Laghouat. This is a longitudinal observational study running from October 2022 to June 2023. We collected 560 patients during daily consultations, lasting 10 months.
The results made it possible to describe the present risk factors, dietary habits and socioeconomic conditions.

Methods:

This is a single-center descriptive observational study carried out at the cardiology consultation of the EPH in Laghouat. One or two general cardiology consultations are held every day; The main objective is to study the clinical profile of hypertensives who present to our consultation in a consecutive manner. We recruit hypertensives either already under treatment or with a systemic blood pressure of 140 and/or 90mmhg. These are adult cardiology consultations so all patients are aged 18 and over. .
The exclusion criteria included the existence of a pregnancy, the presence of secondary arterial hypertension and finally participation in another clinical study protocol.
BP measurement at the consultation was carried out with a cuff adapted to the size of the arm (Omron ® equipment), with a patient in a sitting position for several minutes, taking care to place the cuff on the plane of the heart. At least 3 measurements 2 minutes apart had to be taken during the same consultation. The BP figure used was the average of the measurements taken.

Statistical analysis

A descriptive analysis was carried out: for quantitative variables, the number of missing data, extreme values, mean, standard deviation, median and quartiles. For qualitative variables, estimate of the percentages of the different modalities and their 95% confidence interval. Study of the link between 2 variables: the link between 2 qualitative variables was studied using the Chi2 test, the risk estimated by the Odds Ratio as well as its confidence interval. The link between a quantitative variable and a qualitative variable with 2 modalities was studied using the Student test or the reduced difference test. The link between a quantitative variable and a qualitative variable with more than 2 modalities was studied using the ANOVA test or the Kruskall and Wallis test (if the assumptions of the parametric tests are not verified).

Results:

560 patients were recruited out of a total of 2800 patients seen, i.e. one in five patients is hypertensive. 48% are male and % female. The average age is 62 years old with the group from 50 years old to 75 years old being the most affected and which represents 62% of hypertensive patients (TABLE 1).
Socioeconomically, 80% of patients live in rural areas , 20 % in urban areas. They have running water in 62%, electricity and gas in 71%. Furthermore, 30% of them have medical security coverage issued by the state.
On the plan 55% are illiterate, 60% are at the primary level, 20% are at the secondary level and 10% are at the university level.
The standard of living is poor among 40% of patients (monthly income below the minimum wage), 45% are of average level and 15% of higher level.
Family history, hypertension comes first in 40% of cases, type 2 diabetes in 28% of cases, cardiovascular diseases with 7% of strokes, cancers in 9% of cases. A history of dyslipidemia and 0.95% of renal failure are found in 31.1% of patients.
The risk factors are as follows:
- Diabetes is found in more than 29.2% of patients (type 1 in 1.2% of patients and dating back an average of 11.5 years or type 2 in 28% of patients, dating back an average of 7.4 years.),
- Dyslipidemia found in 31.1% of patients (n=174).
- and we have A cardiovascular condition was found in 10.4% of patients in the study: left ventricular hypertrophy is the most common (7%), followed by stroke/TIA (3.7%), angina (3.1%), arteritis of the lower limbs (2.1 %), myocardial infarction (0.8%) and heart failure (1.4).
We find them especially from the age of 35 and are practically identical in both sexes except for dyslipidemia and type 2 diabetes where a slight female predominance is present.
The average body mass index is 26, higher in women with an average of 27 compared to 24 for men.
-We defined normal BMI which is 19 to 24, BMI defining overweight between 25 and 29.9, BMI for obesity between 30 and 39.9 and malignant obesity beyond 40.

We have 35% normal BMI predominant in men 50% versus 30% for women, overweight reached 35% predominant in women with 36% versus 32%, 20% for obesity with female predominance still 29% versus 9% and 1.1% malignant obesity where women represent almost all cases.

-Tobacco is found in 12% of patients with a male predominance of 26% versus 2% in women

Table 1: Population characteristics.

Average age (years)	62
Male Gender (%)	48
Average BMI (Kg/m2)	29.57
Average abdominal circumference (cm)	99.5
Average SBP (mm Hg)	157
Average DBP (mm Hg)	88.31
Average heart rate (bpm)	80
Seniority of HTA (years)	5.23
Length of antihypertensive treatment (year)	4.63
	% (seniority/years)*
Type 1 diabetes	1.2% (11.5)
Type 2 diabetes	28% (7.4)
Dyslipidemia	31.1% (3.6)
Left ventricular hypertrophy: LVH	7.1% (1.8)
Stroke/TIA	3.7% (2.5)
Angina	3.1% (3.5)
Myocardial infarction: MI	0.8% (4.3)
Heart failure: IC	1.4% (4.0)
Lower limb arteritis: AMI	2.1% (2.0)
Micro albuminuria	6.3% (1.5)
Macro albuminuria	1.6% (1.8)
Renal failure: IR (Creatinine clearance < 60 ml/min)	0.95% (1.4)
Smoking: current or stopped less than 3 years ago	12% (28.2)

Systolic blood pressure is 130 to 138mmhg and diastolic blood pressure was 86 to 88mmhg in 52% of patients, in 40% it was above 140mmhg for systolic and/or above 90mmhg. Only 8% had grade 3 hypertension.

Antihypertensive treatment had been started for an average of 4.63 years. This was a first monotherapy in 68.9% of cases; this was prescribed at full dose in 48.8% of cases. It was based on AIRAI (33.7%), IEC (24.7%), ICa (22.3 %), BB (15.1%), IUD (4%) or central antihypertensive drugs (0). .2%).

In 288 patients (51.3%), other treatments were associated: antidiabetics (n=145), lipid-lowering agents (n=158) and antiplatelet/anticoagulant agents (n=123) . (TABLE 2)

In our study, the association with other pathologies and other comorbidities was not different or we witness a most frequent association with diabetes and dyslipidemia without forgetting tobacco especially in men active or weaned for two or three years.

International learned societies have been issuing recommendations for more than thirty years on the management of hypertension which unfortunately remains insufficiently

Table 2: Therapeutic strategy adopted (at inclusion) according to patient characteristics and clinical history of patients

Features of the patient	Mono therapy	Bi therapy	Sorting therapy	*Pre vs Abs (p)
High age	23.9%	54.8%	7.6%	0.300
Male gender	24.2%	58.0%	6.6%	0.250
HTA = 10 years	22.4%	55.2%	4.5%	0.032
BMI = 30 Kg/m2	22.7%	55.3%	6.5%	0.544
Abdominal obesity	27.6%	53.1%	5.9%	0.197
AOC	20.7%	65.3%	12.4%	$p < 10^{-5}$
Dyslipidemia	25.4%	57.2%	7.6%	0.028
Diabetes	27.3%	57.2%	6.0%	0.018
IR	21.4%	71.4%	7.2%	0.683
MCV	68.5 %	13.0%	92	$< 10^{-4}$
Smoking	66.7 %	6.9%	72	0.151
Total	23.5%	56.2%	6.1%	560

Discussion

High blood pressure (hypertension) is the leading chronic disease in the world. It increases the risk of cardiovascular morbidity, and was the cause of 7 to 8 million deaths worldwide in 2011 [12] . At the same time, the available data on the proportion of patients not controlled on antihypertensive treatment are worrying [8] .

In Algeria, the number of hypertensive patients is estimated to be between 3.5 and 4.5 million [13] and only 23.5% of treated hypertensive patients are controlled [10] .

The question answered by this work of evaluating the clinical and demographic profile of a population in the south whose life traditions are different from those in the north of the country where the social and economic level is low compared to the population in the north. The majority of the study population comes from a rural environment; the majority are illiterate and only 20% have social security coverage.

The average age is around 60 years old. Hypertension has been known on average for more than five years and in more than half of cases it is grade 2 to 3. More than 90% of patients in this population had at least 1 risk factor. In a third of hypertensives, hypertension is associated with type 2 diabetes and in nearly 8% of patients with renal damage; and 11.2% of these hypertensive patients already have target organ damage.

detected, treated and continues to be a significant cause of mortality and comorbidity for our population, especially if this population lives in a rural area lacking the financial means and health structures necessary to care for these patients.

It should also be noted the presence of other factors and their head: diabetes, which is surely due to a sedentary lifestyle and a change in lifestyle where the consumption of sugary soft drinks has become a habit before each meal. . It is therefore

imperative to act directly on modifiable cardiovascular risk factors by controlling associated pathologies to reduce and delay the appearance of complications linked to hypertension.

Conclusion:

In our study we note that our hypertensive consultation patients have a significant history, very present risk factors and above all average blood pressure control. This is therefore a population at risk of significant cardiovascular complications. It is necessary to have multiple actions on the care of these patients while not neglecting either the therapeutic side or the lifestyle side.

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