EPIDEMIOLOGICAL ASPECT AND ASSOCIATION OF HYPERTENSION AND DIABETES IN A MOROCCAN POPULATION OF HYPERTENDS

ABSTRACT:

Arterial hypertension and diabetes are frequently associated cardiovascular risk factors responsible for an increase in cardiovascular risk. Our study aims above all to evaluate the prevalence of the association of these two pathologies and their epidemiological characteristics.This is a retrospective descriptive study, by documentary review of a Moroccan population of hypertensives followed within the cardiology department of the Ibn Rochd UniversityHospitalin Casablanca.

Keywords: High blood pressure, Diabetes

INTRODUCTION:

Arterial hypertension (HTA) represents a major public health problem in developing countries, its association with diabetes is frequent (1, 2), Potentiating morbidity and mortality and cardiovascular risk, thus accelerating the occurrence of degenerative complications.

The objective of this work is to study the prevalence of the association of hypertension and diabetes and its epidemiological characteristics, and to evaluate cardiovascular risk factors in hypertensive patients.

PATIENTS AND METHODS:

This was a descriptive retrospective study, by documentary review, carried out over a period of 2 years as part of a regular annual follow-up of hypertensive patients, including 227 patients, followed in the cardiology department of the Ibn RochdUniversityHospital from Casablanca.

Data collection consisted of analyzing patient files, and the data was collected using a data collection sheet which included all the variables on hypertension.

The variables studied are: age, sex, diabetes, tobacco, hypertension, dyslipidemia, renal failure, alcohol consumption and obesity.

BP was taken with a validated automatic electronic self-measurement device, after resting for a few minutes, in a sitting or lying position.

Sampling: All patients who presented during the study period and who met the inclusion criteria were retained.

Operational definitions:-HTA: Determination of blood pressure was

carried out in accordance with WHO recommendations (Table 1) [3]. Arterial hypertension was defined as the presence of either antihypertensive treatment or a BP greater than or equal to 140/90 mmHg.-The definition of diabetes matches that of the American Diabetes Association (ADA) (4).

Statistical analysis: A simple descriptive analysis was carried out on the entire study population. The results are expressed as frequency for qualitative variables or as mean + standard deviation for quantitative variables. The estimation of the prevalence of hypertension and the average results in the population was made by adjusting the data in relation to sex, with a statistical confidence level of 5%. Pearson's chi-square test and Fisher's exact test were used to compare percentages. Statistical significance was reached when $p<0.05$

RESULTS:

A total of 227 patients were followed for hypertension during the study period, our population was predominantly female with 182 women and 45 men, respectively 80.17% and 19.82% and a sex ratio of 4.04. The median age of our study population was 61.12 years (range 34 to 87 years).

The majority of patients had no formal education. 26 patients (11.50%) in our study still had a professional activity.

Systolic hypertension was the most frequently reported with a median of 142.03 mmHg versus 77.43 mmHg for diastolic blood pressure.

Of the 227 hypertensive patients included in our study, 87 were diabetic (38.32%), with a prevalence of 40.65% of women, versus 28.88% of men, the average age of diabetics was 61, 46 years.

62.06% (i.e. 54 patients) were aged between 45 and 65 years, 33.33% (i.e. 29 patients) over 65 years old, and 4.59% (i.e. 4 patients) under 45 years old (table 2).

Obesity was the risk factor most frequently associated with hypertension (90 patients or 39.46%).

Other risk factors were dyslipidemia (82 patients or 36.12%), smoking (15 patients or 6.60%), renal failure (13 patients or 5.72%), alcohol consumption (05 patients or 2.20%), the most frequently reported symptom was dyspnea on exertion (25 patients or 11.01%).

DISCUSSION:

In our study, diabetes is frequently associated with hypertension, particularly in female patients, and the association of these two pathologies increases with age(5).

These two pathologies represent a major public health problem worldwide, due to their frequency, the need for lifelong monitoring and drug treatment, and their serious cardiovascular complications.

Better blood pressure and diabetic control can considerably reduce the

risks of cardiovascular complications and mortality in hypertensive and diabetic patients (6), hence the need for regular monitoring of patients.

From the point of view of HTA and as an independent factor, our study showed a female predominance of 182 women (80.17%), with a sex ratio of 4.04 in favor of women. This result was observed by J. MARTIONI [7] who found a female/male ratio of 2.64, which seems more consistent with African demography characterized by higher life expectancy among women.

CONCLUSION:

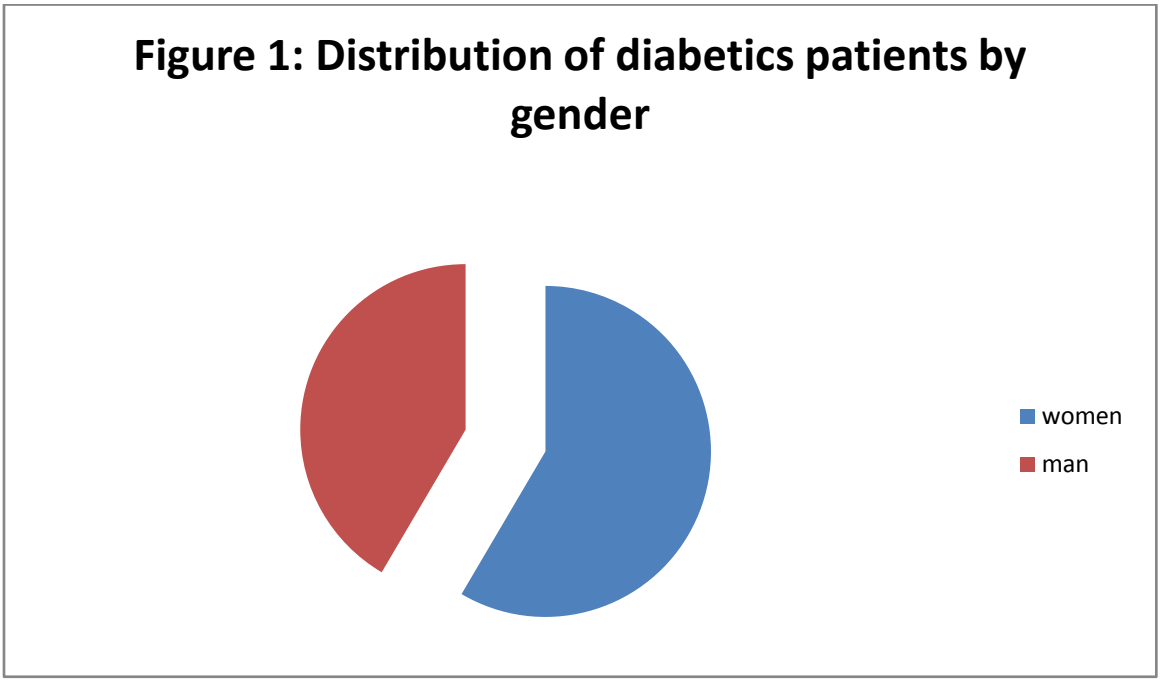
Hypertension and diabetes represent a major public health problem in the world; the combination of these two pathologies considerably potentiates cardiovascular complications, hence the importance of adequate care and good monitoring of this category of diseases patients.

Table 1 classification of hypertension according to the WHO

category	PAS (mmHg) PAD (mmHg)
optimal	<120 and <80
Normal	120-129 and /or 80-84
normal high	130-139 and /or 85-89
HTA grade I	140-159 and /or 90-99
HTA grade II	160-179 and /or 100-109
HTA grade III	≥180 and /or ≥110
Isolated systolic hypertension	≥ 140 and <90

Table 2: Distribution of diabetic patients according to age groups in our population

Age	Number of patients	Percentage %
> de 65 years	29	33,33
45-65 years	54	62,06
<45years	4	4,59



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