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RESEARCH ARTICLE

TREATMENT OF Highblood Pressure in a Heterogeneous Black Population: Study of 50 Cases

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Abstract

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Introduction:-

Historically, the black Moroccan population is heterogeneous, originating from Arab and sub-Saharan immigration, and Amazighs, an indigenous population. This study, first of its kind, allows to determine the peculiarities of hypertension in this population, in particular the response to the different therapeutic classes, which makes it possible to compare the results found with those of the studies carried out on the sub-Saharan or American black population.

Material and Methods:-

This is a transverse prospective analytic study of Black Moroccan patients explored in the cardiology consultation center at the Mohamed V Military Hospital of Rabat, over a 12-month period from June 2018 to June 2019 with a total of 50 patients, , Informed consent was given by all patients .

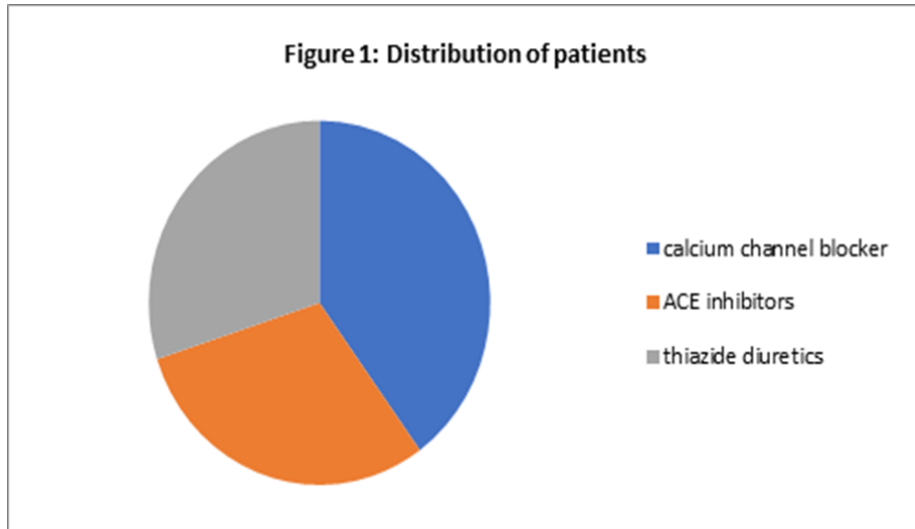
Inclusion criteria were an essential hypertension of recent (less than 1 year) discovery in patients aged 45 to 55 years who do not have any other cardiovascular risk factors : no diabetes, no dyslipidemia, no smoking or weaning from over 15 years, and without an associated pathology in particular no renal, cardiovascular, ocular or cerebral damages, presenting a poorly balanced hypertension on diet alone.

The eligible population was started on monotherapy; 15 on ACE Inhibitors (5 mg), 20 on Calcium channel blockers (5 mg), and 15 on thiazide diuretics (12.5 mg), in addition to a low-sodium diet. The population was followed monthly on an outpatient basis and was subjected to standardized interrogation, complete physical examination and ambulatory blood pressure monitoring.

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Blood pressure was measured in both arms 3 times with a 2-minute interval between measurements, after at least 5 minutes of rest, using an electronic blood pressure monitor well suited to the recommendations of the WHO.



Results:-

One month later of the administration of the treatments with the low-sodium diet, we analyzed the blood pressure profile of our patients during this month, the results were as described in Figure 2.

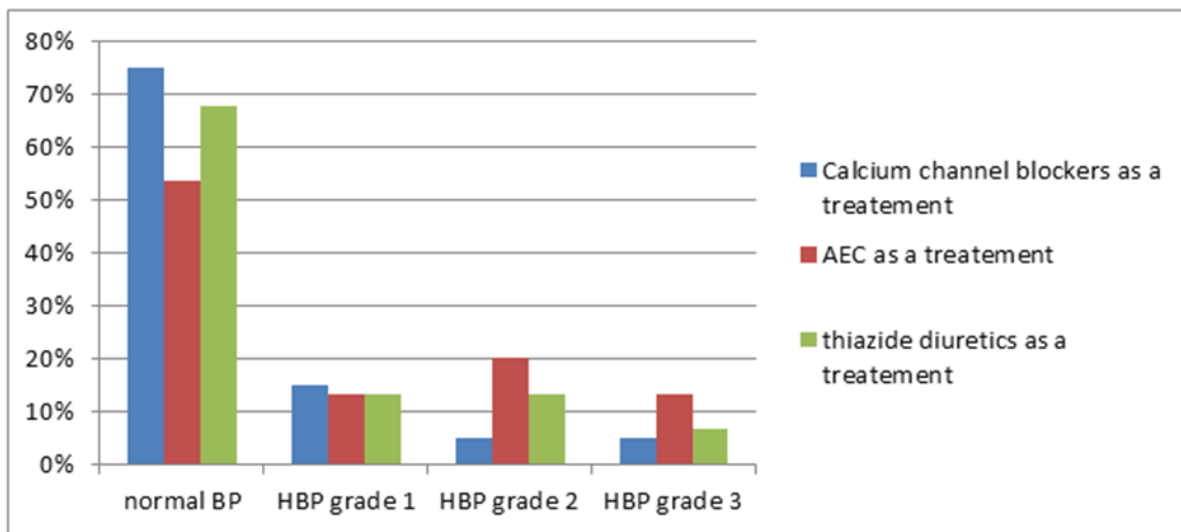


Figure 2:- Blood pressure profile of our patients.

Blood pressure monitoring during 1 month showed that 75% of our patients on calcium channel blockers were well balanced against 67.7% of patients on thiazide diuretics and only 53.4% of patients on ACE inhibitors.

Almost half of our patients put on ACE inhibitors were unbalanced (46.6%) of which 13.30% were admitted to the emergency room for hypertensive emergencies. Two of our well-balanced ACE inhibitors patients had angioedema, one had bothersome episodes of orthostatic hypotension and another had worsened his kidney function in the checkup after 3 weeks of starting treatment.

Unbalanced patients on thiazide diuretics were around 32.3%, 6.7% of whom presented with a hypertensive emergency, compared to only 25% of poorly controlled patients on calcium channel blockers, 5% of whom

presented with a hypertensive emergency. None of the balanced patients in the two groups showed signs of intolerance.

Discussion:-

Our study carried out on the black Moroccan population, a particular population by its heterogeneity, mainly comprising 3 different origins, the Arabs, the Amazighs, and the sub-Saharan, showed a higher effectiveness of calcium channel blockers and thiazides compared to ACE inhibitors which is in agreement with studies done on the black American or sub-Saharan population.

Most studies are in agreement with our findings, the ALLHAT study, a randomized, double-blind, active-controlled clinical trial, conducted between February 1994 and March 2002 in 33,357 hypertensive American and Canadian patients of 55 years of age or older (35% black) with at least 1 other cardiovascular risk factor has shown the importance of thiazide diuretics and calcium channel blockers in the management as well as the prevention of complications in the black population. Renin-angiotensin-aldosterone system (RAAS) inhibitors prescribed as monotherapy and at a given dose, have less control on blood pressure in hypertensive black Americans than in whites, but with a great interindividual variability. In addition, ACE inhibitor-induced cough and angioedema are more common in black patients.

Despite the fact that most studies have shown that they are less effective in black people, RAAS inhibitors keep their place in the combination of dual and triple therapies for the management of hypertension in this population.

Conclusion:-

The black Moroccan population is a particular population by its original heterogeneity, its living environment, its socio-cultural characteristics, and its genetic heritage. Our study, first of its kind, showed similarities in the therapeutic response compared to other black populations, thus, thiazide diuretics and calcium channel blockers remain the first-line treatments in this population.

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