

Characterization of the Population That Acquires Antihypertensive Drugs in a Neighborhood of Santiago de Cali

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To cite this article

Jobany Castro Espinosa, Ingrith Burbano Quintero, Karina Rojas Mejia. Characterization of the Population That Acquires Antihypertensive Drugs in a Neighborhood of Santiago de Cali. *Open Science Journal of Pharmacy and Pharmacology*. Vol. 3, No. 1, 2015, pp. 1-5.

Abstract

Pharmacological treatment of hypertensive patients can be purchased in drugstores neighborhood, however in this way self-medication may be situations that can lead to irrational use thereof. The aim of this study was to characterize the population acquires antihypertensive medication in a group of drugstores in a neighborhood in Santiago de Cali. The sample size was calculated using the formula of proportions through Epidat software version 4. Was developed a survey with questions demographic and related to the use and knowledge of antihypertensives, which was applied users who just bought these medicines in drugstores. Multiple logistic regression analysis was performed, choosing models that show overall significance ($p < 0.05$) and each of the independent variables ($p < 0.05$) and its confidence interval 95%. The drug plus acquired by the respondents was the losartan. Most respondents claim not to have recommended taking these drugs to others, ignoring the adverse effects and have no medical formula to purchasing. Most stated that when purchasing these drugs without a prescription do it to save time and money. Multivariate analysis found association between adverse reactions to these drugs with recommending these medications and submit medical formula, besides to recommend these medications was found also associated with education to primary and male gender. Belonging to the subsidized regime associated with it the doctor who suggests these drugs, known adverse reactions and have up to Primary. For its part belong to the contributory scheme was associated with suggest antihypertensive and knowing adverse reactions.

Keywords

Antihypertensive, Pharmacoepidemiological, Characterize, Colombia, Cali, Pharmacological

1. Introduction

Hypertension is a fairly common disease worldwide (1,2,3) and consequences can be very serious (4), for which it requires pharmacological and non pharmacological treatment. Drug treatment can include a variety of medications, which can get the patient in health promotion entities (for its acronym in Spanish-EPS) or neighborhood drugstores. By purchasing these medicines in drugstores might be going self-medication situations which in turn can lead to irrational use thereof. The management and knowledge for patients to these drugs is a key factor for the success of the treatment, as it could have serious consequences. It is worrying that globally the proportion of patients with hypertension treatment remains

low (5) since these drugs have helped to substantially reduce the negative impact of this disease. It is also worth noting that some studies have found a high percentage of hypertensive individuals are unaware of their condition, many do not receive medication and other high percentage does not adequately control their disease (6). All these situations can complicate the state of this pathology. The social security schemes are important in the timely delivery of medicines and related rational use activities therefore be affiliated with these plans was found associated with being aware of the disease of hypertension, receive proper treatment and control effectively disease (6). It has been observed that the decrease in systolic blood pressure (SBP) is attributed in part to the use of antihypertensive and this impact is more pronounced in the

elderly (7), so it is imperative to make proper use of thereof.

The aim of this study was to characterize the population acquires antihypertensive medication in a group of drugstores in a neighborhood in Santiago de Cali.

2. Materials and Methods

2.1. Type of Study

This was a cross sectional pharmacoepidemiological study in which he characterized the population acquires a group of antihypertensive drug stores Poblado I Commune 13 neighborhood of Santiago de Cali.

2.2. Sample

For the sample size formula of proportions was used, considering the total population of the district according to the National Administrative Department of Statistics (acronym in Spanish DANE) (13,865), the proportion of the population who self-medicate to output drugstores under study by the Ministry of Social Protection in five cities of Colombia (40%) (1), the minimum permissible error (10%) and a confidence level (95%). It also made an adjustment for non-response of 20% according to the study by the Ministry of Social Protection in five cities of Colombia (8). For these calculations the software was used Epidat version 4

2.3. Collection of Information

A survey with questions demographic and related to the use and knowledge that people have about antihypertensive drugs was developed. The survey was tested on 10 people to make adjustments and validate. To collect the information the survey team was presented at drugstores and he requested authorization to charge drugstore for carrying out the work. After a user to acquire drugs and that these were the antihypertensive drug class, it was explained on the objectives of the study and were asked about their willingness to participate in it. If you answered yes then proceeded to survey people. The proportion of users who did not participate were estimated.

2.4. Statistical Analysis

The surveys were typed into a Microsoft Excel template. For the descriptive analysis proportions for the qualitative variables and averages for quantitative variables were calculated. The quantitative variable age was categorized as qualitative generating the following: under 40 years, between 41 and 60, between 61 and 80 years and older than 80 years. Was conducted a bivariate analysis between each variable and the following questions: a-claim to know the side effects, b-presenting a prescription, c- the reason why states purchase drugs without a prescription d-recommend making antihypertensive. In this analysis it was estimated to measure association Odds ratio (OR) and the variables that showed statistical significance ($p < 0.05$) were chosen. After multivariate models for each question were generated with the

variables that showed significance in the bivariate analysis. For this last were performed multiple logistic regressions, choosing models that show overall statistical significance ($p < 0.05$) and for each independent variable presented statistical significance ($p < 0.05$) and that your confidence interval 95% did not include the null value. For these calculations the Stata software version 10 was used.

3. Findings

After adjustment for nonresponse the size of the sample was of 110, was addressed to 129 people, of whom 110 participated at a rate of non-response of 15%. The study was conducted in 15 drugstores, surveying on average 7 people per drugstore. Most respondents were female (56%), level of education of most was until secondary (49%) (figure 1), the largest age range was from 41-60 years (58%), with an average of 57 years and a range of 24-84 years.

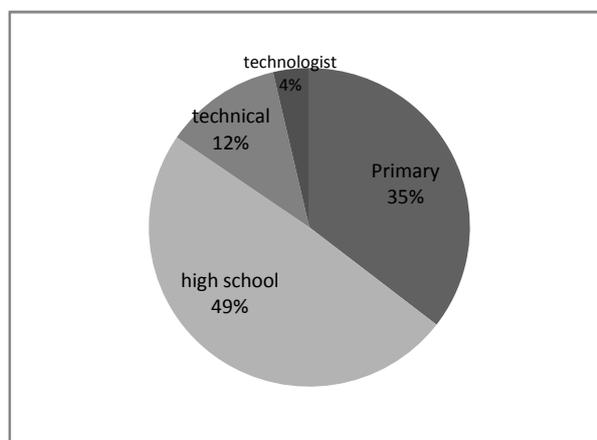


Figure 1. Study maximum level reached

As for most affiliate regime is referred to the subsidized (40%) (Figure 2), being Emssanar the EPS of greater number of respondents (19%).

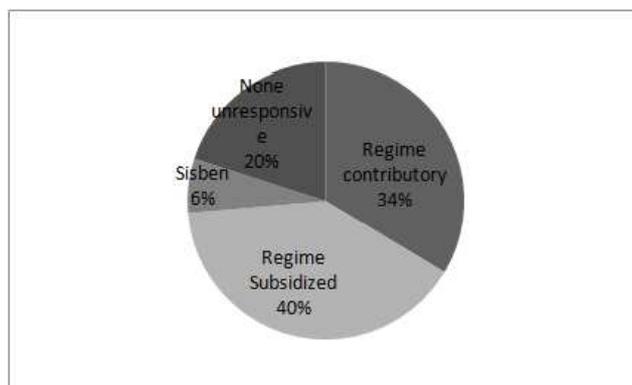


Figure 2. Type of membership in Social Security respondent

The antihypertensive drug more acquired by respondents was the Losartan (42%) (Figure 3) and thus the majority pharmacological subgroup was that of the angiotensin II (42%).

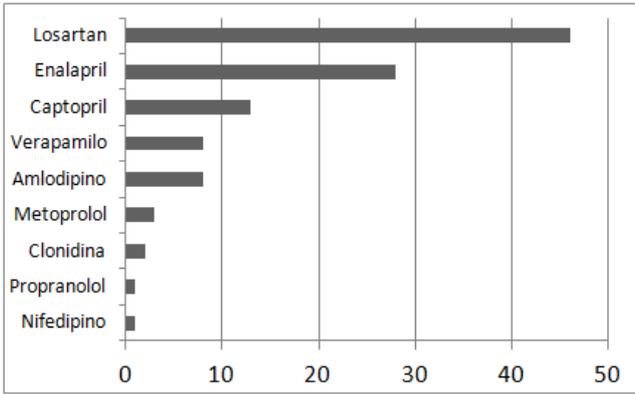


Figure 3. Antihypertensive drugs purchased by the respondent

Most states not have recommended taking antihypertensive others (69%), ignoring the adverse effects of these drugs (78%) and not having the doctor's prescription to purchase them (61%) (Figure 4)

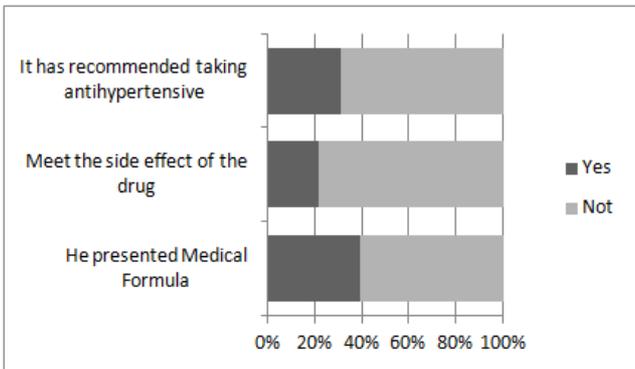


Figure 4. Practices in acquiring antihypertensive respondents

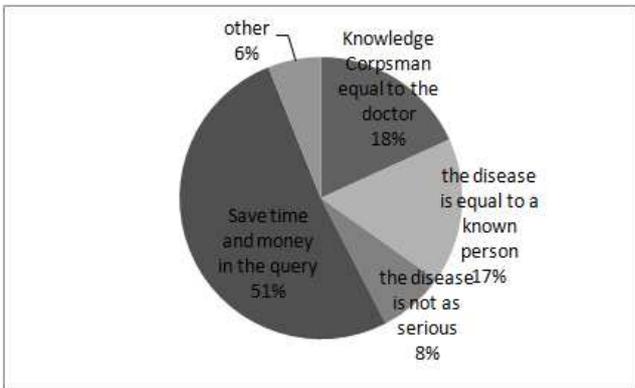


Figure 5. Reason for purchase without a prescription antihypertensive

The majority of respondents said that when you purchase a non-prescription antihypertensive do so because they prefer to save time and money (51%), although other responses were also presented (Figure 5).

Were held crossings variables to analyze the extent of their differences. Who said ignoring the adverse reactions of antihypertensive most others did not recommend these drugs and who do not have a prescription for purchase (Figure 6)

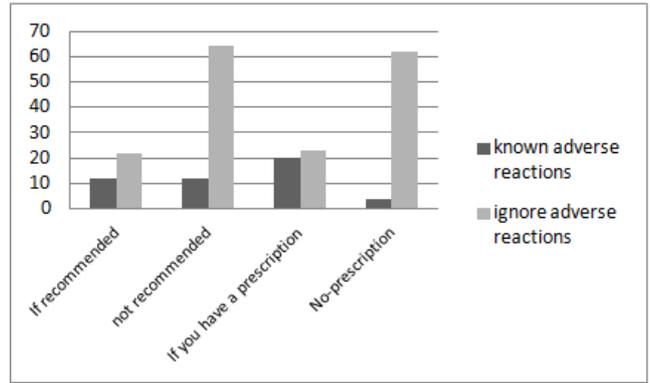


Figure 6. To recommend self-medication with antihypertensive vs primary education, to know adverse reactions and sex

Those who claim not to recommend these drugs to others mostly have a higher level of primary education, expressed ignore the side effects of these medications and are female (Figure 7)

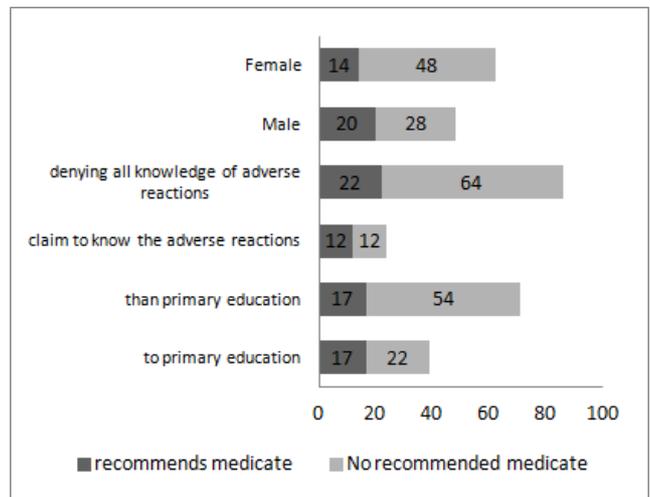


Figure 7. Recommend self-medication

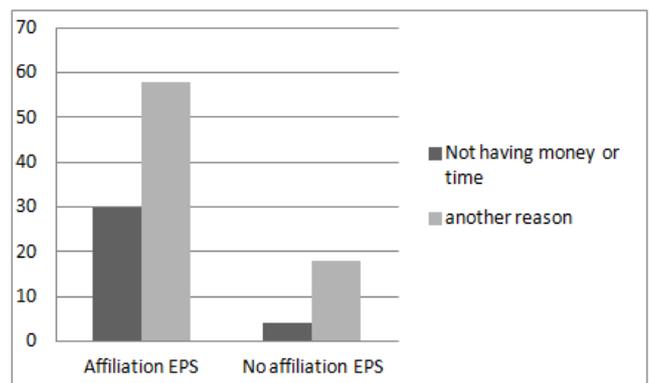


Figure 8. Not having money or time as a reason to go to the pharmacy and not the doctor

Those who say they do not have money or time as a reason to go to the drugstore and not the doctor when purchasing these drugs are mostly affiliated with an EPS (Figure 8).

Claiming to know the side effects of medications was associated directly with recommending these drugs and

present a prescription when purchasing. Meanwhile submit a prescription was well known adverse reactions to buy these drugs at drugstores associated study. Meanwhile submit a prescription was associated well known adverse reactions to buy these drugs at drugstores of the study. Tell medicate with these drugs was found to be associated with having primary, claim to know and adverse reactions and with males sex. Finally prefer to save time and money by going to the drugstore instead of consulting the doctor was associated with being affiliated to an EPS

Table 1. Multivariate Models obtained

Independent variable	Dependent variable	OR	Value of p	IC 95% confidence
Claim to know the adverse reactions	Recommends medicate	4,35	0,012	1,37 to 13,76
	present the prescription	9,53	0,000	2,73 to 33,25
	Primary education	2,49	0,042	1,03 to 6,02
Recommends medicate	Claim to know the adverse reactions	3,07	0,027	1,13 to 8,32
	Sex (Male)	2,73	0,025	1,13 to 6,56
	Suggests the doctor	8,26	0,001	2,44 to 27,89
Subsidized regime	Claim to know the adverse reactions	0,255	0,014	0,086 to 0,76
	To primary education	2,53	0,045	1,02 to 6,27
	suggests	2,15	0,046	1,01 to 4,57
contributory scheme	antihypertensive	7,01	0,000	2,47 to 19,88
	Claim to know the adverse reactions			

4. Discussion

The results of this work who claim to know the adverse reactions to antihypertensive recommend these drugs, which is that people know their drugs believing, perhaps because the employlong, feel knowledgeable enough to recommend other. However this can be a risky practice because using these drugs should be linked to the specific characteristics of each patient. In recommending to another person using an antihypertensive without a diagnosis by the physician maybe at risk of not starting a personalized and effective treatment in a timely manner. Claiming to know the adverse reactions also related to present a prescription when purchasing these drugs, it can be seen that these people, maybe also for time with this disease and its pharmacotherapy, they can permanently maintain formula for the purchase of medicines. Future work is important to consider how long the patient has been diagnosed with the disease and leads to drug therapy, to establish its influence on knowledge, attitudes and practices. Tell medicate with these drugs was also associated with male gender and primary education to be perhaps a low level of education do not understand the seriousness of professionally manage the disease and its treatment hence the sensitivity could be the fact recommend the use of these drugs to others.

Be affiliated to an EPS of the subsidized regime was associated with the drugs are those suggested by your doctor

with ignoring the adverse reactions and have up to primary education. Since the subsidized regime is the lower income population of these would be more associated with a lower education level and therefore the lack of topics as side effects of their medications. Meanwhile be affiliated with an EPS of contributory scheme, to which the population working be longs, was associated suggest using antihypertensive and meet adverse reactions, perhaps they are because it is a population of more income, more educational lowering them to better understand their treatment and even daring to suggest it. Studies have indicated a relationship between membership in these plans with disease management and treatment for effective control (6). The type of EPS to which is affiliated, as this study shows, can be related to the practices and knowledge on the management of hypertension and its treatment. But keep in mind that this is more related to the type of population that is served by these entities.

Although in this study associations between knowing the side effects of these medications and other variables were found, consider that this knowledge is not always as you think, as studies have shown that although it is thought to knowh is disease and management is low proportion of the population who really knows (3). As has been found that these drugs significantly influence in control ling the pressure of these patients (7), it is vital to assess the knowledge of the population on the rational use of them.

Due to the ignorance of many aspects of hypertension and its pharmacological treatment, it may be useful to establish educational campaigns aimed at staff who buy these medicines in drugstores, considering how effective education programs have been shown in several studies(9)

5. Conclusion

In this study it was established as claiming to know the side effects of antihypertensive relates to recommend them to others and present a prescription for purchase. The relationship between recommending these drugs have education up to primary and male gender were identified. Regarding the type of membership association between the subsidized regime found, claim to know the adverse reactions and primary education, on the other hand the contributory scheme was associated with suggesting the use of antihypertensive and claim to know the adverse drug reactions.

Acknowledgements

The authors wish to thank owners for allowing participating drugstores carry out this study.

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