



RESEARCH ARTICLE

Analysis of the Study Sample of Patients and Their Use of Antihypertensive Drugs in Monotherapy

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Abstract

Introduction: Cardiovascular diseases are the primary socio-medical problem of the industrialized countries of the world. One of the most important in terms of increasing life expectancy and the preservation of the viability and quality of life is the solution to the question of the proper therapy of cardiovascular diseases and their timely prevention. The purpose of this study was to determine the structure of patients' use of antihypertensive drugs, as well as to study the subjective factual and prognostic assessment of patients' effectiveness of treatment. **Materials and methods:** Methods such as: questionnaires of patients (content analysis of case histories) were used. Data processing was performed using statistical and mathematical methods and graphical analysis. **Results and discussion:** There were some patterns of lowering blood pressure in patients on the background of monotherapy of hypertension and patients following the doctor's instructions for treatment. **Conclusions:** As a result of the study, it was found that most patients follow the recommendations of doctors on the appointment of antihypertensive drugs.

Keywords: *Arterial hypertension, Antihypertensive drugs, Pharmacoepidemiological study.*

Introduction

One of the most effective ways of achieving this goal is the timely identification and proper treatment of hypertension. Experts note that in diseases such as stroke, coronary heart disease, including myocardial infarction, cardiac and renal failure can be reduced to their level as a result of adequate antihypertensive therapy.

This is especially important for Ukraine, where mortality from cardiovascular diseases is becoming every year more and more threatening to the nation's values. In recent years, along with improvements in the treatment of hypertension, has accumulated enough information about the effectiveness of drugs that reduce blood pressure.

The number of people with cardiovascular diseases has grown significantly in recent

years, we can say that diseases of the cardiovascular system occupy one of the first places among other diseases. One of the main pathologies in cardiology is arterial hypertension (AH). According to WHO statistics, the number of people suffering from hypertension has increased [5]. Treatment with antihypertensive drugs is one of the most expensive, which raises the question of cost-effective therapy.

The rapid development of the pharmaceutical market in our country has led to the emergence of a large number of generic drugs. Today, their number according to various authors reaches 80 % [1]. The study of pharmaco-economic research related to the organization of pharmaceutical supply of the population with drugs, attention was paid to many domestic and foreign scientists. Due to

in-depth study of the problem on the basis of large-scale population studies, new classifications of hypertension were developed, the necessary target levels of blood pressure (BP) were determined, as well as risk stratification and new approaches to pharmacotherapy of this disease [6-8].

Despite some achievements related to the emergence and introduction into the clinic of new modern antihypertensive drugs, the effectiveness of treatment of hypertension leaves much to be desired. This circumstance is due to such reasons as multifactorial and asymptomatic course of hypertension, unreasonable use obsolete and ineffective drugs and treatment regimens, low susceptibility of patients to prescribed therapy, as well as the dominance in the modern pharmaceutical market (especially in the domestic) of generic drugs, a large number of which does not always determine the rational nature of pharmacotherapy. In addition, in Ukraine there is a contradiction between the need to adhere to the current level of therapy, which involves the use of new, usually expensive methods and drugs and the constant lack of funding for health care, unreasonable use of economic analysis of antihypertensive drugs.

The main purpose of the study is to determine the structure of patients' use of antihypertensive drugs, as well as to study the subjective factual and prognostic assessment of patients' effectiveness of treatment.

Materials and Methods

At the first stage of the study, conducted in conjunction with the staff of the consultative clinic of the Institute of Cardiology M.D. Strazheska Academy of Medical Sciences of Ukraine (Kyiv), Department of Propaedeutics of Internal Medicine № 1, Department of Propaedeutics of Internal Medicine №2 of Bogomolets National Medical University (Kyiv) conducted a survey of 320 patients during the fourth quarter of 2019. Data processing was performed using statistical and mathematical methods and graphical analysis.

Results and Discussion

An analysis of 320 questionnaires of patients with hypertension, filled out during outpatient treatment, showed that there were fewer men in the study sample - 147,

and women - 173, which was 45,9 % and 54,1 %, respectively. The age range was between 38 and 73 years, and the mean age was $59,7 \pm 1,7$ years. The majority of patients (77 %) strictly followed the doctor's prescriptions, while others noted deviations from the proposed treatment. Among these patients, 7 % were motivated by non-compliance with prescriptions due to their own reluctance, 68 % - lack of financial capacity (therefore took more affordable analogues) and 25 % explained this by the fact that when buying in a pharmacy was recommended a similar drug with a different commercial name [2, 3].

The study of the social status of patients showed that 48,5 % of respondents had higher education, 34,7 % - with secondary special and 16,8 % - with general secondary education. The study of the structure of alternatives to antihypertensive therapy revealed that 28 % of patients took one drug for the treatment of hypertension, 62 % - two drugs, 10 % - three or more drugs.

Angiotensin-converting enzyme (ACE) inhibitors (47,7 %) took the leading position in the general structure of the accepted drugs, beta-blockers (16,7 %), diuretics (16,6 %) and calcium antagonists (11,9 %) were used less often.

By studying the structure of drugs actually used, with different international non-proprietary names (INN), it was shown that the most commonly used drugs are enalapril. They accounted for 36 %. Indapamide was used in 9 %, metoprolol in 7 %, bisoprolol in 6 %. The frequency of use of other drugs ranged from 1,7 to 3,3 %. The most common were drugs with such trade names as ednit (15,3 %), enap (9,3 %) and egilok (7,7 %).

To determine the subjective assessment of patients for the effectiveness and absence of side effects of antihypertensive therapy, as well as to study the prognostic assessment of treatment, questionnaires were selected from patients who received one antihypertensive drug [4]. The structure of the drugs taken by them is presented in Fig. 1. Here, as in the general sample, the most commonly used ACE inhibitors, in particular, enalapril.

The analysis of the prevalence of commercial names showed that the most commonly used drugs were enap (11,9 %), enam and enap-H, as well as arifon (9,5 %). In order to study in

more detail the subjective assessment of the effectiveness of antihypertensive monotherapy, the questionnaires of patients were structured. They were divided into groups according to the drugs used by patients belonging to a particular clinical and pharmacological group: ACE inhibitors, diuretics, beta-blockers and calcium antagonists.

There was also a group in which combined drugs were used. Next, a comparative intergroup analysis of indicators was performed. The age and sex composition of the groups, the values of mean systolic blood pressure (SBP) and diastolic blood pressure (DBP) recorded at the first visit to the doctor,

the levels of adverse (side) effects of therapy, subjective assessments of treatment effectiveness, the degree of satisfaction with this were studied treatment. To unify the calculations and compare the presented data, indicators of the frequency of side effects of therapy, subjective assessment of its effectiveness, as well as the degree of satisfaction with treatment were presented in points.

Comparison of the studied indicators using analysis of variance did not reveal significant differences in any of the studied features. There were also no significant differences in the level of education and the degree of compliance.

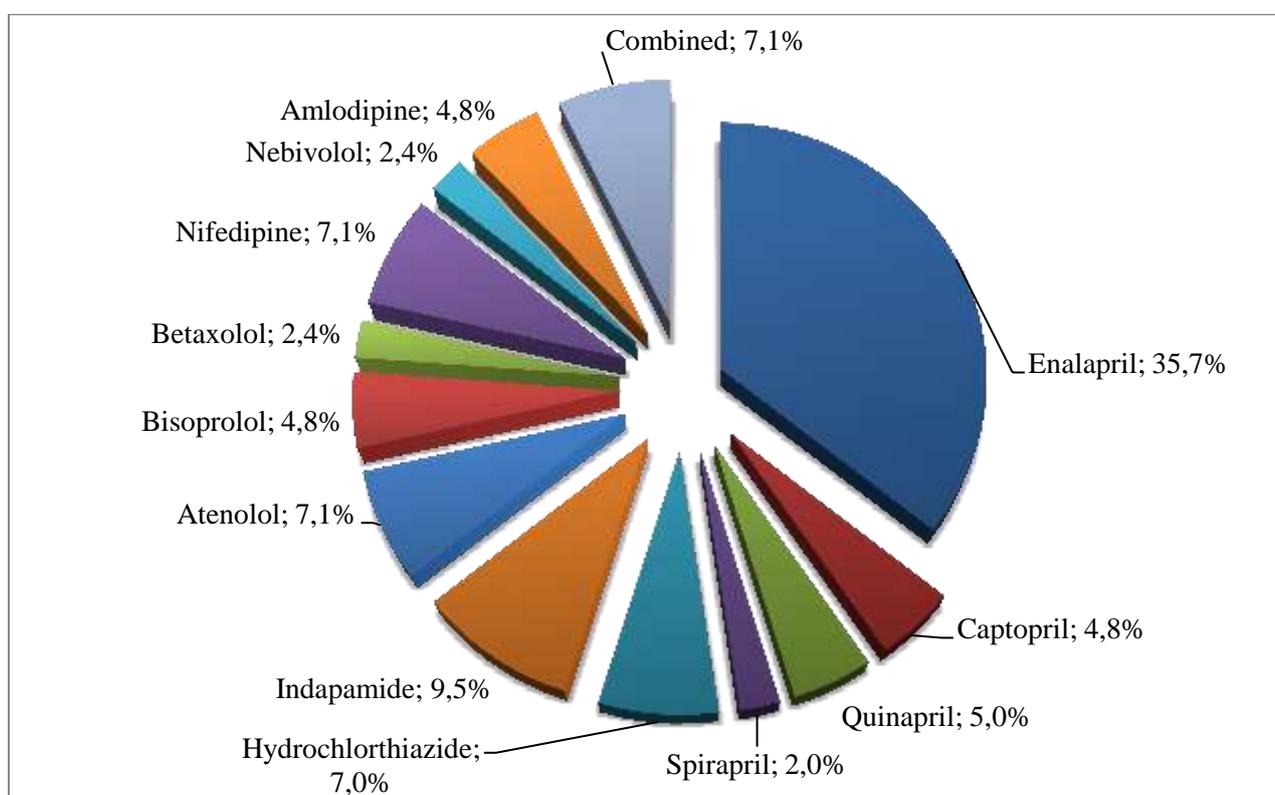


Fig. 1: The structure of patients' use of antihypertensive drugs in monotherapy hypertension

Next, the study of indicators within each of the compared groups. To do this, subgroups were formed depending on the specific drug taken by patients. Further analysis was performed in these subgroups. As in the main groups, the subgroups performed a comparative analysis of age and gender, the value recorded on blood pressure (BP), the frequency of side effects, subjective assessments of patients on the effectiveness of therapy, the degree of satisfaction with it, as well as indicators that reflect initial, achieved (actual) and expected (prognostic) levels of general well-being.

Conclusion

As a result of the study, it was found that most patients follow the recommendations of doctors on the appointment of antihypertensive drugs, monotherapy is the second alternative to prescribing drugs for the treatment of hypertension.

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