

Correct Selection and Effectiveness Assessment of Main Antihypertensive Medicines for Patients Diagnosed with Arterial Hypertension in Ambulatory Conditions

Nizomov Bakhtiyor Urokovich

Assistant, Department of Internal Medicine, Faculty of Pediatrics, Samarkand State Medical University, Samarkand, Republic of Uzbekistan

Rakhmonkulov Sohibjon Salimovich, Kuljanov Sadiq Farkhod's son

Resident, Department of Internal Medicine, Faculty of Pediatrics, Samarkand State Medical University, Samarkand, Republic of Uzbekistan

Abstract: Arterial hypertension (high blood pressure) is one of the most common chronic diseases and, if uncontrolled, can lead to very serious complications. The risk of heart attack, stroke, heart failure, hypertensive retinopathy, and hypertensive nephropathy increases as a result of this condition [1-3,10]. Hypertension is often called a "silent killer" because clinical symptoms are frequently mild or even absent. This makes the condition particularly dangerous, as it can progress unnoticed and only be detected after complications arise [4,5,11,12].

Keywords: Arterial Hypertension, Antihypertensive Drugs, Blood Pressure Monitoring.

According to the World Health Organization (WHO), approximately 1.13 billion people worldwide have arterial hypertension, with the condition prevalent in both developed and developing countries [6-9,]. In Uzbekistan, high blood pressure is present in 13-15% of the population, with a prevalence of 26.6% among those aged 40-59. Of those diagnosed, 50% are aware of their condition, but only a small percentage take antihypertensive medications regularly to control their blood pressure [13,14,17]. Today, hypertension is increasingly common not only in adults but also in younger individuals, largely due to modern lifestyles and elevated stress levels among younger generations. The treatment and management of hypertension place a significant burden on healthcare systems in many countries, as patients with this condition require continuous treatment and monitoring. Arterial hypertension not only has serious health consequences but also negatively impacts a person's quality of life [15,16]. It often necessitates lifestyle changes, such as limiting physical activity, taking medication regularly, and paying constant attention to health.

Understanding the medications used to treat hypertension, their mechanisms of action, and appropriate therapeutic dosing is crucial in preventing dangerous complications in hypertensive patients. Depending on the patient's condition, the following primary drugs are used in the treatment of hypertension (Table 1)

Classification	The name of the drug	Dose	Instruction	Contraindications
ACE inhibitors	Enalapril	5-40 mg/per day	Hypertension, heart failure	Angioedema, pregnancy
Beta-blockers	Metoprolol	50-200 mg/per day	Hypertension, angina pectoris	Asthma, bradycardia
Diuretics	Furosemid	20-80 mg/per day	Hypertension, edema	Anuria, electrolyte imbalance
Calcium channel blockers	Amlodipin	5-10 mg/per day	Hypertension, angina pectoris	Liver failure
Angiotensin II receptor antagonists	Losartan	50-100 mg/per day	Hypertension, diabetic nephropathy	Pregnancy, lactation

The purpose of the research: to determine how patients with hypertension use drugs, to analyze the results and to improve the condition of patients by choosing the right treatment.

Research material and methods: 78 patients who came to the reception department of Jomboy district medical association (TTB) of Samarkand region with high blood pressure were given a survey to find out how they use antihypertensive drugs. 42 (53.85%) men and 36 (46.15%) women participated in the survey. The age of men was 24-78 years (56.3 ± 0.85), women were 26-84 years (59.2 ± 0.64).

Table 2 shows the frequency of arterial hypertension levels in men and women who came to the reception department of Jomboy TTB.

Occurrence of levels of arterial hypertension in men and women 2nd table

Sex	HTN I degree	HTN II degree	HTN III degree
Man	15	20	7
Woman	14	16	6
Total	29	36	13

As can be seen from this table, 37.1% of patients with arterial hypertension had I degree, 46.15% II degree, and 16.78% III degree patients.

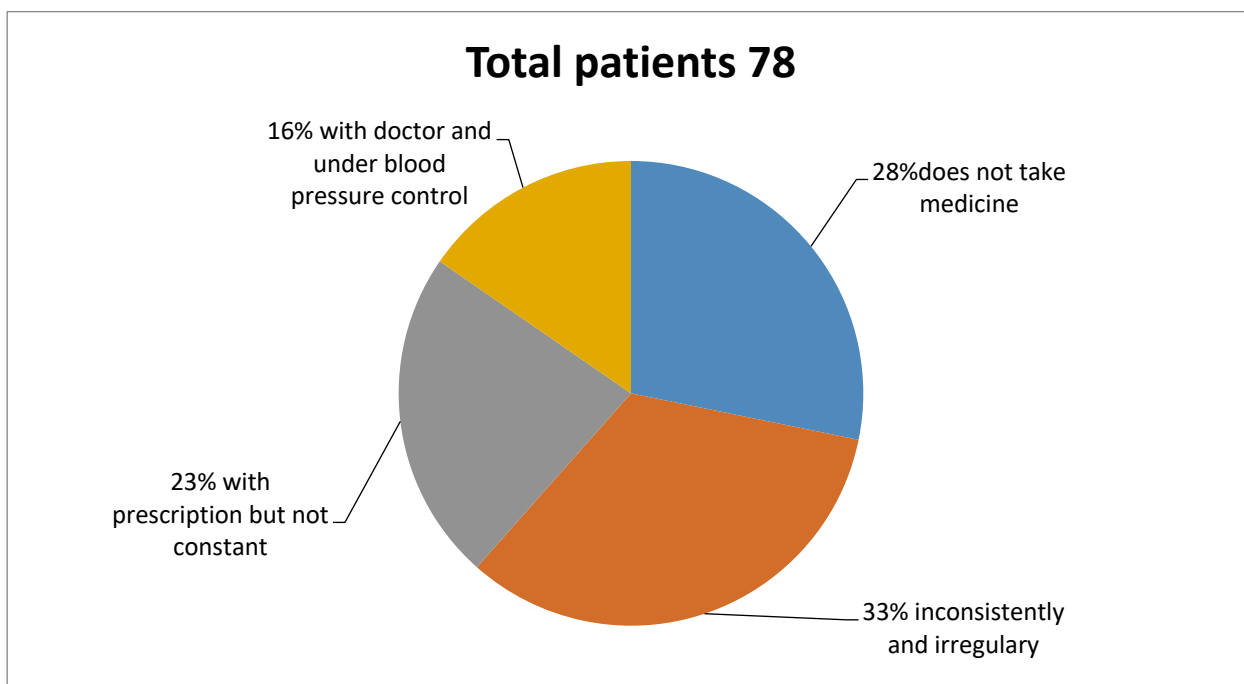
According to the results of the examination, the stages of hypertension in patients are given in Table 3.

Occurrence of the stages of hypertension in men and women 3rd table

Sex	HTN I degree	HTN II degree	HTN III degree
Man	9	15	19
Woman	14	16	6
Total	23	31	25

According to the survey results, only 56 patients (71.79%) are taking antihypertensive drugs. Of these, 26 (46.43%) patients take irregularly and according to their own knowledge, 30 patients take drugs prescribed by the doctor, but 18 do not take them regularly, only 12 patients constantly control blood pressure and antihypertensive drugs constantly drinks the means (Fig. 1).

Fig.1. Distribution of patients according to the reception of hypotensive drugs



Patients and their relatives were taught how to correctly measure arterial blood pressure by the Korotkov method using a mechanical tonometer. After that, the patients were given an antihypertensive drug, and the order of regular intake and the dosages at different levels of arterial hypertension were explained. After 30 days, the patients were re-examined by family medical center and polyclinics, the patients' blood pressure was measured and a repeated survey was conducted.

2nd table. Occurrence of arterial hypertension in men and women (after 30 days)

Sex	HTN was not detected	HTN I degree	HTN II degree	HTN III degree
Man	15	14	8	5
Woman	14	16	5	1
Total	29	30	13	6

Results and Discussion According to the results of our study, 56 out of 78 patients (71.79%) were taking antihypertensive medications. The remaining 22 patients (28.21%) were not taking the primary antihypertensive drugs and instead occasionally received myotropic spasmolytic injections during episodes of elevated blood pressure. Of the 56 patients taking antihypertensive medications, 26 (46.43%) were doing so irregularly and based on their own discretion, while 30 (53.57%) were following prescriptions given by their doctors. However, 18 of these 30 patients (60%) did not take their medication regularly, with only 12 (40%) consistently monitoring their blood pressure and adhering to the prescribed medication regimen.

These results indicate that although 71.79% of patients are taking antihypertensive medications, this does not necessarily mean that they are doing so consistently or correctly. In fact, 46.43% of patients are taking their medications irregularly, which means that more than half of all patients are either irregular or uncontrolled in their medication usage. This irregularity can significantly reduce the effectiveness of treatment, as adherence to the prescribed medication schedule is essential for managing hypertension effectively.

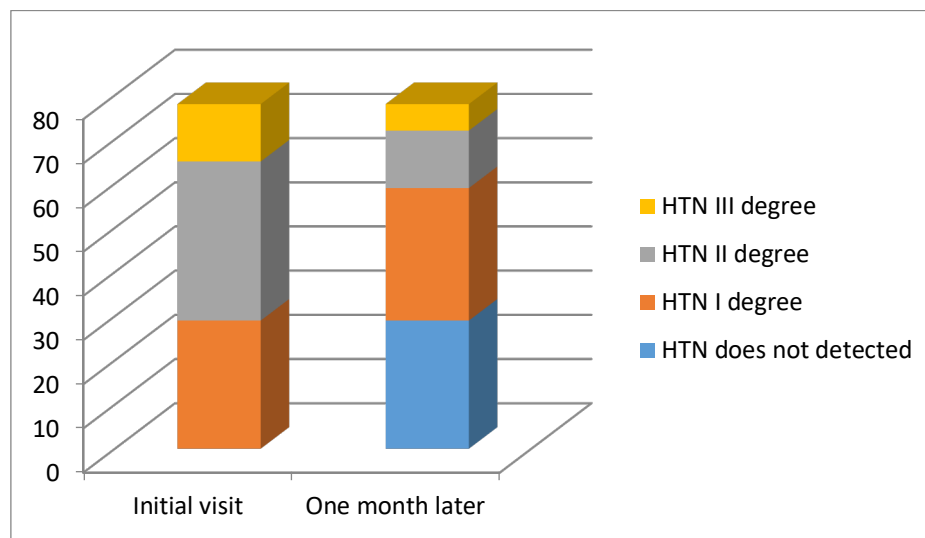
Among the 53.57% of patients who follow their doctor's recommendations, 60% do not take their medication regularly. This non-adherence significantly increases the risk of developing complications. In the initial questionnaire, 15 male patients (35.7%) had grade I hypertension, 20 (47.6%) had grade II, and 7 (16.7%) had grade III hypertension. Among the female patients, 14

(38.9%) had grade I, 16 (44.4%) had grade II, and 6 (16.7%) had grade III hypertension. This suggests that there is a difference in hypertension severity between the sexes, and gender should be considered when developing treatment plans.

After treatment, the proportion of patients with grade II hypertension decreased from 46.15% to 16.7%, and the proportion of patients with grade III hypertension decreased from 16.7% to 7.7%.

Occurrence of the arterial hypertension in patients after initial treatment and procedures

Fig.2



Conclusion: Based on the results of our research, we conclude that teaching patients with hypertension to select the appropriate dose of antihypertensive medication and monitor their blood pressure can lead to a reduction in the number of doctor visits for blood pressure normalization. This approach has also improved the overall quality of life for patients. Therefore, educating patients on how to manage their hypertension by choosing the correct antihypertensive drugs can effectively help control blood pressure and reduce hypertension-related complications.

References

1. Тошназаров Шухрат Мизамович, Назарова Зухра Шариповна, Сафарова Фарангиз Хасановна, Исометдинова Зебо Салахиддиновна, Низомов Бахтиер Уракович Эффективность комбинированного применения ингибиторов АПФ в лечении хронической сердечной недостаточности // Вопросы науки и образования. 2019. №6 (52). URL: <https://cyberleninka.ru/article/n/effektivnost-kombinirovannogo-primeneniya-ingibitorov-apf-v-lechenii-hronicheskoy-serdechnoy-nedostatochnosti> (дата обращения: 12.10.2024).
2. UraKovich N. B. et al. Detection and Correction of Hypokalemia in Patients with Refractory Chronic Heart Failure. – 2023.
3. UroKovich N. B., Ferdavsiyevich U. T. Choosing the Correct Medication and Evaluating the Effectiveness of Farmadipine and Captopril in Patients Diagnosed with Arterial Hypertension in Emergency and Urgent Care Settings //Miasto Przyszłości. – 2024. – T. 45. – С. 293-297.
4. Nizomov B. U. et al. ARTERIAL GIPERTENZIYA BO'LGAN BEMORLARDA FARMADIPIN VA KAPTOPRIL DORI VOSITALARINI TO 'G 'RI TANLASH VA EFFEKTIVLIGINI BAHOLASH //Analysis of world scientific views International Scientific Journal. – 2024. – T. 2. – №. 3. – С. 5-12.
5. Агабабян И. Р. и др. Эффективность влияния комбинированной антигипертензивной терапии на качество жизни у больных гипертонической болезнью //Евразийский кардиологический журнал. – 2019. – №. S1. – С. 83.

6. Турдибеков Х. И., Низомов Б. У. Некоторые генетические аспекты развития бронхиальной астмы //Наука, техника и образование. – 2020. – №. 3 (67). – С. 60-62.
7. Ruziyeva A. A. et al. Verification of dyspnea according to external respiratory function in patients with bronchial asthma //International Journal on Orange Technologies. – 2021. – Т. 3. – №. 2. – С. 48-51.
8. Турдибеков Х. И., Шеркулов Ш. Р., Низомов Б. У. БРОНХИАЛ АСТМА БИЛАН ОФРИГАН БЕМОРЛАРДА В2-АДРЕНОРЕЦЕПТОР GLN27GLU ПОЛИМОРФИЗМИНИНГ КАСАЛЛИК БЕЛГИЛАРИ БИЛАН АССОЦИАЦИЯСИ //BARQARORLIK VA YETAKSHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2022. – Т. 2. – №. 10. – С. 322-326.
9. Turkmanov M. M., Nizamov B. U. REFRAKTER SURUNKALI YURAK YETISHMOVCHILIGI PAYDO BO'LGAN BEMORLARDA GIPOKALIEMIYANI ANIQLASH VA KORREKTSIYA QILISH.
10. Турдибеков Х. И., Агабабян И. Р., Низомов Б. У. ИССЛЕДОВАНИЕ УРОВНЯ СЫВОРОТОЧНЫХ ЦИТОКИНОВ ПРИ РАЗЛИЧНЫХ ФОРМАХ БРОНХИАЛЬНОЙ АСТМЫ С ТЯЖЕЛЫМ ТЕЧЕНИЕМ //Journal of cardiorespiratory research. – 2020. – Т. 1. – №. 1. – С. 95-98.
11. Ibragimovich T. H. et al. Some molecular genetic aspects of the formation of predisposition to bronchial asthma. – 2022.
12. Husan T. et al. FEATURES OF CHANGES IN IMMUNE HOMEOSTASIS IN PATIENTS WITH BRONCHIAL ASTHMA //Central Asian Journal of Medical and Natural Science. – 2021. – Т. 2. – №. 3. – С. 276-281.
13. Шодиева Г. Р., Низомов Б. У. Роль функциональной диагностики в оценке степени обструкции дыхательных путей при бронхиальной астме //Наука и образование сегодня. – 2020. – №. 5 (52). – С. 81-82.
14. Erugina M. V. et al. The population health in The Russian Federation and the Republic of Uzbekistan: a comparative analysis //Problemy Sotsial'noi Gigieny, Zdravookhraneniia i Istorii Meditsiny. – 2023. – Т. 31. – №. 2. – С. 206-209.
15. Бабамурадова Заррина Бахтияровна, Насирова Азиза Акбаровна, Искандарова Фариди Исмаиловна ЭНДОТЕЛИАЛЬНАЯ ДИСФУНКЦИЯ ПРИ ХРОНИЧЕСКОЙ СЕРДЕЧНОЙ НЕДОСТАТОЧНОСТИ В СОЧЕТАНИИ С САХАРНЫМ ДИАБЕТОМ // JARR. 2021. №3. URL: <https://cyberleninka.ru/article/n/endotelialnaya-disfunktsiya-pri-hronicheskoy-serdechnoy-nedostatochnosti-v-sochetanii-s-saharnym-diabetom> (дата обращения: 12.10.2024).
16. Рофеев М. Ш. и др. Клинические особенности и течение неалкогольной жировой болезни печени, по данным Самаркандского филиала РНЦЭМП //Роль больниц скорой помощи и научно исследовательских институтов в снижении предотвратимой смертности среди населения. – 2018. – С. 268-269.
17. Агабабян И. Р. и др. Эффективность влияния комбинированной антигипертензивной терапии на качество жизни у больных гипертонической болезнью //Евразийский кардиологический журнал. – 2019. – №. S1. – С. 83.