



Arterial hypertension in postmenopausal women

**Ergasheva Ma'mura
Tashtemirovna**

Assistant Professor of Department of Propaedeutics of Internal Medicine,
Samarkand State Medical University.
Samarkand, Uzbekistan

**Kamolova Diyora
Jamshedovna**

Assistant Professor of Department of Propaedeutics of Internal Medicine,
Samarkand State Medical University.
Samarkand, Uzbekistan

ABSTRACT

The article is based on a survey of 40 women aged 50 to 60 in the postmenopausal period. Arterial hypertension was diagnosed in 29.8% postmenopausal women, arterial hypertension in 70.2% women, symptomatic in 30.8% women. In postmenopausal women, arterial hypertension may be accompanied by impaired calcium and lipid metabolism. It should be noted that these changes probably indicate a positive correlation between the ionized fraction of serum calcium and total cholesterol. These disorders are considered as one of the clinical manifestations of Arterial hypertension in postmenopausal women and require the development of measures for its treatment and prevention

Keywords:

Arterial hypertension, hypertension, menopause, postmenopause.

Introduction. The prevalence of cardiovascular mortality worldwide is closely related to hypertension. The term "hypertension" or "symptomatic arterial hypertension" was introduced by G.F. Langone in 1948. Arterial hypertension is not a primary disease, but a consequence of other chronic pathological processes. According to the classification approved by the European Society of Cardiology and the Russian Federation, the systolic BP is higher than 140 mmHg when measuring and diagnosing arterial hypertension in women and the diastolic BP is higher, it should be equal or higher than 90 mmHg. A number of authors note that the rapid development of AH is more pronounced during menopause and postmenopause. Recent studies also show that arterial hypertension is more common in 50% of

women over 45 years and in the early menopausal period. Postmenopause - from the last menstrual period until the complete cessation of ovarian function, ie 5-6 years. During this period, periodic changes occur in the body, but menstruation does not occur. Postmenopause, according to different authors, is a postmenopausal period when the decrease in the overall reproductive function of the body leads to aging, but is a physiological process. According to G.M. Savelieva, the cessation of hormonal function of the ovaries long before the last menstruation leads to the appearance of other symptoms. Decrease of cyclic function of the ovaries occurs in the menopausal period. However, in postmenopausal women, a decrease in estrogen secretion leads to a decrease in estrogen activity and the formation

of a small amount of androstenediol in the adrenal glands and ovaries. The concentration of this hormone in the plasma of postmenopausal women is 3-4 times higher than that of estradiol. Oestrogen deficiency in postmenopausal women is a natural physiological process, in which a number of involutionary changes in the body occur, but on the other hand, pathogenetic changes in women also play a major role. Hormonal changes lead to neurovegetative, metabolic shifts, psycho-emotional manifestations of menopausal syndrome, urogenital disorders, the appearance of osteoporosis symptoms, in a certain chronological degree worsen the quality of life in postmenopausal women. The development of various other symptoms is inextricably linked to the cessation of ovarian function. Therefore, the clinical and pathogenetic study of the features of arterial hypertension transition in postmenopausal women is of great theoretical importance in the development of antihypertensive drugs and preventive measures. This process is of great practical interest for primary health care. Research objective: to study the specifics of blood pressure, calcium and lipid disorders in postmenopausal women. Materials and methods: 400 postmenopausal women (50-60 years old) were examined at the 1st clinic of Samarkand State Medical Institute in the Cardiology Department. In the first stage, the indicator of AH and its forms is arterial hypertension and symptomatic arterial hypertension. To detect arterial hypertension in women, BP was measured three times on both arms. Systolic BP > 140 mm Hg and diastolic BP > 90 mm Hg in the diagnosis of arterial hypertension according to the modern classification of the European Society of Cardiology and the European Society of Hypertension. Of the 400 postmenopausal women, 131 (71.1%) were diagnosed with arterial hypertension, of which 74 (56.5%) had stage I hypertension and 57 (43.5%) had stage II hypertension. At the second stage of the study, calcium and lipid metabolism disorders were studied in 80 postmenopausal women. The study group included 60 postmenopausal

women, of whom 29 were diagnosed with stage I hypertension and 31 with stage II hypertension. Normal blood pressure was detected in 20 postmenopausal women of the control group. This group included active women who did not complain about their health. All women underwent general clinical laboratory and instrumental methods of investigation, such as general blood analysis, urinalysis, biochemical blood analysis, brain natriuretic peptide, blood coagulogram; ECG, echoCG, daily blood pressure monitoring, chest X-ray, ocular fundus examination. All patients had their blood pressure measured by the KOROTKOV method, as well as gynecological and endocrinological examinations.

Results and discussion. Of 40 postmenopausal women, AH was detected in 18 (36.8%). Of these, 10(5.6%) had premenopausal hypertension and 5 (31.2%) women reported elevated BP associated with the onset of menopause. Of the 18 AH patients, 13 (71.1%) had HC. Fifty-three women were found to have symptomatic arterial hypertension, which is 28.9%. Our findings show that the causes of symptomatic hypertension in postmenopausal women are renal diseases (chronic pyelonephritis, glomerulonephritis, urolithiasis), the history of 5 (31.2%) patients with type II diabetes mellitus and onset of menopause in the preceding period revealed hypertension. In a study of calcium metabolism indices in 60 postmenopausal AH patients, the amount of ionized calcium -1.31 ± 0.04 mmol/l (GC-1.09- ± 0.02 , $p < 0.05$) decreased the total amount in blood. -2.24 ± 0.03 mmol/l, (GC-2.50- ± 0.02 , $p < 0.05$). The study of total blood cholesterol showed a significant increase in women with AH of 6.49 ± 0.13 mmol/L, (GC-5.50- ± 0.11 , $p < 0.05$). In addition, we found a positive organic correlation between lipid metabolism and serum ionized calcium fraction.

The results of the study show that AH is more common in postmenopausal women (38.4%). In postmenopausal women, hypertension or arterial hypertension predominate in the debut of this pathology (71.1%). In postmenopausal women, calcium and lipid metabolism coexist

with arterial hypertension. Moreover, these changes are probably interrelated, indicating a positive correlation between lipid metabolism and levels of ionized calcium fraction (correlation coefficient 0.31, $r < 0.05$ g). Much of the literature also suggests that arterial hypertension is associated with impaired lipid metabolism. Often in menopausal women changes of bone tissue, diffuse osteoporosis are noted, which is undoubtedly associated with impaired calcium metabolism. In addition, lipid metabolism disorders in menopause are associated with the development of atherosclerosis.

Conclusions. Thus, arterial hypertension is a common pathology in postmenopausal women. The development of AH and arterial hypertension in postmenopausal women is dominated by disorders of calcium and lipid metabolism, which requires further study. In postmenopausal women it is necessary to develop measures to prevent and treat all causes associated with the occurrence of hypertension.

Used literature:

1. Alisherovna, K. M., Erkinovna, K. Z., Jamshedovna, K. D., & Toshtemirovna, E. M. M. (2022). Study of quality of life indicators in patients with coronary heart disease using the sf-36 questionnaire. *Web of Scientist: International Scientific Research Journal*, 3(5), 558-564.
2. Alisherovna, K. M., Toshtemirovna, E. M. M., Totlibayevich, Y. S., & Xudoyberdiyevich, G. X. (2022). EFFECTIVENESS OF STATINS IN THE PREVENTION OF ISCHEMIC HEART DISEASE. *Web of Scientist: International Scientific Research Journal*, 3(10), 406-413.
3. Djamshedovna, K. D. (2021). Echocardiographic Signs F Chf In Patients With Essential Hypertension. *Web of Scientist: International Scientific Research Journal*, 2(11), 192-196.
4. Jamshedovna, K. D., Alisherovna, K. M., Davranovna, M. K., & Xudoyberdiyevich, G. X. (2022). Epidemiology And Features Of Essential Therapy Hypertension In Pregnant Women. *Web of Scientist: International Scientific Research Journal*, 3(5), 606-611.
5. Jamshedovna, K. D., Alisherovna, K. M., Davranovna, M. K., & Xudoyberdiyevich, G. X. (2022). Epidemiology And Features Of Essential Therapy Hypertension In Pregnant Women. *Web of Scientist: International Scientific Research Journal*, 3(5), 606-611.
6. Kayumovna, A. S. (2022). Arterial Hypertension in Youth. *Central Asian Journal of Medical and Natural Science*, 3(6), 163-165.
7. Kayumovna, A. S., & Nizomitdinovich, H. S. (2022). COVID-19 AND KIDNEY DAMAGE. *Galaxy International Interdisciplinary Research Journal*, 10(3), 241-245.
8. Khabibovna, Y. S., & Abdukodirovna, A. S. (2021). Changes In The Diastolic Function Of The Right Ventricle In Arterial Hypertension. *Web of Scientist: International Scientific Research Journal*, 2(11), 161-169.
9. Khabibovna, Y. S., & Buriboevich, N. M. (2021). Change Of Structural And Functional Heart Indicators In Patients With Diabetes Mellitus With Diastolic Heart Failure. *Web of Scientist: International Scientific Research Journal*, 2(11), 144-150.
10. Khabibovna, Y. S., Zhamshedovna, K. D., Davranovna, M. K., & Yusupovich, N. F. (2022). FUNCTIONAL STATE OF THE MYOCARDIA IN DEVELOPMENTAL PATHOGENESIS CHRONIC HEART FAILURE IN PATIENTS WITH HYPERTENSION. *Novateur Publications*, 1-72.
11. Khusainova, M. A. (2023). CYSTATIN C IS AN EARLY MARKER OF DECREASED KIDNEY FUNCTION. *Oriental renaissance: Innovative, educational, natural and social sciences*, 3(1), 485-490.

12. Khusainova, M. A., Toirov, D. R., Khaydarov, S. N., & Kamolova, D. D. (2023). MORPHOFUNCTIONAL PARAMETERS OF THE HEART IN WOMEN SUFFERING FROM ESSENTIAL ARTERIAL HYPERTENSION IN POSTMENOPAUSE AND ON THE BACKGROUND OF TREATMENT. *Oriental renaissance: Innovative, educational, natural and social sciences*, 3(1), 322-330.
13. Nizamitdinovich, K. S., & Alisherovna, K. M. (2022). Quality of Life in Patients with Chronic Heart Failure, After Cardiac Resynchronization Therapy. *Texas Journal of Medical Science*, 14, 168-173.
14. Nizamitdinovich, K. S., Alisherovna, K. M., Erkinovna, K. Z., & Davranovna, M. K. (2022). Heart Lesions in Rheumatological Diseases. *Texas Journal of Medical Science*, 13, 91-94.
15. Nizamitdinovich, X. S., & Toshtemirovna, E. M. (2021). Pathogenetic relationship of metabolic disorders in patients with arterial hypertension and diabetes type 2. *Web of Scientist: International Scientific Research Journal*, 2(11), 156-160.
16. Rustamovich, T. D., Alisherovna, K. M., Baxtiyorovich, U. J., & Abdurakhmonovich, M. M. (2022). Painless Cardiac Ischemia in Women with Rheumatoid Arthritis. *Texas Journal of Medical Science*, 13, 95-98.
17. Rustamovich, T. D., Alisherovna, K. M., Djamshedovna, K. D., & Nizamitdinovich, K. S. (2023). Features of the Psychoemotional Status of Patients with Rheumatoid Arthritis. *Miasto Przyszłości*, 32, 23-30.
18. Toshtemirovna, E. M. M., Alisherovna, K. M., Erkinovna, K. Z., & Xudoyberdiyevich, G. X. (2022). DIAGNOSIS OF CIRRHOTIC CARDIOMYOPATHY. *Spectrum Journal of Innovation, Reforms and Development*, 10, 141-147.
19. Toshtemirovna, E. M. M., Alisherovna, K. M., Totlibayevich, Y. S., & Xudoyberdiyevich, G. X. (2022). Anxiety Disorders and Coronary Heart Disease. *The Peerian Journal*, 11, 58-63.
20. Toshtemirovna, E. M. M., Alisherovna, K. M., Totlibayevich, Y. S., & Muxtorovna, E. M. (2022). Hearts In Rheumatoid Arthritis: The Relationship With Immunological Disorders. *Spectrum Journal of Innovation, Reforms and Development*, 4, 34-41.
21. Toshtemirovna, E. M. M., Alisherovna, K. M., Totlibayevich, Y. S., & Duskobilovich, B. S. (2022). THE VALUE OF XANTHINE IN CHRONIC HEART FAILURE. *Spectrum Journal of Innovation, Reforms and Development*, 4, 24-29.
22. Totlibayevich, Y. S., Alisherovna, K. M., Xudoyberdiyevich, G. X., & Toshtemirovna, E. M. M. (2022). Risk Factors for Kidney Damage in Rheumatoid Arthritis. *Texas Journal of Medical Science*, 13, 79-84.
23. Totlibayevich, Y. S., Alisherovna, K. M., Xudoyberdiyevich, G. X., & Toshtemirovna, E. M. M. (2022). Risk Factors for Kidney Damage in Rheumatoid Arthritis. *Texas Journal of Medical Science*, 13, 79-84.
24. Xudoyberdiyevich, G. X., Alisherovna, K. M., Davranovna, M. K., & Toshtemirovna, E. M. M. (2022). FEATURES OF HEART DAMAGE IN PATIENTS WITH VIRAL CIRRHOSIS OF THE LIVER. *Spectrum Journal of Innovation, Reforms and Development*, 10, 127-134.
25. Xudoyberdiyevich, G. X., Alisherovna, K. M., Toshtemirovna, E. M., & Jamshedovna, K. D. (2022). Features of portal blood circulation and echographic structure of the liver in patients with chronic heart failure. *Web of Scientist: International Scientific Research Journal*, 3(5), 576-581.
26. Xudoyberdiyevich, G. X., Alisherovna, K. M., Toshtemirovna, E. M. M., & Totlibayevich, Y. S. (2022). Characteristics Of Neuropeptides-Cytokines in Patients with Cardiovascular Pathology Occurring Against the Background of Anxiety and

- Depressive Disorders. *The Peerian Journal*, 11, 51-57.
27. Yarmukhamedova, S., Nazarov, F., Mahmudova, X., Vafoeva, N., Bekmuradova, M., Gaffarov, X., ... & Xusainova, M. (2020). Features of diastolic dysfunction of the right ventricle in patients with hypertonic disease. *Journal of Advanced Medical and Dental Sciences Research*, 8(9), 74-77.
28. Yarmukhamedova, S., Nazarov, F., Mahmudova, X., Vafoeva, N., Bekmuradova, M., Gafarov, X., ... & Xusainova, M. (2020). Study of indicators of intracardial hemodynamics and structural state of the myocardium in monotherapy of patients with arterial hypertension with moxonidin. *Journal of Advanced Medical and Dental Sciences Research*, 8(9), 78-81.
29. Yusufovich, N. F., & Khabibovna, Y. S. (2022). MEDICAL AND SOCIAL ASPECTS OF PREVENTION AMONG STUDENTS IN THE CONDITIONS OF COVID-19 PANDEMICS. *Web of Scientist: International Scientific Research Journal*, 3(12), 860-865.
30. Вафоева, Н. А. (2020). Особенности клинической картины хронического пиелонефрита у женщины. *Вестник науки и образования*, (18-2 (96)), 92-94.
31. Назаров, Ф. Ю., & Азизова, Ш. К. (2023). КЛИНИЧЕСКАЯ ХАРАКТЕРИСТИКА ВНЕБОЛЬНИЧНЫХ ПНЕВМОНИЙ У ВЗРОСЛЫХ. *Oriental renaissance: Innovative, educational, natural and social sciences*, 3(1), 313-321.
32. Назаров, Ф. Ю., & Ярмухамедова, С. Х. (2022). Медико-социальные аспекты профилактики среди студенческой молодежи в условиях пандемии COVID-19. *Science and Education*, 3(12), 256-263.