



ANALYSIS OF THE 31-YEAR CHARACTERISTICS OF THE DEVELOPMENT AND CHANGE OF COMORBIDITY, HEMODYNAMIC AND PHARMACOLOGICAL RISK FACTORS IN THE CONDITIONS OF ANDIJAN (AT THE LEVEL OF THE GENERAL POPULATION).

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ABSTRACT

In countries of the near and far abroad, the modern state of arterial hypotension is being actively studied. They are mainly devoted to the clinical aspects of arterial hypotension, improvement of treatment methods, improvement of treatment methods, reduction of cardiovascular events and issues related to comorbidity [1;2;3]. However, the topic of studying the preserved epidemiological mechanisms of the origin, course, and prevention of the disease, taking into account the regional characteristics of various population groups, has been neglected or not studied in a "modern scientific spirit."

Relevance and necessity of the topic.. In countries of the near and far abroad, the modern state of arterial hypotension is being actively studied. They are mainly devoted to the clinical aspects of arterial hypotension, improvement of treatment methods, improvement of treatment methods, reduction of cardiovascular events and issues related to comorbidity [1;2;3]. However, the topic of studying the preserved epidemiological mechanisms of the origin, course, and prevention of the disease, taking into account the regional characteristics of various population groups, has been neglected or not studied in a "modern scientific spirit."

The aim of the research is to develop innovative technologies for optimizing the screening diagnosis and prevention of arterial hypotension in the conditions of the Fergana Valley.

Materials and methods. These 5 epidemiological studies, which are prospective by design, were conducted on a population of men and women aged 18-74 years in the Shakhrikhan, Khojaabad, Andijan, and Pakhtaabad districts of the Fergana Valley. Permission and approval for the study were obtained from the ethics committee of the Ministry of Health of Uzbekistan.

- 9,345 men and women aged 18-74; Shakhrikhan, Khojaabad, Andijan, and Pakhtaabad districts.
- Inspections: 1989, 2020 and 2024-2025.
- Epidemiological, biochemical, instrumental, pharmacoepidemiological, and statistical methods.
- Diagnosis was made based on WHO criteria (WHO, 2008) and international recommendations.
- Statistical analysis: IBM SPSS Statistics 27.0, McNemar test, Paired t-test, Wilcoxon, Repeated Measures ANOVA.

Results and their discussion. Among the population, in the I and II populations of 1989-2020, heart failure is confirmed by a prevalence of 2.1% and 6.9% respectively in the frequency of detection (indicating a 4.8% increase in development); in the general population, its frequency of detection is 9.0% [$\chi^2=0.495$; $p>0.05$; $RR=0.820$; $95\%CI=0.471-1.428$].

In population I and II, vegetative dysfunction is observed with a prevalence frequency of -3.6% and 11.2% respectively, and at the general population level - 14.8% with a prevalence frequency of 8.4% and a higher level of development [$\chi^2=0.439$; $p>0.05$; $RR=0.871$; $95\%CI=0.577-1.313$].

At the population level, according to the 1st and 2nd examination, the frequency of adrenal insufficiency is 2.7% and 6.3%, with a progressive and variable increase of 3.6% [$\chi^2=0.225$;

$p > 0.05$; $RR = 1.131$; $95\%CI = 0.679-1.885$]. At the population level, it is determined by the prevalence rate of 9.0%

A description of the development of risk factors associated with comorbidity of arterial hypotension in the conditions of the Andijan region and their dynamics over 31 years is given, using the example of infectious diseases, oncological diseases, endocrine diseases, and anemia.

The frequency of detection of infectious diseases in the total population is 3.4% with frequencies of 1.0% and 2.4% in groups I and II of the population; the rate of development is -1.4% [$\chi^2 = 0.050$; $p > 0.05$; $RR = 1.103$; $95\%CI = 0.464-2.620$].

Oncological diseases are registered in the total population - 2.7%, in the I and II population - 0.7% and 2.0% respectively; the rate of progression is 1.3% [$\chi^2 = 0.007$; $p > 0.05$; $RR = 0.957$; $95\%CI = 0.349-2.622$].

At the population level, as a risk factor for comorbidity, the frequency of detection of endocrine diseases in the total population is -7.6%, which is confirmed by the characterization in groups I and II of the population at the levels of 1.8% and 3.7%; an increase in the intensity of formation characterizes the indicator of 3.9% [$\chi^2 = 0.283$; $p > 0.05$; $RR = 0.849$; $95\%CI = 0.465-1.551$].

In the 1st and 2nd examination, the frequency of detection of anemia at the general population level was -7.6% and 31.5% and 39.1%, the rate of development - 23.9% [$\chi^2 = 14.138$; $p < 0.001$; $RR = 0.643$; $95\%CI = 0.502-0.823$].

The characteristics of the development of pharmacological risk factors for arterial hypotension at the population level and their dynamics over 31 years in Andijan conditions

Antihypertensive drug use at total population level

"factor" - 2.0%, and at I and II population levels - 0.7% and 1.3% respectively; the frequency of their development/reproduction is 0.6% [$\chi^2 = 0.527$; $p > 0.05$; $RR = 1.489$; $95\%CI = 0.505-4.388$].

"Diuretic intake" was characterized by indicators of -7.1% in the total population, -2.0% and 5.2% in groups I and II of the population, with a developmental/increasing frequency of 7.1%, respectively [$\chi^2 = 0.002$; $p > 0.05$; $RR = 1.014$; $95\%CI = 0.560-1.834$].

In the general population of the study group, in the populations of 1987 and 2020, the frequency of confirmation of "Use of antidepressants and tranquilizers" is 5.7%, 1.3%, and 4.5%, respectively; The 31-year dynamics of the development/increasing indicator is 3.2% [$\chi^2 = 0.599$; $p > 0.05$; $RR = 0.753$; $95\%CI = 0.366-1.550$].

Conclusion. These data indicate that prezoological risk factors, in addition to these risk factors in patients with arterial hypotension, significantly increased the additional high risk compared to arterial hypotension over the past three decades.

References:

1. Bichkova M.S., Reznik E.V. Federal State Autonomous Educational Institution of Higher Education "Russian National Research Medical University named after N.I. Pirogov" Ministry of Health of the Russian Federation, Department of Hospital Therapy. - 2022. - No. 2, - P. 143-155.
2. Golovina G.A., Zhadan O.N., Zargaryan K.A. et al. Orthostatic hypotension. Part 2: diagnosis and treatment //Cuban Innovative Medicine. 2020. No. 3. Pp. 77-85. DOI: 10.35401/2500-0268-2020-19-3-77-85.
3. Allen T.K., George R.B., White W.D., et al. A double-blind, place-bo-controlled trial of four fixed rate infusion regimens of phenylephrine for hemodynamic support during spinal anesthesia for cesarean delivery //Anesth Analg. -2010. Vol.111, N5. P.1221-1229.