



LONG-TERM CHARACTERISTICS OF THE FORMATION AND DEVELOPMENT OF FACTORS OF HYPERTRIGLYCERIDEMIA, HYPERGLYCEMIA, AND HYPOGLYCEMIA IN THE VALLEY UNDER THE INFLUENCE OF AGE, DEPENDING ON PREMORBID PREVENTION OF ARTERIAL HYPOTENSION.

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ABSTRACT

According to WHO recommendations and public warnings, the task of the newest direction in medical science is not to determine the causes of diseases, but mainly pronosological diagnostics and prevention

Relevance of the problem. According to WHO recommendations and public warnings, the task of the newest direction in medical science is not to determine the causes of diseases, but mainly pronosological diagnostics and prevention. A deeper branch of this direction is the identification of the "roots" of some newly emerging molecular diseases [1;2]. Considering the need to solve these problems, the WHO and the international scientific community decided to focus on searching for general patterns that characterize the "life of the disease" at one or another stage of the disease [2].

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. The frequency of detection of hyperglyceridemia under the influence of age and the characteristics of its progression also differ: under the influence of 18-29 years - from 0.0% and 1.0% (with an increase in the rate of formation by 1.0%). The frequency of HTH formation at the age of 30-44 years was confirmed by -0.4% (in the I-population) and 2.2% (in the II-population) (indicating a growth rate of 1.8%), in the general population - 2.7% [$\chi^2 = 1.278$; $p > 0.05$; $RR = 0.502$; $95\% CI = 0.148-1.705$]. The influence of 45-59 years of age, the frequency of detection of HTH in the general population is -2.5%, in I- and II-populations - 0.8% and 1.7% (indicating the frequency of development by 0.9%). The frequency of formation and progression of HTH in the age range of 60-74 years is 1.3%, 0.7%, and 0.6% (with a decrease in frequency of 0.1%), respectively [$\chi^2 = 3.711$; $p > 0.05$; $RR = 3.350$; $95\% CI = 0.909-12.348$].

The frequency of formation and progression of hyperglyceridemia at the age of 18-74 years was characterized by the expression of indicators in studies I and II - 2.0% and 5.5% (confirming a change of 3.5%). The frequency of its detection in the total population is 7.4% [$\chi^2 = 0.017$; $p > 0.05$; $RR = 0.962$; $95\% CI = 0.534-1.732$].

Arterial hypertension is confirmed by prospective epidemiological monitoring in 1987-2020, showing the peculiarities of the formation and development of hyperglycemia in the general population, population I and II under the influence of age.

In particular, hyperglycemia is observed at frequencies of 0.1% (in the I-population) and 0.7% (in the II-population), representing the influence of the age of 18-29 years (indicating an increase in the rate of development by 0.6%); in the general population - 0.8% [$\chi^2= 0.337$; $p>0.05$; $RR=0.536$; $95\%CI=0.063-4.559$].

The features of the formation and progression of hyperglycemia under the influence of the age of 30-44 years are characterized by the frequency of its detection - 0.6% (in the 1st study) and 1.0% (in the 2nd study), in the general population - 1.5%. The level of development confirms a change of 0.4% [$\chi^2= 0.477$; $p>0.05$; $RR=1.531$; $95\%CI=0.453-5.174$].

The influence of 45-59 years of age is expressed in an increase in the formation and progression of hyperglycemia from -0.7% (in the I-population) and 1.7% (in the II-population), i.e., by 1.0%. [$\chi^2= 0.044$; $p>0.05$; $RR=1.116$; $95\%CI=0.398-3.128$]. The detection rate in the total population is 2.4%.

The frequency of registration of hyperglycemia, indicating the long-term nature of its formation and development, was 0.4% and 0.7% (at an increase in 0.3%) in study I and II, respectively, under the influence of 60-74 years of age, in the total population - 1.1% [$\chi^2= 0.436$; $p>0.05$; $RR=1.608$; $95\%CI=0.388-6.665$].

The influence of age 18-74 is the rate of formation of hyperglycemia - 1.8% (in the I-population) and 4.1% (in the II-population), in the total population - 5.9%. The frequency of change is confirmed by the indicator - 2.3% [$\chi^2= 0.322$; $p<0.05$; $RR=1.201$; $95\%CI=0.638-2.263$]. An analysis of the long-term features of the formation and development of hypoglycemia in the valley under the influence of age, depending on the premorbid prevention of arterial hypotension, is presented. It is known that the frequency of formation and development of hypoglycemia is observed in the age range 18-29 years with indicators of -0.4% (in the 1st study) and 1.3% (in the 2nd study) (expressing a change of more than 0.9%). In the general population, this factor is confirmed with a detection frequency of 1.7% [$\chi^2= 0.029$; $p>0.05$; $RR=0.893$; $95\%CI=0.244-3.266$]. Arterial hypertension, confirming the influence of hypoglycemia at the age of 30-44 years, is confirmed in the general population - at 3.5%, in the I and II population - at 1.1% and 2.9% (expressing an increase in the degree of formation by 1.8%) [$\chi^2= 0.003$; $p>0.05$; $RR=1.021$; $95\%CI=0.460-2.266$]. Similar epidemiological indicators of AHgipGpreMFO hypoglycemia, reflecting the influence of 60-74 years of age, are observed with frequencies of detection of 2.0%, 0.8%, and 1.1% (indicating a change in the rate of formation by 0.3%) [$\chi^2= 1.776$; $p>0.05$; $RR=2.010$; $95\%CI=0.706-5.719$].

In the age range of 18-74 years, indicating the long-term nature of its effect, hypoglycemia is noted with a detection frequency of -3.4% (in the 1st study) and 7.8% (in the 2nd study), in the general population - 11.2%. The long-term growth rate of the hyperglycemia factor is -4.4% [$\chi^2= 0.364$; $p>0.05$; $RR=1.148$; $95\%CI=0.733-1.799$].

Conclusion. Factors directly related to the premorbid prophylaxis of arterial hypotension - hypertriglyceridemia, hyperglycemia, and hypoglycemia - are distinguished by the influence of different ages. If the "Step to a Healthy Life" program is implemented, then the effectiveness of premorbid prevention of arterial hypotension, according to the results of the analysis of our study, will increase to 24.5%, or it will be possible to ensure this indicator.

References:

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