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COMPARATIVE EVALUATION OF THE DETECTION OF PREHYPERTENSION AND ARTERIAL HYPERTENSION DEPENDING ON SOME RISK FACTORS IN THE CONDITIONS OF THE FERGHANA VALLEY

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This article presents an analysis of the detection of both prehypertension and arterial hypertension depending on the main risk factors. By influencing risk factors, we contribute to the prevention of damage to target organs, leading to the development of elevated blood pressure. This is of great importance in organizing the prevention of cardiovascular diseases and their complications.

Keywords: prehypertension, arterial hypertension, risk factors, target organs, population, epidemiological study

As is known, the widespread prevalence of arterial hypertension (AH) in the adult population and its unfavorable prognosis determine increased professional interest in all aspects of this disease. Modern preventive cardiology has long been concerned with the problem of prehypertension. At present, it is considered as an independent risk factor for the development of cardiovascular complications.

Naturally, not only cardiologists, but also physicians of all specialties, especially specialists in epidemiology and prevention of cardiovascular diseases, should not remain aside from this serious medical and social problem, since the “intervention” of AH in the form of a pandemic of modern humanity continues [1, 6, 4].

Experts of international organizations as early as the last century came to the conclusion and stated that the so-called risk factors, which include AH, have an extremely significant impact on the burden of non-communicable diseases [9]. In such an epidemiological situation, the only economically effective and sustainable approach to controlling chronic diseases, including AH and other risk factors (RF), in the public health system is the implementation of epidemiological monitoring of risk factors and the participation of the population in preventive measures [9, 4, 7].

Objective: analysis and comparative evaluation of the detection of prehypertension and arterial hypertension depending on the main risk factors in the conditions of the Ferghana Valley.

Materials and Methods: The material for this study consisted of the results of a cross-sectional epidemiological study of random representative samples of the unorganized male and female population aged 15–70 years living in the city of Andijan.

For the epidemiological study, two samples were formed: the first among the unorganized female population aged 15–70 years, and the second among men aged 15–70 years. The coverage of the examination was 280 (76.9%) and 323 (89.5%) individuals, respectively.

A comprehensive examination of the population was carried out using biochemical, epidemiological, instrumental, clinical, and survey research methods.

Results: During the analysis of the results, we were able to identify certain epidemiological trends in this aspect, which are important for organizing and conducting effective mass preventive measures among the population with prehypertension (PreHT) and arterial hypertension (AH).

Table 1 presents data on the comparative characteristics of PreHT and AH among the examined population depending on educational status.

Table 1
Comparative characteristics of the detection of PreHT and AH in the population aged 15–70 years depending on educational status

Educational status	n	PreHT present n (%)	PreHT absent n (%)	AH present n (%)	AH absent n (%)	t-test significance (P)
Higher education	133	46 (34.6)	87 (65.4)	23 (17.3)	110 (82.7)	P<0.05
Incomplete higher	28	8 (28.6)	20 (71.4)	1 (3.6)	27 (96.4)	P<0.001
Secondary/special	383	97 (25.4)	286 (74.6)	78 (20.4)	305 (79.6)	P>0.05
Incomplete secondary	52	6 (11.6)	46 (88.4)	0 (0.0)	52 (100.0)	P<0.001
Primary	4	0 (0.0)	4 (100.0)	0 (0.0)	4 (100.0)	—
No education	3	0 (0.0)	3 (100.0)	0 (0.0)	3 (100.0)	—
Low educational status	59	6 (10.3)	53 (89.7)	0 (0.0)	59 (100.0)	P<0.001

It is obvious that in the presence of a low educational status, the detection of PreHT increases to 10.3%, while for AH such a dependence is not observed.

Table 2 presents a comparative characteristic of the detection of PreHT and AH depending on professional activity.

Table 2
Comparative characteristics of detection depending on professional activity

Occupational status	n	PreHT n (%)	No PreHT n (%)	AH n (%)	No AH n (%)	Significance
Workers	132	102 (77.3)	30 (22.7)	71 (53.8)	61 (46.2)	P<0.05
Entrepreneurs	166	26 (15.7)	140 (84.3)	6 (3.4)	160 (96.3)	P<0.001
Unemployed	301	29 (9.7)	272 (90.3)	25 (8.4)	276 (91.6)	P>0.05
Low social status	6	4 (66.7)	2 (33.3)	3 (50.0)	3 (50.0)	P<0.05

As can be seen, the detection of elevated blood pressure significantly differs depending on professional activity.

Table 3

Comparative characteristics depending on living conditions

Living conditions	n	PreHT n (%)	No PreHT n (%)	AH n (%)	No AH n (%)	Significance
Satisfactory	207	59 (28.5)	148 (71.5)	33 (15.9)	174 (84.1)	P<0.05
Good	305	85 (27.9)	215 (71.2)	61 (20.0)	244 (80.0)	P>0.05
Poor	91	13 (14.3)	78 (85.7)	8 (8.8)	83 (91.2)	P<0.05

Overall, the obtained data indicate that with worsening living conditions, the frequency of elevated blood pressure increases up to 67.5%, compared to 47.9% in individuals with good conditions, i.e., almost 1.5 times (P<0.05).

Conclusions: Based on the results of the study, it can be concluded that the lack of population data concerning the epidemiological aspects of arterial hypertension and its risk factors in the modern population hinders the implementation of adequate prevention and antihypertensive treatment.

Periodic epidemiological studies on representative population samples aimed at detecting prehypertension and arterial hypertension depending on major risk factors ensure reliability and accessibility for assessing the true situation regarding elevated blood pressure.

Thus, the obtained results can serve as real criteria for early diagnosis. Scientifically substantiated primary and secondary prevention against behavioral risk factors can prevent or slow down the epidemic of prehypertension and, consequently, arterial hypertension and its complications among the population. Simple changes in behavior and lifestyle can significantly contribute to the prevention of dangerous cardiovascular complications and improve public health.

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