



THE DEGREE OF RELATIONSHIP OF RISK FACTORS IN A POPULATION WITH HIGH PRESSURE WITH DIFFERENT LEVEL OF CARDIOVASCULAR RISK

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✓ Resume

In the presence of 22 behavioral risk factors, there is an increase in cases of detecting high blood pressure by more than 9.5 times. Complications such as left ventricular hypertrophy (in 85.3%), cerebrovascular diseases (in 90.9%), myocardial infarction (in 80.0%), heart failure (in 87.5%), symptomatic damage to peripheral arteries (in 66.7% of cases), diabetes mellitus (in 75.0%), which, along with high blood pressure, are factors affecting the prognosis of total cardiovascular risk.

Key words: cardiovascular risk, high blood pressure, risk factors

СТЕПЕНЬ СВЯЗИ ФАКТОРОВ РИСКА У ПОПУЛЯЦИИ С ПОВЫШЕННЫМ ДАВЛЕНИЕМ С РАЗЛИЧНЫМ УРОВНЕМ КАРДИОВАСКУЛЯРНОГО РИСКА

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✓ Резюме

При наличии 22-х поведенческих факторов риска наблюдается увеличение случаев выявляемости повышенного давления более чем в 9,5 раз. С большей выявляемостью наблюдались такие осложнения, как гипертрофия левого желудочка (у 85,3%), цереброваскулярные болезни (у 90,9%), инфаркт миокарда (у 80,0%), сердечная недостаточность (у 87,5%), симптомное поражение периферических артерий (в 66,7% случаев), сахарный диабет (у 75,0%), которые наряду с повышенным давлением являются факторами, влияющие на прогноз суммарного сердечно-сосудистого риска

Ключевые слова: кардиоваскулярный риск, повышенное артериальное давление, факторы риска

YUQORI QON BOSIMI BO'LGAN AHOLIDA KARDIOVASKULAR XAVF OMILLARINING TURLI BOSQICHLARI BILAN ALOQALILIK DARAJASI

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Xulq-atvorning 22ta xavf omillari mavjud bo'lganda, yuqori qon bosimini aniqlash holatlari 9,5 baravardan ko'proqqa oshadi. Chap qorincha gipertrofiyasi (85,3%), serebrovaskulyar kasalliklar (90,9%), miokard infarkti (80,0%), yurak etishmovchiligi (87,5%), periferik arteriyalarning simptomatik shikastlanishi (66,7% hollarda), qandli diabet kabi asoratlar mellitus (75,0%), bu yuqori qon bosimi bilan birga umumiy yurak-qon tomir xavfi prognoziga ta'sir qiluvchi omillardir.

Kalit so'zlar: yurak-qon tomir xavfi, yuqori qon bosimi, xavf omillari

Relevance

The results of numerous studies of the evolution of arterial hypertension (AH) have long been of interest all over the world, and Uzbekistan is no exception. Of course, not only cardiologists, but all doctors, especially those who work in the field of epidemiology and prevention of non-specific chronic diseases (NCD), should not avoid this serious medical and social problem associated with hypertensive “interventions”. The pandemic form is a continuation of the modern course and manifestations of arterial hypertension [1, 15, 4, 13]. A number of studies have been carried out, as a result of which we can offer several scientific versions to change the situation in this problem in Uzbekistan. In particular, the list of risk factors in our region should include new risk factors, including gender, age, smoking status, blood pressure (AH) and total cholesterol (TC), cardiovascular complications (CVS) in patients with arterial hypertension, ethnic minorities, socio-pedagogical and nutritional characteristics of patients and body mass index (BMI). The values of these risk factors (RF) should be taken into account, that is, the risk assessment of cardiovascular complications (CV) should be carried out not only in specified arterial hypertension (AH), but also in patients with prehypertension (PrH) to determine the prospects for population tactics and high-risk strategies in patients. In other words, the risk of morbidity with AH and CVS from it is significantly higher in the population with the presence of these risk factors. Insofar as these population results differ significantly from the data obtained by other researchers in various populations and regions of the globe [6,9,10, 2, 12, 5].

The aim of the study: To confirm these population versions, we set out to conduct a more in-depth analysis to study and assess the relationship between the main risk factors in the population with PrH and different degrees of AH development with different levels of the total risk of developing the cardiovascular continuum in the conditions of the Ferghana Valley of Uzbekistan.

Material and methods

The material of our study was the unorganized population of the city of Andijan in the amount of 603 women and men of various ages. A 10% representative sample was drawn at random. Standard clinical, biochemical and instrumental studies, as well as questionnaires were used.

Result and discussion

The presented results confirm that the highest degree of association between the development of PrH and an insignificant additional risk (IAR) of the development of the cardiovascular continuum (CVC) in the conditions of the Ferghana Valley is observed with the following factors: disadvantaged social status (DSS), episodes of use of hypertensive drugs (EUPHD), NSP, smoking and low educational status (LES), compared with them 1.2 times less with predominantly physical labor (PRFL) and ICH, in 1.3 times less with alcohol consumption (AC), 1.8 times less with low consumption of vegetables and fruits (LCVF), predominant consumption of spicy and salty foods (PCSSF), psycho-emotional factor (PEF), predominant consumption of meat and flour dishes (PCMFD) and low physical activity (LPA), 2 times less with the abuse of strong tea and coffee (ASTC), Low medical control (LMC), hypercholesterolemia (HCH) and nasvay abuse (NA), 1.2 times less with hypertriglyceridemia (HTG), 2.5 times less with body mass index (BMI), 2.8 times to a lesser extent among the indigenous population, 3.2 times less with predominantly mental work (PRMW) and significantly less (9.9 times, $P<0.001$) with poor living conditions (PLC).

The findings in this regard are summarized and shown in Table 1.

Among other things, we considered the effect of arterial hypertension by degrees against the background of risk factors on cardiovascular risk. All this is reflected in Table 1.

When considering the relationship between the development of AH of the 1st degree or the formation of a low additional risk group (ARG) of the cardiovascular continuum (CVC), as can be seen from Table 1, it is most noted with EUPHD, smoking, LES, PRFL, DSS and NSP, in 1.6 times less with alcohol consumption and among non-indigenous people, 1.7 times less with PCSSF, low consumption of vegetables and fruits and NA, 1.8 times less with LPA, LMC and PEF, 1.9 times with ASTC, HCH, BMI and PCMFD, 2 times less with PRMW, 2.9 times less in the indigenous population and the least (7.9 times) with PLC.

In the group of those surveyed with grade 2 hypertension and an average additional risk of this nature, the relationship to the greatest extent took place with such risk factors as smoking, LES,

EUPHD, DSS, NSP, PRFL, AC and NC, and 1.6 times less with PCSSF, NA, LCVF, LPA and HCH, 1.9 times less with LMC, BMI, ASTC, HTG and PRMW, 3 times less among the indigenous population and 5.8 times less with PLC.

Table 1

Comparative characteristics of the relationship of the main risk factors in the population with prehypertension and arterial hypertension with different levels of the total risk of developing cardiovascular disease in the Ferghana Valley

№	Risk factors	S PrH [Insignificant DP]			AH 1 stage [Low FR]			AH 2 tbsp. [Medium FR]			AH 3 tbsp. [High FR]			HBP [Additional risk]		
		Value r++	χ^2	P	Value r++	χ^2	P	Value r++	χ^2	P	Value r++	χ^2	P	Value r++	χ^2	P
1	NSP	0,48	59,2	<0,01	0,49	50,3	<0,01	0,51	59,8	<0,01	0,56	60,7	<0,01	0,49	56,4	<0,01
2	PLC	0,10	6,3	<0,05	0,14	8,4	<0,05	0,17	11,2	<0,05	0,20	13,6	<0,01	0,15	10,0	<0,05
3	ASTC	0,24	32,4	<0,01	0,27	34,5	<0,01	0,29	34,4	<0,001	0,32	37,2	<0,001	0,28	34,6	<0,001
4	BMI	0,19	25,1	<0,05	0,24	33,1	<0,001	0,26	34,9	<0,001	0,29	37,5	<0,001	0,25	32,7	<0,001
5	LMC	0,27	32,8	<0,001	0,30	35,9	<0,001	0,33	36,1	<0,001	0,36	39,2	<0,001	0,31	36,0	<0,001
6	LCVF	0,29	34,5	<0,01	0,33	37,3	<0,01	0,36	39,8	<0,01	0,38	41,3	<0,001	0,34	38,3	<0,01
7	DSS	0,56	60,7	<0,001	0,57	60,2	<0,001	0,59	62,0	<0,001	0,60	62,4	<0,001	0,58	61,3	<0,001
8	HTG	0,23	30,2	<0,001	0,25	32,8	<0,001	0,28	34,5	<0,001	0,31	37,8	<0,001	0,29	32,6	<0,001
9	LPA	0,28	33,1	<0,01	0,31	36,3	<0,001	0,34	38,0	<0,001	0,40	40,2	<0,001	0,33	36,9	<0,001
10	PCSSF	0,26	34,5	<0,01	0,29	38,7	<0,001	0,31	40,3	<0,001	0,33	44,3	<0,001	0,30	39,5	<0,001
11	PEF	0,25	33,6	<0,01	0,27	35,0	<0,01	0,28	37,4	<0,01	0,32	39,1	<0,001	0,28	36,3	<0,01
12	NA	0,30	31,0	<0,01	0,34	37,3	<0,001	0,37	39,0	<0,001	0,38	40,4	<0,001	0,35	36,9	<0,001
13	EUPHD	0,51	62,4	<0,001	0,55	63,2	<0,001	0,58	64,0	<0,001	0,60	66,7	<0,001	0,56	64,1	<0,001
14	PCMFD	0,29	33,4	<0,01	0,30	33,8	<0,01	0,31	34,1	<0,01	0,32	35,0	<0,01	0,31	34,2	<0,01
15	PRFL	0,42	50,9	<0,01	0,44	51,0	<0,01	0,46	53,4	<0,01	0,40	48,3	<0,05	0,43	50,9	<0,01
16	AC	0,38	46,8	<0,01	0,41	49,9	<0,01	0,44	52,6	<0,001	0,42	50,0	<0,001	0,41	49,8	<0,001
17	HCH	0,26	32,3	<0,001	0,27	34,6	<0,01	0,31	37,8	<0,001	0,33	38,7	<0,001	0,29	35,9	<0,001
18	ICH	0,40	48,2	<0,001	0,42	49,5	<0,01	0,44	50,7	<0,001	0,47	53,4	<0,001	0,43	38,0	<0,001
19	LES	0,49	58,4	<0,001	0,53	59,8	<0,01	0,56	60,8	<0,01	0,58	61,6	<0,01	0,54	60,2	<0,01
20	Smoking	0,51	59,0	<0,01	0,53	59,9	<0,01	0,57	61,9	<0,01	0,59	62,0	<0,001	0,55	60,7	<0,001
21	PRMW	0,23	19,8	<0,05	0,25	31,2	<0,05	0,28	33,4	<0,05	0,29	33,8	<0,05	0,26	29,3	<0,05
22	NC	0,18	22,0	<0,05	0,19	22,4	<0,05	0,21	24,2	<0,05	0,23	25,6	<0,05	0,19	23,5	<0,05

From the presented results of the analysis in table 1 it also follows that there is a connection between arterial hypertension III Art. and high additional risk in the most pronounced degree with DSS, EUPHD, LES and smoking, to a moderate degree with ICH and AC, 1.6 times less with LCVF, LPA, PCSSF, NA and PRFL, 1.8 times less degree with PCMFD and PRMW, 2.6 times less among the indigenous people and 4.6 times less with PLC.

In general, cases of HBP among the surveyed population of Andijan were most associated with NSP, DSS, EUPHD, PRFL, LES, smoking and AC. A comparatively lesser degree of this nature of the positive correlative relationship of HBP was noted with LCVF, PCSSF and ICH, 2 times less with ASTC, BMI, LMC, HTG, PEF, NA, PCMFD, HCH, 2.2 times less with PRMW, 2.8 times less among the indigenous population and the least (6.4 times) with PLC.

Not to mention the fact that among the surveyed population there was a higher incidence of epidemiological risk factors for PrH and AH: LPA - in 11.3%, HTG - in 14.9%, PEF - in 16.6%, LMC - in 18, 1%, HCH - in 18.4%, AC - in 24.0%, BMI - in 42.7% and smoking - in 43.9%. They were significantly more often recorded in men ($P < 0.01$).

It should be noted that in the presence of 22 noted behavioral risk factors, there is an increase in cases of detection of PrH and AH by more than 9.5 times ($P < 0.001$). ACS were observed with higher detectability, such as LVH (in 85.3%), CVD (in 90.9%), MI (in 80.0%), HF (in 87.5%), CHF (in 90.0%) %, symptomatic lesions of peripheral arteries (in 66.7% of cases), CKD (in 81.7% of cases) and diabetes mellitus (in 75.0%), which, along with HBP, are factors affecting the prognosis (total cardiovascular vascular risk).

Conclusions

Thus, we dare to conclude that the high prevalence of HBP (43.4%), its risk factors and features of ACS in hypertensive patients require continued efforts to preventive impact on the lifestyle of the modern population of the Ferghana Valley and the maximum study of local risk factors for hypertension. In turn, the realization of the risk of developing PrH and AH, as well as their complications, is induced by these factors. Taking them into account as a whole makes it possible, firstly, to quite clearly predict the development of PrH, AH and CVC from them, and secondly, it makes it possible to increase the effectiveness of preventive programs and reduce the total cardiovascular risk to a minimum.

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