



PREVENTION OF ARTERIAL HYPERTENSION IN PRIMARY HEALTH CARE

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Abstract

Hypertension is one of the main risk factors for the occurrence of cardiovascular complications that cause high mortality. The aim of the study was to identify individuals with elevated blood pressure levels and risk factors for hypertension in the Syrdarya region of the Republic of Uzbekistan. The results of the study showed that the highest relative risk is obesity and overweight - they increase the risk of developing the disease by 10 and 8 times, respectively.

Keywords: Arterial hypertension, risk factors, relative and absolute risk.

Introduction

In recent years, the prevalence of non-communicable diseases has increased significantly, which experts consider as an impending epidemic; a significant proportion in the structure of these diseases are cardiovascular diseases, and among them - arterial hypertension (AH). The basis for the prevention of these diseases is the identification of the most significant risk factors, their prevention and control. Monitoring of major risk factors (RFs) can be a tool to prevent disease progression. Thus, about 75% of cases of cardiovascular diseases are associated with smoking, malnutrition and lack of physical activity, which leads to metabolic disorders, overweight and obesity, and as a result, an increase in blood pressure (BP) [1, 2, 3].

AH is one of the main risk factors for the occurrence of cardiovascular complications that cause high mortality [4, 11, 12, 17]. The main risk factors for hypertension, which also affect the course and outcome of the disease, include: smoking, obesity, physical inactivity, impaired glucose tolerance, diabetes mellitus, hypercholesterolemia, etc. [5, 6, 7, 8, 13].



According to population studies, individuals with cardiovascular risk factors are more common than those without them [9, 10, 11]. After detecting elevated blood pressure, it is imperative to evaluate the risk factor to select the correct method of treatment [1, 14, 15, 16].

Thus, an important task of improving the quality of life and increasing its duration remains the early detection and treatment of individuals with risk factors for hypertension.

The purpose of the study was - the identification of individuals with elevated blood pressure and risk factors for hypertension in the Syrdarya region of the Republic of Uzbekistan.

Materials and Methods of Research:

To study the prevalence of risk factors in rural areas, a pilot Syrdarya region was chosen. The design of the study was screening for elevated blood pressure followed by assessment of risk factors in individuals with identified elevated blood pressure levels. Individuals aged 30 and over. Inclusion factors: age, proximity. Exclusion factors: persons under 30 years of age.

The study of risk factors for hypertension with blood pressure measurement was carried out among 1685 families, with a total of 8132 people. Information was collected from 6644 people. aged 30 and over. Persons aged 30 to 60 participated in the screening - 4275 (64.3%) people: the largest number were persons aged 30-39 and 40-49 years. Residents over 50 years old - 2369 (35.7%) people (Fig. 1). The respondents studied the presence of risk factors, increased blood pressure.

Results and Discussion:

It was found that 3840 (57.8%) persons had FR AH, among them 1327 (34.6%) men and 2513 (65.4%) women. Most often, hereditary predisposition was detected - 1280 people (19.3%). The next risk factor was smoking: out of 3840 individuals, 744 (11.2%) were smokers. Low physical activity was noted in 921 (13.9%) persons; mostly, they were women and pensioners. The next risk factor identified among the rural population was excessive salt intake: 580 (8.7%) people preferred salty foods.



An increase in blood pressure above 140/90 was registered in 976 (14.7%) people, of which 531 (54.4%) patients were registered in the SVP for hypertension, and in 463 (45.6%) people, an increase in blood pressure was revealed for the first time. All individuals with RF in the SVP were measured for height, weight, and body mass index (BMI) (Table 1).

Table 1 Distribution of persons with risk factors by BMI, abs (%)

| Body mass index | Total | | With arterial hypertension | | Without arterial hypertension | | R |
|-----------------|-------|------|----------------------------|----------|-------------------------------|----------|----------|
| | abs | % | abs | % | abs | % | |
| up to 25 | 3236 | 84.3 | 528 | 16.3±0.6 | 2708 | 83.7±0.6 | <0.001 |
| 25-30 | 497 | 12.9 | 361 | 72.6±2.0 | 136 | 27.4±2.0 | <0, 0 01 |
| 31-35 | 107 | 2.8 | 87 | 81.3±3.8 | 20 | 18.7±3.8 | <0, 0 01 |
| Total | 3840 | 100 | 976 | 25.4±0.7 | 2864 | 74.6±0.7 | <0, 0 01 |

In general, among the respondents with risk factors, there were almost 3 times more people without increased blood pressure than with elevated blood pressure - 25.4% and 74.6%, respectively (P < 0.01), however, taking into account the value of BMI, its significance is clearly seen. as a risk factor for hypertension. Calculation of BMI showed that in persons with overweight in 72.6, and with obesity - in 81.3% of cases, AH occurred, while among persons without AH, overweight and obesity occurred in 27.4 and 18.7% respectively (P< 0.01). Analysis of blood pressure figures showed that 345 out of 976 individuals (35.3%) had systolic blood pressure in the range of 141-150 mmHg , 275 (28.2%) - 151-160 mmHg , 156 - (15.9%) - 161-170 mmHg , 109 - (11.2%) - 171-180 mm Hg _ 91 (9.3%) patients had systolic blood pressure over 180 mm Hg .. Most of the people with elevated blood pressure - 707 (72.4 %) had diastolic blood pressure to 100 mmrt. Art., 223 (22.8%) - within 101-110, and 46 (4.8%) patients - more than 110 mmRT. st..

An analysis of the results obtained by risk factors made it possible to identify the relationship between risk factors and the likelihood of AH (Table 2).

Table 2 The influence of risk factors on the occurrence of arterial hypertension

| Risk factors | AG is, abs | AG no, abs | Total |
|--------------|------------|------------|-------|
| Eat | 912(a) | 2928 (b) | 3840 |
| No | 64 (c) | 2740 (d) | 2804 |
| | 976 | 5668 | 6644 |



It was found that out of 976 individuals with elevated blood pressure, 912 had one or more risk factors. 64 individuals in this group did not have RF. There were 2928 persons with RF without increased blood pressure. Persons with normal blood pressure and without RF - 2740. The total number of persons with RF was 3840 people. The risk of factors affecting the development of AH was 0.238, the risk of developing AH in the absence of risk factors was 0.023; The risk difference (RR) or the risk of developing hypertension in individuals with RF is 21% greater than in individuals without RF. The relative risk (RR) was 10.4. This means that the risk of developing hypertension in individuals with RF is 10.4 times higher than in individuals without RF. The frequency of new cases of hypertension in the studied population was 0.14. We also analyzed the degree of significance for the occurrence of AH of individual risk factors. Of the 976 patients with hypertension, 337 people had a burdened heredity, of which 639 had no heredity. Persons with a normal level of blood pressure and with aggravated heredity were 943, and those with unaggravated heredity - 4725 people (Table 3).

Table 3 Influence of heredity on the risk of arterial hypertension

| Heredity | AG is, abs | AG no, abs | Total |
|------------------|------------|------------|-------|
| weighed down | 337 (a) | 943(b) | 1280 |
| Not weighed down | 639 (c) | 4725 (d) | 5364 |
| | 976 | 5668 | 6644 |

The risk of the influence of heredity on the development of AH - the absolute risk - was 0.263, the risk of AH in the absence of this risk factor was 0.119. RR or the risk of developing hypertension in individuals with a burdened heredity is 14% greater than in individuals with an uncomplicated heredity. The RR was 2.2, i.e. AH is 2.2 times more likely to develop in people with aggravated heredity. Using the same method, we calculated the risk of AH in smokers (Table 4).

Table 4 The effect of smoking on the risk of arterial hypertension

| Patients | AG is, abs | AG no, abs | Total |
|-------------|------------|------------|-------|
| smokers | 186(a) | 558 (b) | 744 |
| Non-smokers | 790 (c) | 5110 (d) | 5900 |
| | 976 | 5668 | 6644 |



It turned out that the risk of the impact of smoking on the occurrence of hypertension was 0.25, the risk of hypertension in the absence of this risk factor was 0.13. Smokers are 12% more likely to develop hypertension than non-smokers. The RR was 1.92, i.e. The risk of developing hypertension in smokers is almost 2 times greater than in non-smokers. The risk of exposure to excess weight on the occurrence of hypertension was 0.726, the risk of hypertension in people with normal weight was 0.087. This means that the risk of developing hypertension in overweight people is 63.9% higher. The RR was 8.3, i.e. The risk of hypertension in overweight people is 8.3 times higher than in people with normal body weight.

Table 5 Effect of excess weight on the risk of arterial hypertension

| Body mass | AG is, abs | AG no, abs | |
|-----------|------------|------------|------|
| Excess | 361(a) | 136 (b) | 497 |
| Normal | 528 (c) | 5512 (d) | 6040 |
| | 889 | 5648 | 6537 |

The calculation of the absolute and RR for obesity showed that the risk of developing hypertension in obesity and normal body weight was 0.81 and 0.08, respectively.

Conclusion and conclusions:

Of the total number of rural residents over the age of 30 who participated in the study, elevated blood pressure was detected in 14.7% of cases, while the prevalence of blood pressure among people with a BMI of 26-35 is 4.4-5 times higher than with a BMI less than 25. Of the total number of persons with elevated blood pressure, only 54.4% of people are registered with SVPs, which indicates insufficient identification of such persons, especially in the early stages of hypertension. AH risk factors were identified in 57.8% of the surveyed population, and among women they were noted 1.9 times more often than among men . the most important risk factors for hypertension are obesity (RR - 10), overweight (RR - 8.3), heredity (RR - 2.2), smoking (RR - 1.92).



Thus, among individuals with certain risk factors, arterial hypertension may develop more often than in the absence of these factors. Obesity and overweight constitute the highest relative risk, increasing the risk of developing the disease by 10 and 8 times, respectively.

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