



Epidemiological Description of Arterial Hypotonia in Adolescents (In the Example of Fergana Region)

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ABSTRACT

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The study analyzed data from a representative sample of 1,465 adolescents and young men involved in a one-stage epidemiological study. The prevalence of arterial hypotonia (AG) was 18.6% (10.8% among adolescents and 45.2% among boys; $P < 0.001$). The identified results should be taken into account in the development and implementation of prevention programs for adolescents and adolescents living in the regions of Uzbekistan.

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Improving health care involves, first and foremost, a radical reform of preventive practice and theory. To date, this activity cannot be considered satisfactory. The growing epidemic of all diseases and related disabilities and casualties among the population, overcrowded hospitals and emergency medical services, which require preventive science and practice, proves that preventive science and practice in the first generation of medicine are not at the required level. [13,14,15, 17,18].

Extensive epidemiological studies in recent years have confirmed that modern clinicians should be given more space for their preventive activities, so that a "weapon" can be created to stop many diseases, especially the epidemic of cardiovascular diseases [19,20,21,22,23].

Admittedly, the first "epidemiological marches" against chronic non-communicable diseases began in the 1930s and standardized screening methods were introduced in epidemiology in the 1960s. "The main risk factors" of non-communicable and cardiovascular diseases were identified in the 1980s. Prophylactic programs were implemented in different countries and began to achieve great positive results in the 1990s [8,11,12].

We tried to identify the "pluses-minuses" of epidemiological studies concerning arterial hypotension in the work. The following were the reasons for this:

1) Most epidemiological studies have been conducted on coronary heart disease (CHD), arterial hypertension and related coronary heart disease;

2) Epidemiological studies have been conducted mainly in the adult population and to a lesser extent, the adolescent population is less used as an epidemiological object;

3) Almost 95% of the epidemiological results date to the middle and end of the XX century, and their application to the modern population is almost impossible. Therefore the need for new epidemiological studies has arisen;

4) Special research on the epidemiology of hypotension and in Uzbekistan and the adolescent population - not conducted at all;

5) Prophylactic programs for adolescents have not been developed and implemented due to the epidemiological consequences of arterial hypotension.

These scientific observations and literary findings provided the basis/motivation for research planning. Reviews/conclusions confirming the scientificity, novelty, unexplored and practicality of the subject of the planned research were obtained from experts and the Coordinating Council under the Ministry of Health of the Republic of Uzbekistan. After that, the dissertation work was carried out in accordance with the "golden rules" of epidemiological research, and the expected results were fully achieved.

The study was organized and conducted with specific features, in contrast to other works close to it and mostly done abroad [1,2,3].

In particular, students of Kosonsoy Economic and Industrial College of Namangan region were targeted for inspection. This unorganized adolescent population covers the entire Fergana region and is considered convenient for screening by epidemiological characteristics or integrates a modern representative population that fully meets WHO requirements (WHO, 2003), the number of adolescents is sufficient to determine statistically reliable epidemiological patterns, and the study area are not previously involved in epidemiological studies, verification of adolescents included in the study is easier).

The study was conducted in three phases: screening of the adolescent population using questionnaire methods (*first phase*), in-depth complex special examinations in adolescents diagnosed with arterial hypertension (*second phase*), and assessment of risk factor relevance to arterial hypertension by specific biostatic examination methods (*third phase*).

The sample size was determined using a special formula for screening and according to WHO (2003) criteria –in the amount of 1,500 (population of unorganized adolescents aged 15-22 years). Absolute screening – 1465 of these representative adolescent populations (97.8%) were fully screened.

The standardization level of the inspection was ensured taking into account the recommendations of WHO experts (2000) and the methodological guidelines of the Russian experts [11,15,16].

These epidemiological, clinical, biochemical, instrumental, and special (additional) screening methods were used, and risk factors were identified. A total of 30 directions and 31,955 inspections were carried out. The results obtained were analyzed and evaluated using modern standard statistical software.

Thus, the first simultaneous epidemiological study of the epidemiology of arterial hypertension in Uzbekistan was provided and fully conducted in the adolescent population, with the rules of standardization and harmonization of their characteristics, the results of which can be compared globally.

The study results were analyzed and evaluated in 5 areas based on the goals and objectives and ensuring their full implementation.

In particular, the prevalence characteristics of arterial hypotension in the adolescent population in the Fergana (first line), epidemiological description of the main risk factors in the adolescent population (second line), clinical features of arterial hypotension in the adolescent population (third line), correlation epidemiological (fourth direction) and the development of a program for early detection and prevention of arterial hypotension in adolescents (fifth

direction) were identified, observed and described with scientific and practical potential.

The need for epidemiological surveys with this approach is recommended at the WHO (2003) level and recognized by researchers [5,6,11]. It should be noted, however, that the studies that set out the objectives of the study and obtained the results were not conducted by researchers in the adolescent populations, and there are no similar data in the sources for comparison. Hence, we believe that this study, which is the first step, opens a new direction or gain scientific potential by involving researchers not only in arterial hypertension, which is traditional in prophylactic cardiology, but also in neglected arterial hypotension.

The results (Chapter 3.1) showed that arterial hypotension and its specific types in the organized 15-22-year-old adolescent population are age-related and are defined by the following levels:

Arterial Hypertension (AH) - 18.6 percent (15-17 years - 10.8 and 18-22 - 45.1 percent), primary AH - 12.9 percent (15-17 - 8.6 and 18-22 - 27 , 4%), secondary AH - 5.6% (in teenagers - 2.2 and in adolescents), physiological AH - 4.2% (15-17 years - 4.1% and 18-22 - 37.7%), pathological AH - 14.4% (at 15-17 - 10.4 and at 18-22 years - 28.2%), acute AH - 7.2% (at 15-17 - 4.0% and in 18-22 - 18.2 percent), chronic AH - 11.5 percent (in 15-17 - 6.8 and in 18-22 - 26.8 percent), neurocardiac AH - 13.7 percent (15-17 - 9.9 percent and 18-22 - 27.7 percent), postprandial AH - 9.8 percent (15-17 - 4.2 and 18-22 - 28.6 percent), orthostatic AH - 4.2% (in teenagers - 3.1% and in adolescents - 8.1%), AH - 2.9% (in 15-17 - 2.3 and in 18-22 - 4.8%) and cardioarrhythmic AH - 3.1 percent (in 15-17 - 2.2 and in 18-22 - 6.3 percent).

Thus, the study found that AH is more common in teenagers (15-17 years) and adolescents (18-22 years), and it requires "wider attention" not only clinicians, but also all interns and specialists in preventive medicine.

Then its modern aspects open up more deeply, and the weight of the therapeutic continuum is undoubtedly significantly reduced in the adolescent population.

Results are not available in many literature, and researchers provide data on the prevalence of it in more clinical trials [4,7]. However, these statistics do not reflect true epidemiological descriptions of the disease/nosological unit, and therefore, based on them, it is not possible to implement active/effective medical prophylaxis in adolescents with Arterial Hypertension [9,10].

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