

ACTUAL ISSUES OF ORGANIZING NURSING CARE BY ESSENTIAL ARTERIAL HYPERTENSION IN ADOLESCENTS IN PRIMARY HEALTH CARE

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Abstract. *The given article describes a preventive examination and its results conducted at secondary school N.46 of Kibray district, Tashkent region. The purpose of the study was based on a comprehensive assessment of the activities of nursing staff, to assess the health status and risk factors for the development of disease in adolescents. Essential arterial hypertension was identified in 21.5% of adolescents. The results of the study showed that the most significant provoking factors were a sedentary lifestyle, excess weight, fatigue during extracurricular activities, sleeping less than 6 hours a day and consuming a lot of salt and smoking. During nursing care, patients were prescribed additional methods, such as: a salt-free diet, reducing calorie intake, taking medications regularly and engaging in active sports.*

Keywords: *essential arterial hypertension, primary health care, organization of nursing care, adolescents, risk factors.*

Relevance of the problem.

It is important to suggest that essential arterial hypertension (EAH) is a a main disease, with the only clinical symptom is an increase in blood pressure [8.P. 202-204]. Factors that play an important role in the occurrence and development of hypertension in young people include: age, gender, smoking, stress, hereditary predisposition, low physical activity, excess body weight, disorders of carbohydrate, lipid and purine metabolism. According to the studies conducted in our country, hypertension is observed in 2.4-18% of children, depending on age [6.P. 74-78]. In children and adolescents, hypertension is much less common than in adults [8.P. 202-204]. Up to 10 years of age, essential hypertension is observed in 10% of children, and symptomatic in 90% of children; with age, the number of cases of essential hypertension increases and reaches 35% in adolescents. Recently, there has been a tendency towards an increase in the incidence of hypertension among children, which is the result of the increased prevalence of obesity among children and adolescents [8.P. 202-204]. Children and adolescents with hypertension most often experience moderate hypertension, which is expressed as a slight increase in blood pressure. Clinical data indicate the increased reactivity of heart rate (HR) and blood pressure in response to stress or other stimuli [6.P. 74-78].

According to the results of epidemiological studies, it has been established that in overweight children, hypertension reaches 30%; in addition, with an increase in body mass index (BMI), the number of cases of hypertension increases [8.P. 202-204]. Children and adolescents with high blood pressure are more likely than those with normal blood pressure to be diagnosed with cardiovascular risk factors such as hyperinsulinemia, abdominal obesity, elevated triglyceride (TG) levels, and low high-density lipoprotein (HDL) levels [3.P.152 -156]. The question remains about the future fate of hypertension in children and adolescents.

According to long-term observation, hypertension becomes progressive in 25% of adolescents, and remains constantly elevated in 33-42% of adolescents [8.P. 202-204]. A clear relationship was identified between blood pressure levels in childhood and adolescence and blood pressure levels in adults [3.P.152-156]. As children aged 7-17 years grow older, the incidence of hypertension increases from 3.9 to 14.3%, and in young people by the age of 30 it increases to 18.4% [6.P. 74-78]. If an increase in systolic blood pressure (SBP) above the 90th percentile was observed in childhood, the probability of having an increased SBP level in adulthood is 24% [4.P. 152-156]. A number of studies have assessed the dependence of the incidence of hypertension on gender. Thus, according to the EPOCH study (2004), it was revealed that at the age of 20-29 years, women suffered from hypertension in 1.6% of cases, men - in 4.8%, which proved the more frequent occurrence of hypertension in men at a young age [4.P. 152-156]. A weak relationship between gender and the level of SBP and diastolic blood pressure (DBP) was shown. The correlation coefficient for SBP was 0.39 in men, compared to 0.38 in women, while for DBP it was 0.29 versus 0.26 [8.P. 202-204]. According to other studies, no significant differences in blood pressure levels were identified in men and women with hypertension [4.P. 152-156]. Further research is needed to explain differences in the relationship between gender and BP levels in children and adults. A number of studies have shown the influence of heredity factors on the formation of hypertension. The prevalence of hypertension is significantly higher in families whose members suffer from hypertension compared to families of healthy people [3.P.152-156]. The influence of heredity on the occurrence of hypertension is detected in 20-40% of patients with this pathology. If one of the parents has hypertension, the risk of developing hypertension in children is 27%, and if both parents have the disease, the risk increases to 50%.

It was also found that the incidence of hypertension in children is also determined by gender, if one of the parents is sick, hypertension was observed in girls - 2.4 times more often than in the control group, and in boys 1.9 times more often than in the control group ; with illness of both parents - 6.2 and 3.9 times more often, respectively, compared to the control group [3.P.152-156]. It is well known that smoking increases the risk of developing CVD. In recent years, there has been a tendency towards a decrease in the age at which regular smoking begins: up to 23% of people aged 15-24 years old smoke and up to 30% of people aged 25-34 years old [3.P.152-156]. Latest data from Canadian scientists show that at the age of 15-17 years, about 25% of girls and up to 19% of young people smoke, and by the age of 19 these figures are compared to 31%. In addition, there was a difference in the number of cigarettes smoked per day - young men smoke 17% more than girls and have a greater tendency to rapidly increase the number of cigarettes smoked [3.P.152-156]. It has been proven that one of the risk factors for the development of hypertension is low physical activity. The results of prospective studies show that people leading an inactive and sedentary lifestyle have a 20-50% increased risk of developing hypertension compared to people leading a physically active lifestyle [6.P. 74-78].

Several studies in both adults and young people have revealed a close relationship between blood pressure levels and body mass index [4.P. 152-156]. Thus, 73% of patients with hypertension have increased body weight. Overweight patients develop hypertension 8 years earlier, and the mortality rate among such patients is 12 times higher than in the general population [6.P. 74-78]. When examining young people, similar data were obtained. If one of the parents is obese, the risk of developing overweight in a child is 30-60%; if both parents are affected, then the probability of developing obesity reaches 80%, so it is necessary to take into account the

influence of heredity in young people [2.P.100–104]. According to the Community Hypertension Clinic Study, obese people were twice as likely to have hypertension as people with normal body weight. The Framingham study found an association with an increase in systolic blood pressure of 4 mmHg. with an increase in body weight by 4.5 kg [3.P.152-156]. The rise in obesity among children is of particular concern. Almost all over the world, the number of obese children doubles every three decades. Over the past 20 years, the prevalence of obesity among children aged 6 to 11 years has doubled (from 7 to 13%), and among adolescents aged 12 to 19 years it has almost tripled (from 5 to 14%). Currently, up to 25% of adolescents are overweight, and 15% are obese [6.P.74-78]. A significant increase in the incidence of obesity among the 35-year-old population is expected by 2020 [4.P. 152-156]. Numerous studies over the years have firmly established the connection between increased BMI in childhood and the development of hypertension in adults [2.P.100–104]. Insulin resistance is currently considered a pre-diabetic condition and is often observed in children with increased body weight. A shift in the lipid spectrum to the atherogenic side is typical for children with MS in combination with hypertension, which increases the likelihood of developing coronary heart disease and diabetes mellitus (DM) [2.P.100–104]. Data on the relationship between blood pressure and disorders in the lipid spectrum of the blood are contradictory; however, a correlation between the increase in the level of total cholesterol (TC) in the blood serum and the level of blood pressure has been revealed [2.P.100–104].

Materials and research methods

This study describes a preventive examination and its results conducted at secondary school N.46 of Kibray district, Tashkent region. The purpose of the study was: based on a comprehensive assessment of the activities of nursing staff, to assess the health status and risk factors for the development of disease in adolescents. A prospective analysis of 201 questionnaires from adolescents with EAH was also conducted.

An analysis of the quality of medical care provided to adolescents with EAH was carried out among 30 nurses working in the central multidisciplinary clinic of Kibray region.

For solving the problems and obtain reliable and objective research results, we used a complex of modern social, hygienic and general scientific research methods: analytical, sociological (questioning), statistical and instrumental.

Object of study:

201 teenagers from the secondary school N.46 in Kibray district, Tashkent region. Nurses at the central multidisciplinary clinic of Kibray region, providing primary health care to the population with hypertension.

Subject of study:

-Organization of nursing care for adolescents with EAH in primary health care.
social predictors of prognosis and the process of organizing primary health care (PHC) for adolescents suffering from EAH.

Units of observation:

Group I (control) - 171 practically healthy adolescents, who went to the clinic with a one-time increase in blood pressure and were not registered with a dispensary.

Group II (main) - 30 adolescents with EAH, registered at the dispensary, receiving standard nursing care from nurses who have undergone special training in hypertension, optimized by a set of measures (introduction of modern clinical protocols into the nursing process, remote monitoring, organization of "Health Schools for Patients" AG")

The criteria for inclusion of patients in the study were:

- attachment to a territorial clinic;
- voluntary informed consent;
- age 10–19 years.

Exclusion criteria:

- patient’s refusal to participate in the study;
- presence of severe forms of concomitant diseases;

The research program was implemented in several stages in accordance with the purpose and objectives. The study included four stages and covered two years (2020-2021).

Stage I – preparatory (organizational);

Stage II – collection of medical and social information;

Stage III – introduction of new approaches;

Stage IV – analysis of the obtained data and effectiveness.

The stages and design of the study are presented in Table 2.1.1.

In accordance with the inclusion and exclusion criteria, 201 adolescents with EAH were initially selected to be subject to preventive examination under an age-specific medical examination program and the implementation of an optimized nursing care program. All patients included in the study, upon initial visit to the clinic, underwent primary riskometry, a questionnaire (levels of quality of life, adherence to prevention and anxiety) and subsequent examination according to a standard clinical examination program. Patients were interviewed using a risk factor questionnaire, after which anthropometry, tonometry, ECG and clinical examination were performed in the physician's examination room.

Table 2.1.1. Research stages

<u>Stage</u>	<u>Unit of observation</u>	<u>A source of information</u>	<u>Number of patients</u>	<u>Research method</u>
Research Stage I (2019) – organizational and analytical. Definition of object, volume, unit of observation; selection and description of research methods, order of research. Retrospective analysis of the incidence and frequency of EAH in the community center of Kibray district of the Tashkent region for 2015 - 2019.	-Medical documentation of patients with hypertension who underwent routine medical examination in 2015–2019.	- Report on the number of diseases registered in patients living in the service area of the medical institution”; - “Statistical coupon for registration of final diagnoses”, form N. 025-2/u; - “Registration register for outpatients”, form N. 074/u; - "Outpatient card patient", form N. 025; - “Control card of dispensary observation of the patient”, form N. 030/u.	1082 patients with CSD	<u>Analytical</u> <u>statistical</u> <u>Sociological</u>
Stage II (2020-2021) – Prospective analysis of patients with hypertension registered at the dispensary. collection of medical and social information. Questionnaire (adherence,	- patients with hypertension who are registered at the central multidisciplinary clinic of the Kibray region - nurses of the central multidisciplinary clinic of the Kibray region, providing primary health care	- “Patient’s outpatient card”, form N. 025; - “Control card of dispensary observation of the patient” - Form N. 030/y. (family history, smoking status, lipid status, glucose	120 patients, 20 nurses	<u>Analytical</u> <u>statistical</u> <u>sociological</u>

Research results.

The study showed that there were more boys in the study group than girls and made up 60.83% of boys and 39.17% of girls. When divided into age groups, it was found that patients of early adolescence (up to 14 years old) were 12.5%, 14-15 years old - 25.83%, 16-17 years old -

20%, 18-19 years old - 2.5 % (3). The diagnosis of EAH was made in 72.5% of patients. All patients comprised health groups 1 and 2. Among the most significant provoking factors were: sedentary lifestyle - 71.5%, overweight - 43.3%, fatigue in classes 23.33%, sleep less than 6 hours a day - 38.33%, eating a lot of salt – 20.0%, smoking – 2.67%. The main complaints of adolescents were headache, sometimes darkening before the eyes, and rapid fatigue. When providing nursing care, adolescents were prescribed additional methods, such as: a salt-free diet, reducing the caloric content of food. An assessment of the ongoing health-improving activities showed that the majority of adolescents sought to actively carry out all prescribed medical activities and were confident in the success of the care provided.

Conclusions. By summarizing it can be suggested that the diagnosis of EAH was identified among 72.5% of adolescents. Among the most significant provoking factors were identified: a sedentary lifestyle, excess weight, fatigue in class, sleeping less than 6 hours a day, consuming a lot of salt, smoking. When providing nursing care, patients were prescribed additional methods, such as: a low-salt diet, reduced calorie intake, and regular medications. All patients at risk for developing EAH were recommended to exclude the provoking factors listed above.

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