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MULTIFACTOR PREVENTION OF ISCHEMIC HEART DISEASE IN THE PRIMARY HEALTH CARE OF THE REPUBLIC OF UZBEKISTAN

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ABSTRACT

Introduction: Thanks to scientific researches, carried out in the world, a large number of preventive programs in recent years is created, the assessment of their efficiency and economic feasibility is studied, predictive criteria. Nevertheless, questions of creation of organizational models and technologies of introduction of preventive programs in real practice taking into account features of mentality of the population remain not solved. **Aim:** Our scientific research study is oriented at solving of above mentioned scientific degree, in particular, the presence of certain nonmodifiable risk factors RF and modifiable coronary heart disease requires long-term monitoring and treatment with prevention programs created for rural medical points (RMP) and family clinics (FC) in Uzbekistan, which indicates the relevance of the theme of the research. **Methods and results:** Rather most part of IHD patients doesn't address to doctors (42, 9%), and among persons at whom this disease was taped at the independent request of patients for a medical care (58, 1%) the late address to the doctor and untimely diagnostics takes place. As a result of it between emergence of the first symptoms of the disease and diagnosing of a IHD stable angina pectoris (SAP) passes 6, 8±0, 2 years. **Conclusion:** Implementation of the program of multifactorial prevention of an IHD of SAP led to improvement of 17 indicators of quality of life of patients and taped existence of reliable correlation dependence of quality of life with age,with duration of SAP advanced in years, hereditary burdeness, with heart pains, stenocardia FC, frequency of hospitalization, the diastolic blood pressure (DBP) level and drug intake frequency.

KEYWORDS: Ischemic heart disease, Primary Prevention, Risk factors, Arterial hypertension, Anxiety depressive syndrome.

ABBREVIATIONS

CVD, Cardiovascular diseases; IHD, Ischemic heart disease; RF, Risk factors; MI, myocardial infarction; GP, general practitioners; RMP, rural medical points; FC, family clinics; BMI, body mass index; ADS, anxiety depressive syndrome; SAP, stable angina pectoris; CH, cholesterol; TG, triglycerides; VLDL, very low density lipoproteins; FC, functional class; DBP, diastolic blood pressure; WHO, World Health Organization; ACS, Acute Coronary Syndromes; CAD, coronary artery diseases; CVD, cardiovascular diseases; LDL, low density lipoproteins; AH, arterial hypertension; AP, arterial pressure; ECG, electrocardiography; QL, quality of life; MI, Myocardial infarction; HF, heart failure; VRS, verbal rating scale; HADS, hospital anxiety and depression scale; PDW, platelet distribution width; APV, average platelet volume; HCH, hypercholesterolemia; HDL, high density lipoprotein; SAP, stable angina pectoris; SVE, verbal rating estimate; SAQ, Seattle Angina Questionnaire; DAH, diastolic arterial hypertension.

1. INTRODUCTION

Ischemic heart disease is the leading cause of death. IHD is a heart problem caused by reduced blood supply to the heart, and thus less oxygen reaches the heart muscle. The World Health Organization (WHO) reported that 17.5 million people died from cardiovascular disease in 2012 worldwide and, 7.4 million of these deaths are due to IHD. CVDs are the number 1 cause of death globally:

more people die annually from CVDs than from any other cause. An estimated 17.9 million people died from CVDs in 2016, representing 31% of all global deaths. Of these deaths, 85% are due to heart attack and stroke.

Over three quarters of CVD deaths take place in low- and middle-income countries. Out of the 17 million premature deaths (under the age of 70) due to noncommunicable diseases in 2015, 82% are in low- and middle-income countries, and 37% are caused by CVDs. CVDs are the leading causes of death in the Arab world. Arab countries are still lagging far behind in CVD research compared to the Western and other regions of the world. Knowing that CVDs are the main cause of deaths globally and in the Arab world specifically, it would be expected that research activity must increase with time.[1] Most cardiovascular diseases can be prevented by addressing behavioral risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol using population-wide strategies. People with cardiovascular disease or who are at high cardiovascular risk (due to the presence of one or more risk factors such as hypertension, diabetes, hyperlipidemia or already established disease) need early detection and management using counselling and medicines, as appropriate. The prevalence of IHD has increased each year.

1.1 The problem of combating risk factors

People with IHD still behave in the manner they did before their diagnosis. A diagnosis of IHD has a great impact on the health of a person such as the productivity of one's life, as well as on families, and societies[2] but they did not care about that and still continue smoking, uncontrolled blood pressure, unhealthy diet and physical inactivity. Persons need to respond effectively to a diagnosis of IHD and employ both cognitive and behavioral strategies.[2] Schroederp[3] stated that more than 60% of IHD risk factors are preventable and modifiable by performing healthy behavior. In the Arab world, cardiovascular diseases are increasing at an accelerated rate due to the unhealthy lifestyles people in the Arab countries are leading. Excessive use of tobacco, unhealthy diets, lack of exercise, damaging consumption of alcohol and obesity are the main causes of these cardiovascular diseases.[4] Modifiable RF particularly smoking cessation, checking blood pressure levels, diet management, physical activity, and stress management.[5] could control the risk of IHD.[6]

The same RF that contribute to the initial development of atherosclerosis also contribute to its progression. There is impressive evidence that RF modification is effective in preventing recurrent cardiac events.[2] An analysis by Capewell et al. was undertaken to determine how much of the decline in mortality from coronary artery diseases (CAD) during the period 1980–2000 could be explained by improvements in interventions and how much could be explained by changes in cardiovascular RF.[3] The study estimated that approximately 47% of this decline in mortality was attributable to improved interventions and medical therapies, whereas approximately 44% was attributable to improvements in major risk factors. These data highlight the important role played by RF modification in preventing cardiovascular events. However, despite clear evidence of benefit from RF modification for secondary prevention, the level of RF control in clinical practice has been disappointing. The risk factors that appear to have the largest impact on secondary prevention of CAD are diabetes mellitus, hypertension, dyslipidemia, and smoking.[7]

1.2 Overview of significant preventative measures to address cardiovascular diseases (CVD) risk factors

IHD has a multifactorial etiology and can be prevented from developing in populations primordially, and in individuals at high risk by primary prevention. The primordial approach focuses on social determinants of health in populations: political, economic, and social factors, principally unplanned urbanization, illiteracy, poverty, and working and living conditions. Implementation of the UN Sustainable Development Goals can lead to major improvements in cardiovascular health, and adequate health-care financing and universal health care are important for achieving these goals. Population-level interventions should focus on tobacco control, promotion of healthy foods (fruits, vegetables, legumes, and nuts), curbing unhealthy foods (saturated fats, trans fats, refined carbohydrates, excessive salt, and alcohol), promotion of physical activity in everyday living, and control of ambient and indoor pollution. At the individual level, identification of people at high multifactorial risk and guideline-driven management of hypertension, low density lipoproteins (LDL), cholesterol, and diabetes is required. Strategies to improve adherence to healthy lifestyles and drug therapies are essential and can be implemented at health system, health care, and patient levels with use of education, technology, and personalized approaches. Improving quality of medical education with a focus on ischemic heart disease prevention for physicians, nurses, allied health workers, and the public is required.[8]

Billions of dollars have been spent over the past 25 years on developing new therapies for the prevention/treatment of adverse cardiac events related to atherosclerotic cardiovascular disease. Although some therapies have been lifesaving, several mega-randomized studies have shown only a <2% absolute reduction in adverse events with a large residual event rate. Atherosclerosis develops decades before an adverse event, and the trials previously alluded to have nearly always been applied to secondary prevention, decades after disease initiation. Individuals with an absence of the usual cardiac risk factors have a lifelong low incidence of events. Early initiation of strategies against the common cardiovascular risk factors in primary or primordial prevention will lower the incidence of adverse events, although many groups have not been well studied, including individuals younger than 40 years of age. New strategies are required to realize a

radical reduction in events, and this article proposes new methods of prevention/treatment for coronary artery disease complications.[9]

CVD remains the leading cause of death in the United States and worldwide. Prevention of cardiovascular disease is an achievable goal. A rigorous 2010 analysis by the WHO suggests that reducing risk factors in young adults and maintaining an optimum risk profile through age 50 could prevent 90% of atherosclerotic cardiovascular disease events. Misinformation and poor implementation of proven preventive strategies, misplaced fears of medications, or incorrect understanding of ideal dietary and lifestyle choices all contribute to poor risk profiles. Every patient deserves an individualized prescription for cardiovascular disease prevention incorporating strategies to control modifiable cardiovascular risk factors.[10]

The American Heart Association has defined ideal cardiovascular health based on seven risk factors (Life's Simple 7) that people can improve through lifestyle changes: smoking status, physical activity, weight, diet, blood glucose, cholesterol, and blood pressure.[11] These health behaviors and metrics represent seven out of the top 10 most costly risk factors for employers.[12] Studies show people in optimal ranges of Life's Simple 7 have a lower risk of heart disease and stroke compared to people in poor ranges: In a study of a large, ethnically diverse population of one employer, annual employer healthcare costs were on average $2,021 less for employees with at least six ideal Life's Simple 7 metrics compared to employees with two or fewer ideal metrics.[13] People with at least five ideal Life's Simple 7 metrics had a 78% reduced risk for heart-related death compared to people with no ideal metrics.[14]

The 5-year trend of CLARIFY India registry indicate varying trends in prevalence and control of cardiovascular risk factors, the need for approaches to improve control of all modifiable risk factors, and increase in long-term use of essential primary and secondary prevention medications in clinical practice as emphasized in the latest Indian guidelines for management of stable CAD.[15]

Today, it has become especially important to carry out primary prevention of cardiovascular diseases, which provides for a healthy lifestyle.[16]

Secondary prevention medicines are highly effective in avoiding recurrence of cardiovascular disease events, which can be especially devastating for people living in low-income and middle-income countries where acute, life-saving treatment might not be easily available and the economic consequences of illness are severe. Our findings revealed both remarkably low rates of use of known effective secondary prevention medications in several countries, but also statistically significant inequality in some low-income and middle-income countries. The UN and WHO have now recognized the need to reduce the burden of non-communicable diseases, including cardiovascular diseases, and to narrow inequalities in premature mortality. To realize these goals, increased and more equitable secondary prevention must be high on the agenda.[8]

The studies carried out are very diverse. For example, Several observational and prospective cohorts in South Asia have been established in recent times to evaluate the burden of cardiovascular disease and their risk factors. The Prospective Rural Urban Epidemiology (PURE) study is the largest of these studies that has provided data on social, environmental, behavioral and biologic risk factors that influence heart disease and diabetes. Some studies have also borrowed data from large datasets to provide meaningful insights. These studies have allowed a better understanding of cardiovascular disease risk factors indigenous to the South Asian population along with conventional risk factors. Culturally sensitive interventions geared towards treating risk factors identified in these studies are needed to fully realize the true potential of these epidemiologic studies.[17]

1.3 Justification of the relevance of preventive measures in uzbekistan

CVD, in particular the IHD, remains as the most widespread disease in Uzbekistan. More than 50% of mortality fall to lot of this pathology. The special alarm is caused by growth of IHD and mortality of persons from it young and working-age. Results of a research on epidemiology and prevention of CVD and their risk factors (RF) in the Republican specialized center of Cardiology of the Ministry of Health of the Republic of Uzbekistan in 2018 year during quarter of the century showed quite high prevalence of an IHD and acute frustration of cerebral circulation both in the city of Tashkent, and among country people. The incidence of stable angina (SA) in 2017 was 3382 (64%) and in 2018 4828 (68%) cases. According to 2018 the incidence of an ischemic heart disease on 100 thousand population is 1833.3 people, and arterial hypertension (AH) - 4290.1 persons.

Today the undertaken reforms of health care in Republic of Uzbekistan, in particular, improvement of work of the RMP, the FP, central versatile clinics creates a real opportunity for performing primary and secondary prevention of all diseases, including cardiovascular pathology. In addition to the specified opportunities an important role is played by the organization of preventive actions among the population taking into account features of mentality. The preventive program has to rely not only on fight against the conventional RF, but also on features of a way of life which are inherent in the surveyed region.

Proceeding from it, such preventive influence demands strict scientific justification, the proof of existence of communication between concrete features of a way of

life with a number of indicators of health. In this regard, the special attention is deserved by lack of study of influence of the preventive events held by GP in modern conditions of our republic where traditions and habits of the people have the taken roots character.

The difficulty of performing primary and secondary prevention of IHD consists in the choice of the most modern, expedient and effective remedies of prevention and treatment of diseases and also emergence of its complications that provides continuation of researches in the choice of method of controlling with behavioral RF. It is important to note that now the multiple-factor intervention (directed at the same time to fight from several RF) is considered the most adequate. Thanks to scientific research, carried out in the world, a large number of preventive programs in recent years is created, assessment of their efficiency and economic feasibility is studied. Nevertheless, questions of creation of organizational models and technologies of introduction of preventive programs in real practice of primary link remain not solved in many countries of the world.

Thus, the relevance and importance for applied medicine of unresolved questions of prevention of an ischemic heart disease demands development and approbation of ischemic heart diseases adequate to today's conditions of functional and organizational model of prevention taking into account the studied population cohort in the presence of certain upgradeable and not upgradeable RF of an IHD in the system of primary link of health care.

1. Level retrospective analysis of out-patient cards

In terms of evidential medicine, an important factor in fight against a negative outcome of diseases is knowledge of the concept of FR and high professional competence of health workers.

Study design, period and area

Participants of poll among 89 RMP of Tashkent; Kashkadarya, Surkhandarya, Namangan, Tashkent regions had to specify the number of patients from an IHD on the out-patient site. Despite, criteria of diagnostics of an IHD in the analysis of copied out 3160 cards it turned out that IHD patients made 1640 (51.9%) persons, and in an IHD combination to AH – 1520 (48.1%) patients.

Study subjects

The analysis of out-patient cards revealed that with IHD and IHD with arterial hypertension (AH) patients aged from 51 till 60 years had the greatest occurrence of an IHD and IHD with AH in 46 and 47% of cases. In addition, from 3160 patients (the analyzed out-patient cards) by gender more men – 1926 (60.9%) persons, than women – 1234 (39.1%) patients prevailed at both pathologies for 21.8% (tab.1).

In the analysis of these out-patient cards it turned out that one of ineradicable RF - genetic predisposition is found in 44 (61.1%) patients from 72 IHD patients. Smoking which existence is available at 31 (43.1%) patients belongs to group of removable RF. It respectively provides informing on harm of smoking and refusal of it, but RMP during the poll indicated that they were limited only to verbal recommendations for 17 (54.8%) patients.

Existence of excess weight at 27 (37.5%) patients and a hypodynamia at 29 (40.2%) is revealed, but the mark about BMI and purpose of the dosed exercise stress the patient in out-patient cards, is found only in 2% studied. Rules of the balanced food have the general character and, as a rule, come down to refusal of salty, hot and fat dishes in 21 (29.1%) out-patient card. Existence of psychoemotional distress syndrome is noted in 28 (38.9%) out-patient cards of FP and RMP. In a research it is also revealed that level of cholesterol and TG in blood is increased at 55 (72.2%) patients, but correction by hypolipidemic drugs by RMP is carried out only at 6 patients that made 11%. It says about low knowledge of doctors of primary link of RF of an IHD and bases of its prevention.[18]

Primary prevention of IHD till today remains difficult. So, only in 10.4% of out-patient cards there were records about existence of these or those RF contributing to the development of this disease.

Effective secondary prevention - prevention of exacerbations of a disease and slowing down of its progressing, on the contrary, is possible and includes not only rational medicinal therapy, but also the measures directed to correction of the adverse factors connected with a way of life.

Considering the aforesaid, it turned out that in addition to the revealed upgradeable IHD RF (SA) and AH at 1520 patients and also low degree of their reflectivity in out-patient cards have diseases promoting progressing of IHD (SAP) at 1640 patients i.e. a diabetes mellitus at 47 (2.8%) patients.

The low detectability of RF of IHD led to their differentiated contribution to number of complications at this category of patients that made 743 persons (23.5%), disability cases on a disease 648 (20.5%) patients. High frequency of cases of disability led subsequently to increase in number of deaths from IHD - 266 (16.2%), IHD with AH - 302 (19.8%) and their complications at 160 (21.5%) patients.

The prevalence and progressing of a disease can be reduced significantly when performing scientifically based and effective primary and secondary prevention of a disease.

2. Level assessment of preventive intervention

For assessment of efficiency of preventive actions in primary link of health care the educational program based on group intervention with involvement of

members of families of IHD and HD patients was created.

2. MATERIAL AND METHODS

Research methods: Collecting complaints, the anamnesis, clinical examination of patients was carried out: assessment of expressiveness of a pain syndrome on the 5th ball scale of verbal estimates; measurement of AP; definition of Ketle index; feeding habits. Biochemical methods researches are conducted: studying of a lipidic range of blood; removal of an ECG. Use of the standard questionnaires: determination of level of the alarming and depressive syndrome (ADS) (hospital scale of alarm and depression, questionnaire of level of a psychological stress of L.Reeder); definition of an exercise stress (with definition of training pulse); assessment of nicotine addiction (Fagerstrem's test) and also assessment of degree of motivation and readiness for refusal of smoking; the quality of life (QL) – according to the Seattle questionnaire for patients with stenocardia is investigated; identification of correlation dependence between the studied indicators.

3. RESULTS AND DISCUSSION

3.1 The program of IHD patients training at SCHOOL of health

Training at SCHOOL of health consists of 5 practical training within 1 week by 45 minutes twice within a year.

Occupations are devoted to concept of IHD, SAP, AH, RF: to tobacco smoking, obesity, bases of a dietotherapy, physical activity and a role of the dosed exercise stresses, an arterial hypertension, a concept about a psychoemotional stress, their correction and fight against them.

Training of patients at SCHOOL of health in particular tactics of the patient at SA attacks taught patients to measurement of AP, calculation of Ketle index, a circle of a waist and hips, measurement of training pulse, drawing up individual diets taking into account a calorage, to methods of auto-training and rendering most and mutual aid in case of emergency.

Listeners got acquainted with special methodological literature (banners, stands, methodical recommendations and grants, distributing material: booklets, information leaflets. Training and drawing up individual methods of controlling RF were solved by lecturing with display of slides of 10-15 of slides in each one (the multimedia presentations). Holding the structured training classes in prevention of IHD in the conditions of SCHOOL of health is in detail described in the methodical recommendation: "New preventive technologies at ischemic heart disease in primary link of health care at the present stage".[19]

The main object for it became 276 persons, from them: 207 IHD patients and 69 people members of families of IHD patients.

Selection of 207 IHD patients was made in stationary conditions of cardiological department of I and III TMA clinic. As criteria for selection served algorithms of IHD diagnostics, existence of the maximum quantity of FR and also oral information consent to following to the protocol of a research on a basic disease.

At the time of the beginning of training at SCHOOL of health after 14-16 months from 207 IHD patients there remain 177 persons (30 patients left owing to refusal of participation in a research, exacerbation of pathologies the complicated peptic ulcer of a stomach and a duodenum which are not connected with IHD, for example; viral hepatitis of type B and C; oncological diseases; jet arthritises, etc. from 1 group) that created obstacles for performance of medical appointments. Further within 1.5 annual periods of training at SCHOOL of health from scientific research 42 more patients left the II group. Basic reasons became: irregular visit of SCHOOL of health – 23 patients (54.8%); refusal of performance of non-drug methods of treatment – 16 patients (38.1%); at 3 patients (7.1%) complications of a basic disease developed (the progressing SA, Myocardial infarction (MI), heart failure (HF)).

In the course of 2-year-old observation a total of only 135 patients (65.2%) suffering from IHD of SA of I II, III, IV FC from 31 to 67 years (54.4±2.6 years) were subject to statistical processing.

The research for the purpose of performing primary prevention of an IHD included members of families of IHD patients having several RF in number of 69 people, with genetic predisposition to IHD, having several RF. These are 19 families of IHD patients, i.e. children of patients in quantity: 10 families (32 persons) - in the I group, 9 families (37 people) in the II group. Average age of members of families (28 men and 41 women) of IHD was 28.2±2.3 years. All examined members of families after holding the corresponding polls and clinical trials were almost healthy faces. At 22 patients the 2nd or 3-fold increase in AP in the anamnesis which was not demanding purpose of hypotensive therapy was noted. IHD duration at patients was from 1 year to 8 years.

According to the purpose and research problems patients were divided into 2 groups by the method of a random sample: the first group (I) was made by 68 patients who were not trained at SCHOOL of health, the second (2) - 67 patients who were trained at SCHOOL of health. Distribution of patients on groups, age, sex and also frequency of occurrence of IHD is presented in table 2.

All patients with IHD are distributed depending on FC of SA and brought in table 3.

Duration of observation made 2 years. It is known that gender and age refer to unchangeable RF (not upgradeable). The most significant role in development of IHD as multifactorial disease also hereditary predisposition to it plays. The burdened anamnesis on a disease in 1 group was revealed (i.e. existence of IHD at parents and the immediate family) at 45 (66.2%) patients, not burdened at 18 (26.5%), at 5 (7.3%) patients the predisposition to an IHD at parents was not noted. According to anamnestic data of patients of the II group, hereditary burdeness is defined at 43 (64.2%) IHD patients, the others 24 (35.8%) did not mark out the patient of predisposition to a disease. Along with it, before the beginning and after training at SCHOOL of health degree of awareness of patients on not upgradeable RF was defined. Results are provided in table 4.

Reliable increase in level of knowledge concerning uncontrollable RF is noted at men whereas at women only concerning genetic predisposition to IHD ($P < 0.05$).

The analysis of indicators of awareness of patients in knowledge of uncontrollable FR of IHD according to 67 patients prior to training at SCHOOL of health revealed the low level of knowledge of women in influence of genetic predisposition in 33.3% of cases and men on importance of sexual differences in development of ischemic heart disease in 42.9% of cases (since these indicators appeared less than 50%).

Training of the patients at 1 lesson at SCHOOL of health devoted to a concept in an etiopathogenesis of SA, RF of IHD led to reliable increase in knowledge of patients in knowledge of genetic predisposition both at men, and at women for
55.6% and 28.6%, and in knowledge of importance of gender and age authentically significant increase by 36.7% and 22.5% is noted only at men after training at SCHOOL of health.

The above-stated reliable positive dynamics of knowledge of uncontrollable FR of IHD patients, it will become unconditional a basis of the beginning of forming of the active attitude towards the health.

It is established that patients with a depression have major defects of physiological characteristics of thrombocytes, such as the increased level of intracellular free calcium, hypersensitivity of serotonin (5-HT) and catecholamine receptors, hyperproduction of a factor 4 and beta thromboglobulin. These features contribute to the raised vasoconstriction and also promote more active aggregation of thrombocytes. The increased level of catecholamines in blood, characteristic of patients with alarm and a depression, in turn increases risk of activation of the thrombocytes, processes of aggregation and a further thrombogenesis which are closely connected with development of ACS.[20]

Carrying out researches in this direction on the bigger number of patients with determination of frequency of prevalence of coagulative factors at SA is necessary.

In this regard, studying of association of polymorphisms of the specified genes with development and the course of the above-stated pathology in the presence of certain upgradeable RF, will allow to estimate risk of development of lifeendangering states and also it is correct to define ways of their treatment, prevention and possibility of use of these or those medicines.

After identification at the patient of signs of IHD, the available RF of a disease continues to work, promoting progressing of IHD and worsening its forecast. The practical doctor should deal from several FR at the patient with IHD. Therefore, each of them or their combination makes the contribution to emergence of pathological process. Identification of frequency of occurrence of this or that RF will allow to define its leading role in development of a disease which changes depending on the studied cohort.

For determination of frequency of occurrence of the operated and uncontrollable IHD RF (SA) the analytical analysis of these patients of two groups included in a research was carried out.

Studying of prevalence, importance and influence of RF on progress or regress of IHD at 135 patients in the conditions of primary link of health care from SA various FC in stationary conditions is relevant. 67 patients expressed readiness in obtaining reliable medical information and individual development of adequate nondrug and drug measures for change of a way of life with the structured training programs. So, all patients, having received hospital treatment on a basic disease, were written out and put under observation of GP with the recommendations issued by the doctor in a hospital.

Thus, patients were divided into 2 groups: 1 group – 68 patients were put under observation without training, and the 2nd group – 67 people were trained at SCHOOL of health (twice within a year for 2 years of observations). At all patients by collecting complaints, the anamnesis, assessment of the clinical status IHD RF are revealed and defined.

From 177 patients within the first year of training 42 IHD patients left the scientific research. Basic reasons became: irregular visit of SCHOOL of health – 23 (54.8%) patient; refusal of performance of non-drug methods of treatment (despite existence of information consent) – 16 (38.1%) patients; at 3 (7.1%) patients complications of a basic disease developed (unstable angina, MI, HF).

Among the examined patients of group 1, the number of women and men was 40 (58.8%) and 28 (41.2%) people, respectively. The average age of the examined was 53.8

± 1.4 years. Of the examined patients, patients with higher education made up 21 (30.9%), with secondary education 37 (54.4%) people, with secondary special education - 10 (14.7%) people. Residents of the city amounted to 31 (45.6%) people, the rest of the examined 37 (54.4%) patients were residents of the regions.

In group 2, the average age of 49 (73.1%) men and 18 (26.8%) women was 56.1 ± 0.9 years. Of the examined 2 groups, patients with higher education accounted for 22 (32.3%), 34 (50.7%) people with secondary education, and 11 (17%) people with secondary special education. Residents of the city made up 28 (41.8%) people, the rest of the examined 39 (58.2%) patients turned out to be residents of the regions of the Republic. Patients in both groups suffered from a major disease on average 5.3 years.

The pain syndrome before treatment in patients of group 1 on the basis of verbal rating scale (VRS) was divided as follows on a 5-point scale: 1 point - 7 patients (10.2%); 2 points - 29 (42.6%); 3 points - 12 (17.6%); 4 points - 16 (23.8%); 5 points - 4 (5.8%). The average score of the pain syndrome on the scale before treatment was 2.7 (average burning and compressive pains), and after treatment 1.95 (from chest discomfort to mild compressive and compressive pains) score.

In patients of group 2 before treatment, the gradation was as follows: 0 points - 23 (34.3%); 1 point - 28 patients (41.7%); 2 points - 12 (18%); 3 points - 4 (6%), respectively. The severity of pain was before and after training - 1.0 point, and after treatment 0.7 on average for the group.

Of the 135 patients included in the study, 24 (14.5%) patients had a history of rare A / D rises, the level of which averaged 155.3 / 89.5 ± 11.2 / 9.1 mm Hg.

The adverse effects of each of the RFs and their contribution to the patient's state in the fight against IHD RF by increasing knowledge about the disease in the context of SCHOOL of health are presented below for each RF separately. The following is a separate analysis of the levels of RF for each of them with an indication of their frequency of occurrence.

3.2Anxiety-depressive syndrome (ADS) An increase in interest in the relationship of depressive, anxiety disorders and CVD is associated with the widespread prevalence of these disorders, their social significance, adverse effects on working capacity, and their high degree of comorbidity.[21,22,23]

According to modern estimates, the prevalence of depressive states in CVD patients varies from 18 to 60%, not only in people with CVD, but also in healthy people. These results were confirmed in the course of our study.

All individuals in the control group were asked to answer questions from the hospital anxiety and depression scale (HADS). It turned out that 8 people (26.7%) of the practically healthy individuals surveyed suffered from subclinically expressed signs of ADS, which averaged 6.8 points. The level of psychological stress by the method of rapid diagnosis of Reader in men was 2.3 points, and in women 2.6 points, which is equal to the average score in the table.

When assessing the patient's condition on the HADS during the last week, it turned out that in group 1 in 23 (34%) patients, the total score corresponded to the level of clinically pronounced anxiety and depression (11.4 points), in 30 (44,1%) of patients with subclinically expressed manifestations of ADS (7.2 points), the remaining 15 patients (21.9%) on the total scale were not included in the group with this RF (4.8 points). In total, the average score for the group was 9.04 points, and after treatment, 9.1 points. The stress level was on average 2.6 points, and after treatment remained the same. A relatively high percentage of ADS was detected in people with secondary education and rural residents - 65%, regardless of gender.

The nature of pain in individuals of group 1 with pronounced signs of anxiety/ depression before and after treatment was more often burning and compressive in 74.2% of patients was 2.9 and 2.6 points on a 5 point scale, which corresponds to a line with weak and moderate compressive and burning pains in the heart.

Two-year observations of patients of the same group showed that in the group of patients with clinically expressed anxiety and depression in 3 people, the total value increased to 12.3 points, and in 5 out of 30 patients (16.7%) with subclinically expressed depression decreased up to 6.75 points.

The total HADS score for each patient of group II was determined. According to the questionnaire, patients were distributed as follows: 19 (28.4%) - no signs of anxiety/depression, 20 (30%) - subclinically expressed anxiety/depression (8.4 points), 28 (41.6%) - clinically expressed anxiety / depression (11.2 points).

After training in SCHOOL of health, 19 people began to be able to manage their psycho-emotional status, of which 11 (55.0%) people moved from the subclinical group in the absence of signs of depression (6.3 points), and 8 respondents (28.6%) from clinically expressed subclinical groups (8.2 points). On average, the level of stress before treatment and training for men was 1.91 points (high), for women - 2.7 (average) points, after 2 years it was possible to reduce the stress level to 2.63 (average) and 2.96 (low) score, respectively. As a result of this, there was a positive dynamics of pain in patients of group II, which amounted to 1.2 points for VRS before treatment and 0.8 points for treatment, i.e. almost no pain in the heart.

Based on studies conducted previously among GPs, only 10 people out of 79 GPs surveyed are carrying out preventive work in this direction, and only 17 patients (5.6%) GPs are prescribed sedatives and 20 patients (6.6%) antidepressants and sedatives.

Studies are ongoing to investigate the contribution of ADS to the progression of coronary artery disease. In patients with stable angina pectoris in combination with ADS, in contrast to patients without anxiety and depression, there was a significant increase in the duration of anginal pain ($p < 0.01$), an increase in the frequency of angina attacks ($p < 0.05$) and destabilization of blood pressure ($p < 0.05$), increased heart rate ($p < 0.05$), mean SBP ($p < 0.01$), total cholesterol ($p < 0.01$), LDL-C and atherogenicity coefficient ($p < 0.001$), fibrinogen values ($p < 0.001$), prothrombin index ($p < 0.01$) and a decrease in thrombin time, Activated Cha Static Thromboplastin Time ($p < 0.01$). The presence of ADS in patients with coronary heart disease was associated with a significantly increased mean platelet index (PLT) of 1.4 times ($p < 0.001$), a platelet distribution width (PDW) of 1.3 times ($p < 0.05$), and an average platelet volume (APV) 1.2 times ($p < 0.001$) and immature platelets (IPF) 1.5 times ($p < 0.01$) relative to patients without ADS. Based on logistic regression analysis, it was found that independent predictors of risk of increased platelet aggregation activity (OS 8.95, CI 2.08-38.49; $p = 0.003$) in patients with coronary artery disease and hypertension are: anxiety (OS 1.78, CI 1 , 12-2.84; $p = 0.015$) and personality type D (OS 2.32, CI 1.57-3.44; $p = 0.001$).

3.3 Obesity, hypercholesterolemia (HCH) and eating habits

When studying constitutional data in group 1, it turned out that 48 (70.5%) patients with SAP were obese of various degrees, of which: overweight was noted in 21 (30.9%) patients; 1 degree - in 12 (17.6%); 2 degree - in 13 (19.1%); 3 degree - in 2 (2.9%) and only normal weight was found in 20 (29.5%) patients. After a 2-year follow-up, in the degrees of obesity, a transition of 2 patients from the group with the III degree of obesity to the II degree was noted (table 5).

On average, in the group, patients, regardless of the degree of obesity, entered the weight line with a Ketle index of 31.6 kg / m², and after 2 years of observation, 30.7%, which continues to indicate a relatively high risk of developing cardiovascular catastrophes. When analyzing the results of the Ketle index in group 2, it turned out that 39 patients (58.2%) of coronary heart disease were highly obese.

After a 2-year follow-up, only 11 patients showed an unreliable decrease in body weight from 1 to 2.5 kg. The BMI on average for these respondents before and after training at the SCHOOL of health was 30.1 and 28.7 kg / m², which corresponds to overweight. Thus, the awareness of patients about the presence of increased body weight, its effect on health and compliance with recommendations for their reduction played a positive role in 28.2% of patients of group 2.

Most RFs are associated with lifestyle, one of the important components of which is nutrition. It manifests itself in the action on the lipid spectrum of the blood and the processes of thrombosis, the protective effect of complex carbohydrates and fiber contained in vegetables and fruits.

According to some studies, nutrition is considered optimal, in which the share of total energy received from complex carbohydrates is 46-66%, from sugar - 10%, from proteins - 12-13%, from total fats - 30%. Today, in most cases, nutrition does not correspond to these indicators. This confirms the attitude of our patients to the rules of good nutrition and dietary recommendations: they are strictly adhered to by only 7 (10.3%) patients with coronary artery disease; often - 9 (13.2%) patients; sometimes 10 (14.7%) of the number examined in the 1st group. Ignoring dietary recommendations, in large enough quantities they take fatty (predominance of animal fats in the diet), salty, flour dishes - 52 patients (76.4%) (Table 3.8).

Of the patients of the 2nd group, almost 90% of patients with coronary heart disease and members of their families eat fatty, floury and meat foods, the consumption of vegetables and fruits were noted in 42% of people in the amount of 150-200 g.

Accordingly, knowledge and skills about observing dietary recommendations before studying at the SCHOOL of health: 14 people (21%) knew and followed dietary recommendations, after training 38 patients (56.7%) began to adhere to dietary recommendations. As can be seen from table 6, a significant improvement in food habits was achieved in patients who studied at the SCHOOL of health to reduce the use of high-fat, flour, fatty dairy products, animal fats and confectionery.

Further, all examined patients were assigned a study of the level of lipid fractions. In our study, evidence was obtained of a significant increase in the level of cholesterol, triglycerides, LDL, VLDL and the atherogenic coefficient in 41 (60.3%) patients of the 1st group and in 29 (43.3%) patients of the 2nd group of patients with IHD.

Analysis of indicators of the blood lipid spectrum in group 1 showed that a significant reliable increase in relation to the control group was shown by indicators of TG levels of 60.9%, VLDL by 15.3%, and atherogenic coefficient by 2.56%. After a 2-year follow-up, it turned out that in 41 patients (60.3%) with the highest lipid levels, the positive dynamics in the direction of their decrease was insignificant and unreliable in only 37 patients (54.4%) (Tab. 7).

It is believed that a decrease in serum cholesterol by 1% reduces the risk of developing severe coronary insufficiency by 2%. Hence the rule: the more expressed dyslipidemia (DLP), the stricter the diet should be justified, but partially, because correction of DLP by dietary recommendations in our study was insignificant.

The data in table 7 indicate a significant decrease in the level of cholesterol in a greater degree in patients of group 2 in the group with statins in relation to the data before treatment by 34.1 mg / dl, TG by 69.5 mg / dl, and VLDL by 15, 6 mg / dl, atherogenic coefficient of 2.7 ($P < 0.05$), respectively.

According to our studies, a low level of high density lipoprotein (HDL) has an independent, unfavorable prognostic effect in relation to the development of IHD complications in patients of group 1, whereas in patients of group 2 there was a significant increase in the level of HDL cholesterol by 1.1 and 2.2 mg / dl.

Despite the fact that the examined contingent of patients had an increased level of lipid fractions and a high percentage of obesity, as prescribed by a doctor, statins were taken according to the scheme only 4 (6%) patients of the 1st group from the number of examined, after treatment 7 (10.4%) patients, of 29 patients of the 2nd group with elevated cholesterol, statins took only 11 (38.0%) of the respondents before training, and after information intervention - 27 (93.1%).

The most significant decrease in the level of atherogenic lipoproteins after taking statins at a dose of 10-20 mg per day for 3-4 months (dose selection was carried out individually). Given the relatively low level of compliance with statin therapy, a survey was conducted among patients on the motivation for refusing drugs of this group, which will be discussed in detail below.

3.4 Physical activity

The level of physical activity in 13 patients (19.1%) of patients with IHD of group 1, measured in meters during the day, averaged 628.5 ± 57.2 m, and after treatment decreased to 546.2 ± 51.4 m.

According to our studies, the presence of a sedentary lifestyle in 7 (10.4%) patients of the examined patients of group 2, i.e. on average, before the training, our respondents were 886.8 ± 71.2 m, and after training the physical activity of 5 patients increased on average to 1630 ± 91.4 m ($P < 0.001$).

3.5 Smoking

Modern literature data indicate a significant effect of smoking in the development of acute myocardial infarction. Nicotine increases myocardial oxygen demand and enhances platelet aggregation, causing thrombosis in coronary vessels and vessels of the lower extremities. Despite advances in behavioral and pharmacological treatment for tobacco use and dependence, quit rates remain suboptimal. Increasing physical activity has shown some promise as a strategy for improving cessation outcomes. However, initial efficacy studies focused on intensive, highly structured exercise programs that may not be applicable to the general population of smokers.[24]

The number of smokers among the examined patients of group 1 before treatment was 12 (17.6%) people, and non-smokers - 56 (82.4%) people, after treatment 3 more patients (4.4%) joined the group of smokers. According to the Fagerstrem test, the level of nicotine addiction in smokers was on average equal to 6.37 points, and after treatment - 6.83 points, this corresponds to a high degree of nicotine addiction. The frequency of smoking was 55.5% before treatment and 59.8% after treatment.

A survey of the 2nd group showed that 14 (23%) male smoking patients have a very high level (8.4 points) of nicotine addiction - 5 (35.7%) of the respondents and a high (6.8 points) in 9 (64.3%) respondents. After informational intervention with the help of non-drug treatment, 3 (21.4%) people quit smoking, 5 (35.7%) people left the line with weak nicotine addiction, which amounted to 57.1%. According to the Fagerstrem test, the level of nicotine addiction in smokers of group 2, on average after treatment, was 3.8 points, which corresponds to a weak degree of nicotine addiction.

Among regular smokers, the following intensity of smoking was revealed: 1-9 cigarettes per day - 11 people and 10-20 cigarettes per day - 5 people in both groups studied. In addition, individuals who smoked in the past, i.e. those who quit - 7 (10.4%) people and those who smoke irregularly - 6 (8.9%) people. I would like to note that among the examined 135 patients with IHD there were practically no patients who particularly abused alcoholic beverages, but people taking alcoholic beverages sometimes amounted to 61.7% within the range of equivalent doses.

Thus, the prevalence of ADS and its influence on the intensity of the pain syndrome was noted, as well as a significant decrease in the negative impact of leading RFs as a result of training in the SCHOOL of patients with IHD (SAP).

3.6 The relationship and the quantitative ratio of the FR of IHD (SAP) among themselves in the studied cohort

Many scientific studies indicate that the presence of several RFs aggravates the course of the disease. For example, patients with coronary artery disease with signs of depression are less likely to adhere to a healthy lifestyle, they are less likely to follow medical recommendations on dieting, quitting smoking, physical activity, and the need to limit alcohol. The presence of depressive and anxiety-depressive symptoms adversely affects the patients' adherence to the medication recommended by the doctor. Anxiety in IHD patients at

baseline and at 1 year was associated with increased risk of MI (HR 2.74; 95% CI: 1.10–6.83) but was attenuated after adjusting for other risk factors (HR 1.18; 95% CI: 0.39–3.55). Both anxiety and depression at 1 year were associated with increased risk of stroke: HR 2.25 (95% CI: 1.05–4.82) and 2.34 (95% CI: 0.99–5.50), respectively, but risk associated with anxiety was attenuated after adjustment (25). Combined intervention adherence has been proven.[26]

When analyzing the data of our study, it turned out that of the RF, aggravating the course of the disease on average before treatment in both groups - one RF is present in 6 patients; two RF in 52; three RF - in 64; four RF - in 13 patients with IHD.

Assessment of the frequency of occurrence of behavioral RF in patients with coronary artery disease in both groups showed that ADS prevails among them in 77.9% and 71.6% of cases, non-compliance with dietary recommendations in 61.7% and 91%, overweight in 70, 5% and 58.2%, an increased level of lipid fractions of 60.3% and 43.3% of cases. The lowest prevalence among RF was occupied by physical inactivity and smoking in 19.1 and 17.6% of cases, and in group 2 in 10.4% and 20.8% of patients before treatment in both groups.

The absence of smoking among women with IHD, mainly aged 51 years and older, included in the study, was probably determined by the local mentality. Analysis of the quantitative ratio of RF in the studied group of individuals showed that the largest combination of RF was observed more in men in 58.2% of cases than in women (41.8%) according to information from both groups.

The presence of high levels of ADS, overweight and physical inactivity led to an increase in pain according to SVE in 32 patients of both groups.

The high incidence of non-compliance with dietary recommendations with anxiety-depressive syndrome led to an increase in body weight by an average of 0.92 kg in 12 patients of group 2.

Observation of patients and the dynamics of RF of SAP in the 1st and 2nd groups showed the following results, in the 1st group the level of ADS significantly increased by 7.35%, HCH by 5.9%, smoking by 4.45%, and physical inactivity by 1.48%.

Optimization of preventive measures by training patients of group 2 in a SCHOOL of health led to a significantly significant decrease in the impact of the following RFs: ADS by 16.4%, non-compliance with dietary recommendations by 56.7%, decrease in HCH by 40.3% and unreliable hypodynamia by 2.94%, smoking 4.4%, compared with pre-treatment.

Thus, as a result of two years of long-term training and treatment of patients in the SCHOOL of health, a decrease in the quantitative characteristics of RF IHD (SA) was noted, especially significantly significant in patients of the 2nd group with four RF diseases.

3.7 The frequency of occurrence of modifiable RF in family members of patients with IHD

The development of market relations stimulates the population to increase their health due to the need for professional in our country growth, fear of job loss, achievement of material well-being. Nevertheless, the majority of the population and families as a whole are not ready to fulfill the requirements of a healthy lifestyle, which depend on the family itself, and the healthcare system, primarily at the primary health care level, is often not ready for differentiated satisfaction of these needs.

World data show, that social and economic upheaval led many families to severe neuro-emotional stress, a significant deterioration in their material situation and standard of living. Especially in a difficult situation were families in which there are patients with IHD. Such families have low adaptive capabilities, they are most vulnerable from the standpoint of their material well-being, level of health, intrafamily microclimate, psychological state of family members. An urgent problem is the identification and well-reasoned evidence of the role of the family in the implementation of relevant recommendations. The developed programs for medical and social protection of these families should take into account the whole range of unresolved problems concerning a patient with IHD and members of his family.

The above provisions dictate the need to study the medical and social aspects of the health and lifestyle of a patient with IHD and his family to obtain scientific data and develop recommendations on their basis for the prevention of coronary artery disease and clinical follow-up of patients and their family members.

Based on the foregoing, 19 families of IHD patients (69 people), i.e. their children in number: in the 1st group - 10 families (32 people), in the 2nd group - 9 families (37 people). The average age of family members (28 men and 41 women) of IHD was 29.2 ± 2.4 years. All the examined individuals, after conducting appropriate surveys and clinical trials, were included in the group of practically healthy individuals.

The prevalence of modifiable RF among family members of patients with coronary artery disease is presented in Table 8. The most common RF IHD in this category of people were: heredity, smoking, alcohol, ADS.

The data obtained as a result of observation over 2 years showed that the frequency of occurrence of RF practically did not change in group 1, only an unreliable

decrease in the level of cholesterol by 3.15 mg / dl. In group 2, with an unreliable decrease in the incidence of some of the RFs, for example, smoking by 5.4%, alcohol and ADS by 8.1%, attendance at the SCHOOL of health was 28.1%. These changes turned out unreliable (table. 8).

Awareness of this category of persons was carried out through the dissemination of knowledge and lifestyle changes in patients with coronary artery disease, which did not significantly affect the decrease in the effect of some RF IHD on the health of their families.

The presence of 100% hereditary burden in both groups should prompt GPs in the implementation of measures for the primary prevention of coronary heart disease by increasing the knowledge and culture of a healthy lifestyle among practically healthy individuals. The absence of preventive measures leads to a sharp increase in RF levels, which is an unfavorable prognostic sign and is fully confirmed by the data obtained in the course of our study.

3.8 The effectiveness of multifactorial prevention relation to the total dynamics of modifiable RF and the clinical course of IHD, as well as endpoint assessment

The success and scientific justification of preventive measures in patients with the presence or absence of pathological genotypes is proved by the dynamics of RF IHD detected in the course of this study. We have studied the genetic predisposition to coronary heart disease in people of Uzbek nationality, these data will be presented by us in our subsequent scientific publications.[27]

The total count of each of the RFs, aggravating the course of this disease over 2 years, showed that on average before treatment in both groups - one RF was present in 6 patients; two RFs - in 52; three RFs in 64; four RF - in 13 patients with coronary heart disease. After treatment and training, there is a positive trend towards a decrease, mainly due to patients of group II, i.e. similarly 1 RF - 6; 2 RF - 53; 3 RF - 68; 4 RF - 8 patients. A significant decrease in the number of RFs was achieved only in the group after treatment and training at the SCHOOL of health, reducing the number of patients with 4 RFs by 9.0% compared with the data before treatment (Table 9).

Thus, the group with three RFs in patients of the 1st group and with two RFs in the patients of the 2nd group statistically significantly increased, the latter fact indicates a positive effect of the knowledge and commitment of patients in the implementation of medical recommendations.

The most common combination of detected RFs was ADS, malnutrition, HCH, obesity and hereditary burden.

Analysis of the study data showed that over 2 years the number of planned and emergency hospitalizations in patients in groups 1 and 2 was 1.7 and 1.4 times before training and 1.6 and 0.7 after training. The number of calls to the ambulance averaged 2.4 in the 1st group and 2.1 in the 2nd group for each patient, after 2 years of observation 1.2 and 0.5 times, respectively. These changes were not reliable.

It is known that an increase in the volume of hospital admissions to date accordingly increases the costs of inpatient treatment. This occupies a significant place in the overall structure of health care spending. Therefore, primary health care workers, especially GPs, become the most important “healers” of this situation, since approximately 80% of the population begins and ends the examination and treatment at the prehospital stage.
All patients who achieved the final result required endpoint counting.

Primary end-point - a pre-selected outcome option in the research protocol for which the possibility of the most powerful statistical analysis is planned. Primary endpoints can have varying degrees of "rigidity." As the primary endpoint or its components, they prefer to choose more “rigid” outcome options - strokes, heart attacks, death.

Secondary (sometimes tertiary) endpoints (secondary / tertiary end-points) preselected outcome options for which the study protocol provides for the possibility of adequate statistical analysis.

According to the literature, their weight is not high, but, as a rule, it is probably a convincing evidence in favor of the significance of differences between the analyzed branches of the study. Tertiary endpoints reflected changes in individual parameters.

Below are the initial data in 2 study groups before treatment and 2 years after treatment, confirming the above conclusion (table 10).

Based on the foregoing, observation of patients of the 1st group for 2 years showed that 28 (41.1%) patients with SA transferred to the group with unstable angina (progressive angina pectoris, ACS, MI) in the amount of 15 (22.1%) people; 9 (13.2%) patients with a history of periodic AP elevations experienced repeated hypertensive crises; 4 (5.8%) respondents showed signs of stage I HF.

Due to the development of oncological pathology 1 (1.4%), the patient dropped out of the study due to death. In group 2, the outcome of SAP was as follows: 2 (3%) patients were transferred to the group with unstable angina, and angina pectoris decreased in several patients. Thus, two-year observations showed that in 65 (97.0%) patients trained in the “SCHOOL of Health”, the FC of SAP decreased from FC III to FC II of angina pectoris.

The introduction of modern preventive technologies in cardiology practice is effective and justified, because on the one hand, it allows conducting effective preventive interventions at the level of RF into a state of "pre-illness", and on the other hand, it significantly improves the course of diseases, reduces the number of complications and improves QL. In addition, it is very important that these new preventive forms are low-cost and economically feasible.

The concept of "quality of life" includes indicators of physical health, social status and mental state of the individual. In fact, QL covers all aspects of human life: health, living conditions, education, income, social contacts. The Seattle Angina Questionnaire (SAQ) is a validated questionnaire in patients with obstructive coronary artery disease with established cardiac-specific quality of life and prognosis measures.[28] The results of the statistical processing of the indicators of the Seattle questionnaire are shown in table 11.

Using the Seattle questionnaire and analysis of 19 variables of the main aspects of QL, it was found that the most reliable indicators were as follows: How much are you limited in performing actions: washing in the shower? How much are you limited in performing actions: lifting or moving weights? How much are you limited in taking actions: playing active sports (for example, swimming, tennis)? How much are you concerned about taking medications for angina pectoris, pain, chest tightness? How much angina, pain, chest tightness in the last 4 weeks prevented you from enjoying life?

From the data obtained it follows that if QL worsens as a result of the therapy, then the usefulness of such treatment for the patient is significantly reduced, and vice versa, QL improvement motivates patients to take drugs, which was confirmed by the data of 2 groups.

Majority of RFs are interconnected and, at the same time, enhance each other's influence, thereby increasing the risk of complications.

80% of ACHD patients have at least one CVD risk factor. Hypertension, obesity and physical inactivity are frequently seen in both pediatric and adult patients with CHD. Many ACHD patients demonstrate abnormal glucose metabolism and are at an increased risk for developing diabetes. Current guidelines for CVD risk assessment and prevention do not specifically mention patients with CHD but are likely applicable to most of these patients. Specific CHD populations have "highrisk" lesions that are associated with an increased risk of CVD complications and may warrant intensified screening and treatment.[29]

The correlation analysis of the final indicator of QL of the Seattle questionnaire established a reliable negative correlation with the level of anxiety and depression. At the same time, the total QL score practically did not correlate with the degree of coronary lesion of atherosclerosis. In this regard, the characteristics of quantitative QL indicators were studied to identify correlation relationships. In table 6.4, reliable correlation relationships are indicated in bold ($P < 0.05$).

Table 12 show that there is a reliable correlation between the QL index: selfdressing with age and hereditary burden ($r = 0.25$; $r = -0.27$), with pain in the heart and angina pectoris ($r = -0, 25$; $r = 0.27$), as well as the level of diastolic arterial hypertension (DAH) ($r=0.31$). Walking indoors with the frequency of hospitalizations, the duration of the disease in years, heart pain, angina pectoris, hereditary burden and level of DAH ($r = -0.27$; $r = 0.34$; $r = -0.35$; $r = 0.26$; $r = 0.26$; $r = 0.34$). The greatest reliable correlation of QL issues related to the frequency of angina attacks, medication was identified with pain in the heart, hospitalization rate, angina pectoris. QL indicators regarding the frequency of drug administration (question 4) were significantly correlated with the following indicators: age, hospitalization frequency, duration of coronary heart disease in years, heart pain over the past 4 weeks: $r = 0.29$; $r = -0.30$; $r = 0.26$; $r = -0.50$.

Improving the quality of life of patients participating in the study, a consequence of raising the awareness of patients with coronary heart disease in the fight against RF, which is one of the strategies for optimizing preventive measures at the primary health care level.

The fight against FR, along with adequate medication, as well as increasing patient awareness of their disease and adherence to their treatment, is the key to achieving clinical and possibly cost-effective prevention of CVD.

The basis of training at the SCHOOL of health - a form of effective medical consultation, during which there is a non-directive discussion with the patient of the doctor's advice and recommendations - helps to understand the essence of the problem and draw up a realistic treatment plan. As a result, the patient himself must be interested in the successful treatment of coronary artery disease. A SCHOOL of health necessarily involves monitoring the results of treatment, if necessary, correcting medications, as well as repeating and clarifying recommendations.

The effectiveness of training is immediately visible - patients are more committed to regular treatment, they often achieve target levels. Such patients go to doctors less, call ambulances several times less, they are more likely to take new generation drugs, increases motor activity and adherence to the principles of good nutrition. And as an end result, the percentage of patients with a high risk of developing cardiovascular complications decreases, and the frequency of ACS and heart attacks is significantly reduced. These data suggest that the SCHOOL of patient education is an effective technology to combat the dire consequences of this disease.

REFERENCES

1. Khachfe HH, Refaat MM. Bibliometric analysis of Cardiovascular Disease Research Activity in the Arab World. Int Cardiovasc Forum J., 2019; 15: 25–8.
2. Roger VL, Go AS, Lloyd-Jones DM, Benjamin EJ, Berry JD, Borden WB, et al. Executive summary: Heart disease and stroke statistics-2012 update: A report from the American heart association. Circulation, 2012; 125(1): 188–97.
3. Lecture S, Schroeder SA. of the American People, 2007; 1221–8.
4. Boumedjout H. Cardiovascular diseases on the increase in Arab states. Nature Middle East, 2012.
5. Blumenthal JA, Sherwood A, Babyak MA, Watkins LL, Waugh R, Georgiades A, et al. Effects of exercise and stress management training on markers of cardiovascular risk in patients with ischemic heart disease: A randomized controlled trial. J Am Med Assoc, 2005; 293(13): 1626–34.
6. Xie X-X, Zhou W-M, Lin F, Li X-Q, Zhong W-L, Lin S-G, et al. Ischemic heart disease deaths, disability-adjusted life years and risk factors in Fujian, China during 1990–2013: Data from the Global Burden of Disease Study 2013. Int J Cardiol, 2016; 214: 265–9.
7. Bairey Merz CN, Rozanski A, Forrester JS. The secondary prevention of coronary artery disease. American Journal of Medicine. Elsevier, 1997; 102: 572–81.
8. Gupta R, Wood DA. Primary prevention of ischaemic heart disease: populations, individuals, and health professionals. Lancet, 2019; 394(10199): 685–96.
9. Ambrose JA, Najafi A. Strategies for the Prevention of Coronary Artery Disease Complications: Can We Do Better? American Journal of Medicine. Elsevier, 2018; 131: 1003–9.
10. Reamy B V., Williams PM, Kuckel DP. Prevention of Cardiovascular Disease. Vol. 45, PrimReamy, B. V., Williams, P. M., & Kuckel, D. P. (March 1). Prevention of Cardiovascular Disease. Primary Care - Clinics in Office Practice, 2018; 45: 25–44. https://doi.org/10.1016/j.pop.2017.11.003ary Care - Clinics in Office Practice. Elsevier, 2018; 25–44.
11. American Heart Association's Workplace Health Solutions. American Heart Association Life's Simple 7 ® Journey to Health ™, 2017.
12. Goetzel RZ, Pei X, Tabrizi MJ, Henke RM, Kowlessar N, Nelson CF, et al. Ten modifiable health risk factors are linked to more than one-fifth of employer-employee health care spending. Health Aff, 2012; 31(11): 2474–84.
13. Osondu CU, Aneni EC, Valero-Elizondo J, Salami JA, Rouseff M, Das S, et al. Favorable Cardiovascular Health Is Associated With Lower Health Care Expenditures and Resource Utilization in a Large US Employee Population: The Baptist Health South Florida Employee Study. Mayo Clin Proc [Internet], 2017; 1, 92(4): 512–24. Available from: https://doi.org/10.1016/j.mayocp.2016.12.026.
14. Ford ES, Greenlund KJ, Hong Y. Ideal cardiovascular health and mortality from all causes and diseases of the circulatory system among adults in the United States. Circulation, 2012; 125(8): 987–95.
15. Hiremath S, Vala DR, Roy T, Khera P, Kaul U. Changing patterns in the prevalence and management of cardiovascular risk factors in India and their comparison with the rest of the world along with clinical outcomes at. 5 An analysis of stable coronary artery disease patients from The Prospective. Indian Heart J, 2018; 70: S36–42.
16. Arnett DK, Blumenthal RS, Albert MA, Buroker AB, Goldberger ZD, Hahn EJ, et al. 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. J Am Coll Cardiol, 2019; 74(10): e177–232.
17. Rehman H, Samad Z, Mishra SR, Merchant AT, Narula JP, Mishra S, et al. Epidemiologic studies targeting primary cardiovascular disease prevention in South Asia. Indian Heart J, 2018; 70(5): 721–30.
18. Nurillayeva NM. An analysis of the prevalence and significance of behavioral risk factors in patients with coronary heart disease on an outpatient basis (Анализ распространенности и значение поведенческих факторов риска у больных ишемической болезнью сердца в амбулаторных условиях) Preventative medicine. - Moscow, 2011; 1: 11-15.
19. Gadaev AG, Nurillaeva NM. New preventive technologies for coronary heart disease in the primary health care at the present stage: Guidelines (Новые профилактические технологии при ишемической болезни сердца в первичном звене здравоохранения на современном этапе: Методические рекомендации).Tashkent, 2010; 25.
20. Nemeroff CB1, Musselman DL. Are platelets the link between depression and ischemic heart disease?Am Heart J, 2000; 140(4): 57-62.
21. Farquhar JM, Stonerock GL, Blumenthal JA. Treatment of Anxiety in Patients With Coronary Heart Disease: A Systematic Review, Psychosomatics. Elsevier, 2018; 59: 318–32.
22. Sundel KL, Stain-Mahngren R, Andersson A, berg-Wistedt A, SchenckGustafsson K. High frequency of anxiety and angina pectoris in depressed women with coronary heart disease. Gend Med, 2007; 4(2): 146–56.
23. Christiansen OG, Madsen MT, Simonsen E, Gögenur I. Prophylactic antidepressant treatment following acute coronary syndrome: A systematic review of randomized controlled trials. J Psychiatr Res, 2017; 94: 186–93.
24. Vander Weg MW, Coday M, Stockton MB, McClanahan B, Relyea G, Read MC, et al. Community-based physical activity as adjunctive

smoking cessation treatment: Rationale, design, and baseline data for the Lifestyle Enhancement Program (LEAP) randomized controlled trial. Contemp Clin Trials Commun, 2018; 9: 50–9.
25. Kornerup H, Zwisler ADO, Prescott E. No association between anxiety and depression and adverse clinical outcome among patients with cardiovascular disease: Findings from the DANREHAB trial. J Psychosom Res, 2011; 71(4): 207–14.
26. Párraga-Martínez I, Escobar-Rabadán F, Rabanales-Sotos J, Lago-Deibe F, Téllez-Lapeira JM, Villena-Ferrer A, et al. Efficacy of a Combined Strategy to Improve Low-density Lipoprotein Cholesterol Control Among Patients With Hypercholesterolemia: A Randomized Clinical Trial. Rev Española Cardiol (English Ed, 2018; 71(1): 33–41.
27. Nurillayeva NM, Gadaev AG. Health SCHOOLS experience and role of a general practitioner in the fight against risk factors for coronary heart disease (Опыт работы «ШКОЛЫ здоровья» и роль врача общей практики в борьбе с факторами риска ишемической болезни сердца). Rational pharmacotherapy in cardiology,Moscow, 2011; 7(6).
28. Herscovici R, Wei J, Shufelt C, Mehta P, Weins-Cook G, Marpuri RS, et al. Seattle angina questionnaire and prognosis in coronary vascular dysfunction: results from the women's ischemia syndrome evaluation -coronary vascular dysfunction (WISE-CVD). J Am Coll Cardiol, 2018; 71(11): A1905.
29. Awerbach JD, Camitta MGW. Coronary Disease and Modifying Cardiovascular Risk in Adult Congenital Heart Disease Patients: Should General Guidelines Apply? Prog Cardiovasc Dis, 2018; 61(3–4): 300–7.