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CEREBRAL STROKE PREVENTION PROGRAMS

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Abstract. Cerebral strokes are the second most common cause of premature death in the world after coronary (ischemic) heart disease. A significant part of the risk factors for acute cerebrovascular accidents is “manageable”, so a significant portion of stroke deaths is preventable. For those experiencing transient ischemic attacks and stroke victims, avoiding these risk factors is equally important. The programs of primary, secondary and tertiary prevention of strokes are implemented by medical institutions, medical and social non-governmental organizations, and educational institutions. The prevention of cardiovascular diseases can be included in continuing education programs, briefings and structured cases on the formation of a healthy lifestyle.

Keywords: cardiovascular diseases, cerebral stroke, risk factors, stroke prevention, disability, Social Pedagogy, Health Pedagogy, valeological competence, healthy lifestyle, case study method, production briefings, Post-Stroke Patients School.

Brain stroke in most countries is the second or third cause of death [1]. About 16 million people carry it for the first time annually, 5.7 million stroke victims die. Only 10-20% return to work, of which about 8% retain their professional suitability, 25% need outside help. By the end of the year after a stroke, 25-30% of patients develop dementia [2].

There are over 300 risk factors for stroke. But the "significant" among them are much smaller. Significant [3] are those risk factors that occur most often in the anamnesis vitae, in any population or in most populations, can cause a stroke independently of each other, have a significant effect on the development of stroke, and reduce the risk of stroke when they are eliminated. Based on many years researches, it was established [4-6] that the following significant risk factors lead to the development of cerebral stroke: behavioral (physical inactivity, tobacco smoking, alcohol abuse, overeating fats, sugar and salt, refusal to undergo a medical examination and the necessary correction of arterial hypertension, hypercholesterolemia, hyperglycemia, hyperhemoglobinemia, sports of the highest achievements, residence in settlements where qualified medical care is not available), physiological / pathophysiological (distress, arterial hypertension, cardiac arrhythmias and conduction disorders, obesity, diabetes mellitus, age 60+, myocardial infarction, transient ischemic attacks and stroke in the anamnesis vitae, sleep apnea, thromboembolic diseases, hyperhomocysteinemia, the use of oral contraceptives and hormone replacement therapy in menopause, with hypofunction or after resection of the endocrine glands), genetic (Andersen-Farby disease, transient ischemic attacks and stroke in a family anamnesis), environmental. Many factors have a greater or lesser effect depending on gender, race and combination of these factors.

Stroke prevention can be [7]:

– primary (aimed at maintaining a healthy lifestyle and preventing the development of strokes, with preventive medical examinations and identification of individual risk factors, medical examination and recovery);

– secondary (aimed not mitigating the effects of stroke and preventing their recurrence, with targeted medical examinations, diagnosis of pre-stroke conditions);

– tertiary (aimed at preventing disability, partial or full recovery of disability, with physical and socio-psychological rehabilitation).

For primary prevention of cerebral strokes, WHO recommends that citizens and civil society focus on “manageable” risk factors [8], and medical services on the early detection of diseases that lead to the development of strokes. However, practical healthcare has its own ideas about the effectiveness of stroke prevention for various “controlled” risk factors: high prevention efficiency is observed with respect to arterial hypertension and smoking, low with respect to atrial fibrillation, hypercholesterolemia, diabetes mellitus and alcoholism [9; 10].

It is advisable to identify risk factors and carry out individual stroke prevention for all persons over 30 years old who applied for the first time this year for medical help or advice to a family doctor, general practitioner, cardiologist, feldsher or feldsher-obstetrician. A direct statistically significant dependence of the level of medical literacy and education and commitment to change behaviors to a safer pre-stroke, as well as commitment to rehabilitation after a stroke was found. In the first case, the frequency of strokes is significantly reduced, in the second, the decrease in neurological disorders is significantly increased if the rehabilitation program is fully implemented [11].

For the planning of preventive measures, sociological surveys are used: primary and repeated, after 12 months. Most often they have the form of questionnaires. This method also allows you to get "feedback", to assess the health status and quality of life of patients.

Prevention programs typically include:

– issues of personal prevention: maintaining a healthy lifestyle (rational nutrition, adequate physical activity, adherence to work and rest regimes, harmonious family and sexual relations, mental hygiene, bad habits to quit), self-monitoring of weight, blood pressure, blood sugar level in patients with diabetes, preventive medical examinations;

– issues of public prevention: national and regional programs to prevention cardiovascular disease, obesity, tobacco smoking, abuse of alcohol, salt, fat and

sugar, marking of products with a warning about the risk of their use by diabetics, people with obesity and weight gain, people with hypertension, strengthening the preventive direction of the health care system, improving the environmental and sanitary conditions.

In epidemiology, two strategies for the primary prevention of stroke are used [9]:

– Population Strategy: it is used for large groups of the population, regardless of a stroke or other vascular diseases in anamnesis, is aimed at creating a healthy lifestyle (stereotypes of proper nutrition, normalizing blood pressure, quitting smoking, alcohol abuse) and is based on the development of national programs;

- High-Risk Strategy: aimed at identifying people with a high risk of stroke and conducting individual treatment measures. A High-Risk Strategy is also applicable for secondary and tertiary prevention.

The formation of a healthy lifestyle and a safe behavior model from the point of view of stroke prevention lies in the field of several academic disciplines: Social Pedagogy, Health Pedagogy, Valeology, the Basics of Life Safety, the Basics of Medical Knowledge, a number of hygienic and therapeutic disciplines, Nervous Diseases, Social Medicine and Organization of Health Care. Social Pedagogy plays a preventive role in achieving the goals of "harmonizing the relations of subjects of the social environment" [12], "educating the individual taking into account the specific conditions of the social environment" [13], "helping young people quickly adapt to the social system, and resisting negative deviations from behavioral norms" (E. Mollenhauer, Germany) [14], "training and education of an individual person or group of people, sometimes united by social disaster and in need of rehabilitation or treatment, their socialization" [15]. Thus, the points of application of social pedagogy in the prevention of strokes:

– in primary prevention – the motivation of the population to lead a healthy lifestyle in order to minimize the possible consequences of hereditary and behavioral risk factors; help stroke-affected patients adapt to new health restrictions in their lives (often disability [16]) to prevent recurrent strokes and successful rehabilitation; help

relatives of the victims adapt to changes in the living conditions of their families in connection with the need to take care of a family member who suffered a stroke [17];

– in secondary and tertiary prevention – the motivation of those who have experienced transient ischemic attacks and stroke victims to lead a healthy lifestyle, follow medical recommendations for examination, treatment and rehabilitation, attend the "school of post-stroke patients" to minimize the risks of developing and recurring stroke, and development of disability.

Health Pedagogy, the discipline that is just beginning to be taught in Ukrainian universities of a non-medical profile (Shtefan L.V., Shevchenko A.S., 2019), includes the prevention of strokes as one of the main causes of death and disability of Ukrainians. Reducing the number and strength of the action of "controlled" ("correctable") risk factors in relation to this pathology is included in the general strategy for the formation of a healthy lifestyle. Refusal from tobacco smoking and alcohol abuse, overeating, refusal of excess salt, sugar and fat in the diet, increase in the number of fruits and vegetables in the traditional Ukrainian average diet, additional physical activity in a sedentary lifestyle, control of blood pressure, blood sugar and fat levels, timely medical examinations, partnership with medical workers in maintaining and strengthening their own health, identifying heredity regarding cardiovascular diseases system, diabetes, obesity, atherosclerosis, thromboembolic conditions, alcohol and tobacco addiction, as well as smoothing their effects – topics as a lecture course, self-study program, and practical exercises, topics of a lecture course, self-study programs, as well as practical exercises, training cases. Also, these issues can be included in briefings at industrial enterprises. Knowledge and practice, supported by motivation to preserve health and even life, become the basis for the formation of valeological competence. And it, in turn, can reduce the risk of strokes, reduce the frequency and severity of disability, and increase the survival rate for a stroke.

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