The results of sociological study of various groups of people over the cerebrovascular diseases

The study was intended to analyze the sociological study of different groups of people on their knowledge of cerebrovascular diseases, risk factors, treatment and prophylaxis, effectiveness of health care delivery by primary and secondary health care workers. The objects of investigation were patients with hypertension, patients who have suffered from acute ischemic stroke, their families, primary health care workers, emergency care workers, hospital health care workers.

The analyzed questionnaires of patients with hypertension showed that the majority of them don’t keep to rational lifestyles. 27.9% of patients overuse salt in food, 30.7% of them eat fat food, 25.4% of patients smoke, 18.8% of patients abuse alcohol, 22.0% of them are physically inactive.

The low activity for preventing hypertension crisis and complications were observed in patients with hypertension. Only 10.3% of patients take antihypertensive preparations daily, 29.9% of patients seek medical aid only in case of dramatically high blood pressure, 35.0% of patients take arterial pressure regularly.

It was determined that 87.3% of patients with acute ischemic stroke were taken to hospital. In 10.6% of cases the called ambulance arrived within 20 minutes, in 78.0% of cases after 40 minutes. In the admitting office there were examined 63.5% of patients within first 20 minutes, 17.5% of patients — later than 20 minutes.

In self assessment of health care workers there was noted: ability to provide emergency health care in case of acute ischemic stroke by using up-to-date methods of drug therapy and non-drug therapy (76.9%), ability to correct lifestyles of patients with cerebrovascular diseases (80.4%), ability to discover cerebrovascular diseases risk factors (81.3 and 63.7% among general practice/family medicine and primary care physicians, respectively).

All respondents are able to undergo training in the institutes of postgraduate education (73.3%), to use scientific resources (74.9%) and Internet (86.1%).

Main activities of health prevention and treatment of cerebrovascular disease are proposed.

**Key words:** sociological study, cerebrovascular disease, hypertension, stroke, health care workers.

**Preamble**

Today development of health care in most countries of the world is characterized by a shift of priorities from economic costs to developing and implementing the most effective methods of resources distribution. All states are interested to improve their health systems for expansion opportunities to provide qualitative care to all who need it.

This task is relevant for those countries that already provide efficient medical care, as well as for those where the majority of population still does not receive the necessary medical care, according to modern standards (Avksentyeva M.V., Omelianovskiy V.V., 2010). Researches conducted have determined a clear correlation between quality of organization and provision of medical care to patients with stroke, and index of morbidity and disability (Stakhovskaya L.V. et al., 2009).

Despite advances in diagnosis and treatment of cerebrovascular diseases, including ischemic and hemorrhagic stroke, this problem remains one of the main causes of death and disability among adults, due to different organizational, material and technical and other factors.

So, patients with suspected stroke (hemorrhagic, ischemic) are brought to medical institutions with different possibilities level, and neuroimaging techniques are used in less than in half cases. In many hospitals there are no conditions for intensive therapy. In most towns and villages there is no neurosurgical care advisory organization, and even if there is a neurosurgical department, yet there we can see low neurosurgical activity. A similar situation is observed not only in Ukraine but also in other countries, especially in the former Soviet Union (Gusev E.I. et al., 2003).

Many other factors also influence development and course of cerebrovascular diseases: social risk factors, people's attitude to their health, awareness of the cerebrovascular and cardiovascular diseases among population.

The aim of this research is comprehensive sociological study among different categories of population to determine awareness of cerebrovascular diseases, risk factors, treatment and prevention, as well as the role of health professionals of the primary and secondary care in provision of medical care.

**Object and methods of research**

The objects of study were persons with essential hypertension (EH), patients who underwent cerebrovascular accident (CVA), their families, health care professionals of the primary health care and in-patient (tertiary) care. The main research method: questionnairing the participants.

**Results and discussion**

The total number of respondents: 495, including men - 243 (49.1%), women - 252 (50.9%).

Most (53.7%) of the respondents were aged > 50 years, the least were aged below 30 (7.3%) (p<0.05). The most numerous group as for social status consisted of employees (22.6%) and seniors (28.9%), and the least - students (1.0%) and persons with disabilities (7.9%).
The next study stage was studying the time of EH manifestation and medical supervision. The largest proportion of respondents were persons who have been suffering EH for > 20 years (27.7%), and 15-19 years (24.4%), and the least proportion were persons, who were diagnosed EH < 5 years ago (6.5%). Of all surveyed, only 73.9% were under medical supervision, and 26.1% were not under medical supervision (difference is significant, P < 0.05), evidencing the quality of supervision patients with essential hypertension. Moreover, among respondents who were under medical supervision, the most were attending a physician as a prophylactic measure once every 6 months (47.5%) or annually (42.4%), and only 10.1% - once every 3 months. During visiting a doctor, patients took a number of surveys: electrocardiography (ECG) - 84.4%, Doppler ultrasound (ultrasoundography) - 26.7%, biochemical studies - 95.4%, were consulted by doctors-specialists - 6.9%, were consulted as for lifestyle modification - 47.5%, and as for correction of drug therapy - 59.4%.

Despite what many people with EH do not follow principles of healthy lifestyle. Thus, 27.9% of respondents over-used table salt, 30.7% - fatty food, 25.0% - smoking, and 18.8% - regularly consumed alcohol. Such an important factor, as psycho emotional stress, is mentioned by 11.5% of patients with essential hypertension every day, and 8.7% - several times a day, and in 45.6% in stresses mainly occur at work, in 37.9% - at home, and in 20.6% - at home and at work.

We have discovered that respondents often have lack of physical activity. So, only 11.9% of respondents do exercises; 2.8% visit swimming pools; 5.5% actively spend weekends; 10.5% go hiking. 22.0% of respondents inform about sedentary work, at that 16.4% of respondents spend their free time at the computer. Only 13.9% of patients sleep well, 39.6% suffer insomnia. 46.5% of respondents mentioned shallow sleep and informed that usually they did not have time to rest at night.

Analysis of getting medical recommendations by persons with EH was a very important issue. We have found out that recommendations for correction of diet were received by 59.6% of the respondents, in relation to physical activity - 25.5%, eliminating bad habits - 35.5%, normalization of sleep - 14.6%, and recommendations for removing stress - 18.4% of respondents. Results obtained indicate a low level of an individual work of health personnel, particularly physicians, with patients to optimize treatment and lifestyle factors as the main factors of primary and secondary prevention of cardiovascular diseases. During the survey we found out that in 66.1% of cases, a doctor recommended to use drugs regularly, in 23.6% of cases – at increase of blood pressure (BP), in 10.3% of cases - during stress situations. This evidences not sufficient level of doctors, especially of primary level, who run care record of the majority of patients with essential hypertension. The following fact also evidences the same: in 10.3% of cases, doctors recommend patients to measure blood pressure only if they feel unwell.

Also we found out that doctors give recommendations to patients and their relatives about the need to take drugs at blood pressure increase, as well as at vertigo, loss of consciousness, different first symptoms of CVA by an algorithm “face, arm, speech.” During the statistical analysis of questionnaires, we questioned the study how well doctors’ recommendations are fulfilled by respondents. The analysis carried out indicates insufficient fulfilment by patients with essential hypertension of doctors’ recommendations, including those concerning the prevention of hypertonic crises and preventing complications of EH. Thus, only 10.3% use drugs daily, 29.9% - go to a doctor with persistent blood pressure increase, and 35.0% - regularly measure blood pressure.

That reaffirms low health communication of medical personnel, lack of awareness of the population and, above all, patients with risk factors for cardiovascular and cerebrovascular diseases. The latter leads to poor preventive work among both medical staff and patients, which negatively affects the incidence of cardiovascular and cerebrovascular diseases and causes increase of mortality and disability.

We conducted sociological studies among CVA survivors. Among 510 of such patients, there were 55.5% of men and 44.5% of women. The biggest age group (91.0%) consisted of people aged > 40. 41.8% of respondents have suffered stroke 5-9 years ago, 20.4% - 1-4 years ago. The smallest group consisted of people who suffered CVA > 20 years ago.

It should be noted that among these patients, 94.3% were under dispensary record, and 44.9% - under neuro-physicians’ record. The survey data show that 87.3% of the patients were brought to the hospital by emergency crews (emergency), and only 1.4% came with other transport. Emergency came for calls within ≤ 20 min in 10.6%, within ≤ 40 min - in 78.0% of cases. It is very important that at the front desk, the majority (63.5%) of patients were examined by a physician and in ≤ 20 min were sent to the corresponding department, and 17.5% of patients for > 40 min were staying at the front desk, which extremely negatively affected their health.

Magnetic resonance imaging (MRI) within the first 2 h of staying in a hospital was carried out in 19.0% of cases, mainly for those patients who were sent to the neuropsychiatric department. The study of care of patients with CVA in the department revealed that in 89.2% of cases patients received care from relatives and only in 7.5% - from health care workers.

We should also mention a low level of compliance with medical recommendations among respondents after CVA. Thus, 19.0% of them regularly consumed salty food, 20.0% - fat food, 18.8% smoked, 22.9% regularly consumed alcohol, 50.6% were living in constant stress, 27.1 % were sedentary. Respondents after CVA have positive opinion about recommendations from physicians and other health professionals after stroke. Thus, 83.7% of respondents received recommendations for improving nutrition, 69.0% - for establishment of full sleep, and 68.2% - for anti-stress behaviour.

Respondents believe that there is lack of efforts to eliminate bad habits (42.2%) and increasing physical activity (61.2%).

We also noted high level of recommendations as for drug therapy, especially antihypertensive drugs. As a result, the number of respondents controlling blood pressure regularly has increased. Thus, we should note a more appropriate response of patients after CVA to recommendations of health workers, especially in control of blood pressure, adjustment of sleep, physical loads. However, there remains a significant proportion of violations concerning diet (salt, alcohol) and smoking.

Besides, 310 questionnaires of respondents (44.5% male, 55.5% female) have been analyzed with respect to care of disabled as a result of cerebrovascular disease in their families.

The age distribution among men was even. In the analysis of education level, the largest group of men had secondary education by (58.7%), while the lowest - with non-complete higher education (0.7%), and higher education (1%). A group of men who have permanent income made 21.8% (16.7% of male respondents were hired employees, 5.1% - entrepreneurs); 5.1% - persons with disabilities; 22.5% - seasonal workers; 36.2% - unemployed; 14.4% - household workers.

When comparing the social status of men and women we found out that percentage of constantly working women is 2 times more than of men: 26.7% vs. 16.7%. It is very important that the majority of surveyed men and women (95.7 and 93.0%, respectively) mention permanent conflicts in families, including several times a day (10.1%). We discovered that the main cause of conflict is the presence of a disabled person in a family and the need of constant care of him.

We studied the readiness of 310 members of families having a disabled as a result of CVA, to provide the necessary assistance. It turned out that the majority of respondents from families where people with disabilities live, are familiar with the basic principles of care for the disabled: 100% awareness about nutrition, 95.2% - care in case of constipation, 95.5% - tacticts in case of loss of consciousness, 86.5% - hygiene facilities and only 31.0% - in matters of medical and social rehabilitation. The analysis shows that the most frequent source of information on organization of care for disabled members of their families are primary health nurses (45.8%), as well as family physicians (25.3%) and social services employees (3.9%). In most cases, family members of a disabled person take care of him (58.4%), or a person employed by them (19.7%). Employees of social services are involved in assisting the disabled only in 4.5% of cases, volunteers – in 1.0%, while in European countries these functions are basically performed by social services workers and volunteers.

We have analysed 438 profiles of sociological research among health workers of primary care. Among the respondents, 18.3% were physicians of general practice/family medicine, 81.7% - local doctors-therapists. In accordance with their own self-esteem level of readiness to provide help with cerebralvascular diseases, the best results were received the following areas: knowledge of risk factors for cerebrovascular diseases and EH (81.3 and 63.7%, www.umj.com.ua) | UKR. MED. CHASOYPS, 3 (95) – V/VI 2013

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respectively), knowledge of the methods to fight risk factors for cerebrovascular diseases involving the family (65.1%). In addition, doctors respondents positively evaluated their abilities to use modern medical methods and non-pharmacological treatment (76.9%), the ability to correct the way of life of patients with cerebrovascular diseases (80.4%). We found out that the level of knowledge of physicians of general practice/family medicine is significantly higher than that of district doctors.

Also we studied the possibility to provide medical assistance to the population in the primary level, including the use of modern methods of drug therapy; the availability of modern methods of functional (instrumental) screening for revealing cerebrovascular diseases, modern laboratory methods of examination; possibility of individual work with patients as for correction of risk factors; lifestyle modification in patients with risk factors for cerebrovascular diseases, etc.

We have established that availability of up-to-date methods of functional (instrumental) and laboratory survey for revealing cerebrovascular diseases at the primary level is 19.9%, possibility of application methods of modern drug treatment of cerebrovascular disease in the outpatient setting is 65.3%. 10.5% of respondents are provided with appropriate means for emergency medical care for CVA.

At that respondents indicated the lack of time for individual work with patients to correct lifestyle at cerebrovascular diseases, management of risk factors as for cerebrovascular diseases, working at the family level for training in rehabilitation of patients after stroke. The number of respondents who indicated time limit for preventive work is significantly higher compared to those who have sufficient time: 98.9% vs 1.1% (p < 0.01).

Analysis of 344 respondents’ questionnaires – by ambulance teams - has been made. They included: 53.5% - doctors of general brigades, 28.2% - paramedic, 18.3% - specialized teams. It is established that the most significant problem for teams was arrival due to traffic jams on the roads (the problem of arrival of medical transport was reported by 90.4% of respondents), resulting in that in 27.3% of cases ambulance arrives at the place within > 40 minutes.

We should note that ambulance teams are provided well with necessary medicines and the means to provide emergency medical care for stroke (89.8%), as confirmed by official financing of emergency medical care for the purchase of medicines and means of medical purpose. Despite this fact, we can see that emergency cars are not provided enough with tools, instruments to maintain vital body functions during transportation (27.3%), creating proper conditions for transporting patients in bad state (27.3%).

In addition, we have studied conditions of hospitalization of patients with CVA. We can see that in 83.4% of cases patients brought with CVA were hospitalized through the front desk, and in 16.6% of cases (due to severity of cases) - directly to the hospital. It should also be noted that in 59.0% of cases, a doctor, who should accept a patient is called from the corresponding department which delays admission: in 41.6% of cases, process of admission is delayed for => 20 minutes.

The main source of information concerning provision of modern medical care for cerebrovascular disease was the pre-attestation course (73.3%), and 86.1% - the Internet, 74.9% - scientific literature, 17.2% - remote online study. Only 22.1% of health workers study periodic scientific publications.

Also, we have analyzed 175 questionnaires of respondents – hospitals physicians: 38.8% - neurologists, 33.7% - therapists, 20.6% - neurosurgeons, 6.9% - anaesthetists. According to respondents, 6.0% of patients were admitted to the department in critical state, 24.8% - in heavy, 48.6% - in moderate, 20.6% - in light state.

Survey of doctors' awareness about modern standards of care for patients with cerebrovascular diseases is also interesting. For example, most physicians neurosurgeons and anesthesiologists (94.4 and 77.9%, respectively) are familiar with the special standards of care at vascular brain diseases. However, among physicians only 15.3% are familiar with the standards, 28.8% are not familiar, partly familiar - 55.9%.

Moreover, we found out that 66.3% of survey respondents have the possibility to undergo MRI, CT, ultrasonography and laboratory biochemical express survey 24 hours a day. Operating rooms for surgical treating in hemorrhagic stroke are always ready in neurosurgical departments, and actually all departments except patients with acute cases, have medicines for emergency treatment (77.1%). Thrombolytic therapy is carried out extremely rarely.

Possibility to organize emergency care and treatment of patients in accordance with the appropriate standards is significantly higher for doctors-neurosurgeons and neurologists than for therapists.

Analysis of the questionnaires of physicians responding shows that they all have the opportunity to take a pre-attestation course, thematic improvement cycles, as well as internships. 61.1% of hospital doctors read scientific literature, 74.9% - scientific periodicals, 86.9% - use the Internet, 26.3% - use remote studying.

Thus, analysis of sociological survey of different population segments - from patients and their relatives to outpatient doctors, doctors of emergency service and hospitals – has revealed both positive sides in the area being studied and problems to be solved in organizational and methodical, therapeutic and diagnostic, rehabilitation and prophylactic way.

Educating the population should be paid more attention, including among individuals with cerebrovascular diseases: clarification of main symptoms of cerebrovascular diseases, behaviour tactics at revealing these symptoms, EH treatment. Moreover, it is necessary to draw attention to the work as for risk factors management: lifestyle change, diet, physical activity, achieving psycho-emotional comfort.

Emergence service work is still an important issue, including its timely arrival, medical aid at the pre-hospital stage in accordance with the modern standards; equipping emergency cars with modern equipment and medicines.

It is very important to create conditions for quick admission to the necessary departments (neurovascular, neurosurgery, intensive care unit) of patients in critical state; assisting them in the emergency department (urgent care department) by multi-discipline teams (anesthesiologist, cardiologist, neurologist, physiotherapist) with application of neuroimaging examination methods (CT, MRI, ultrasonography) and ECG; transferring a patient if necessary to neurosurgery operating room.

There is no doubt that the issue of training medical personnel, particularly physicians, should be solved every day. For this any forms are acceptable: advanced studies courses as basic training, remote training, educational literature, internet, including scientific and practical forums.

Physicians should use in their work contemporary domestic and foreign standards of diagnosis, treatment, rehabilitation and prevention, create in allocated departments local standards within international and national ones.

Conclusions

Based on the survey results, main directions of health care work for prevention and treatment of cerebrovascular diseases are:

1. Further improvement of health service to people with cerebrovascular diseases by creating vascular centres (departments), emergency department in big hospitals with servicing patients by multidisciplinary teams.
2. Paying more attention to enlightening work among the population concerning the first symptoms of cerebrovascular disease, behaviour tactics at revealing these symptoms, treatment directed to EH as the major risk factor.
3. Providing emergency service with the necessary vehicles, equipped with reanimation and survival equipment, medical supplies.
4. Providing health care workers with the possibility of permanent increasing their professional level (training, postgraduate education, internet, e-textbooks, etc.).

Literature


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