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The clinical and etiological characteristics of patients of elderly and senile age with discirculatory encephalopathy depending on residing region.

The clinical and etiological characteristics of discirculatory encephalopathy (DE) depending on residing region has been studied. The analysis of risk factors has shown that the leading reasons of vascular defeat of a brain at all patients were the atherosclerosis and an arterial hypertension, thus at patients of I group at whom old traditions of a food and quieter, traditional way of life have remained, these risk factors were present less often. Clinical symptoms of discirculatory encephalopathy, as well as numerous subjective and clinical displays, have been most expressed at patients of the basic group, inhabitants of Viljujsky region, adverse in the ecological plan.

Keywords: discirculatory encephalopathy, region, risk factors, the clinical characteristic, elderly and senile age.

Introduction: the chronic asphyxia of brain (ChAB) on prevalence takes a leading place in structure of cerebrovascular diseases (1). Slowly progressing insufficiency of blood supply of the brain is meant by this term, leading to gradual infringement of its functioning (1,2). An atherosclerosis and arterial hypertension promote to blood circulation destabilizations as a whole, to gradual development of chronic cardiovascular insufficiency and, accordingly, development and progressing XHMK (3,4). Consider that the extremely difficult, and at times and an impracticable problem is an accurate definition of etiology of discirculatory encephalopathy at elderly (4,5). The reason of it is characteristic for persons of the senior age groups the combination of actually atherosclerotic changes with arterial hypertension, cardiac pathologies and other vascular pathological changes. At such variants of a pathology patients of elderly and senile age quickly enough, during 2 - 5 years pass all three stages of chronically developing insufficiency of brain blood circulation (6,7). Many researchers note a tendency to increase the share of discirculatory encephalopathy in structure of vascular diseases of nervous system that is connected with aging of the population.

Each certain geographical region, each ethnic group of the population define the features in epidemiology of this or that disease. There are separate researches about prevalence of vascular diseases of a brain in some regions of the Russian Federation (Baragin J.J., 1990). Studying cerebrovascular pathologies at representatives of elderly and senile age, especially taking into account some regional and ethnic factors, represents doubtless scientific and practical interest and has certain value for perfection of quality and efficiency of rendering of medical aid to older persons of this or that region of such big and multinational country, as the Russian Federation.

Research object - to study risk factors of development and progressing, and also to carry out the comparative analysis of a clinical picture discirculatory encephalopathy at persons of the elderly and senile age living in different regions of republic.

Material and research methods. 118 patients with discirculatory encephalopathy of 2nd stage have been surveyed. All patients during supervision have been hospitalized in neurologic branch of the Geriatric Center (GC). Criteria of statement of the diagnosis was clinically confirmed by defeat of vessels of a brain at a corresponding clinical picture. Proceeding from the purpose patients have been subdivided into two groups: the basic, including 2 subgroups, and control. Criteria of division of the basic group into subgroups was the residing region. The basic group was made by 83 patients at the age of 60 - 85 years: in the 1st subgroup there were 38 patients living in northern zone, in the 2nd - 45 patients living in Viljujsky area. The comparison group has been presented by 35 patients with a similar pathology aged in a range of 35-55 years.

Clinical research included careful and profound gathering of the anamnesis in the course of personal meeting with sick, their relatives, viewing of out-patient cards from polyclinic establishments in a residence, archival case records, extracts, and inquiries. Results of the first and all subsequent inspections were compared, as one of problems of our work was research of dynamics of clinical displays of cerebrovascular pathologies depending on region. For the purpose of definition and specification of stage of discirculatory encephalopathy the anamnesis, complaints of patients, a condition of the neurologic status on 11 parameter have been analyzed. The statistical analysis was carried out on IBM- the computer with use of programs Microsoft Excel, Statistica, Biostat with material processing on groups by means of the methods of variation statistics including calculation of average values, errors of average, standard deviations. Nonparametric methods, in particular factor of Spearmen's correlation, Mann Whitney's test were also used. At the primary statistics the tabular express method of Strelkov was applied. For each sample of indicators counted numerical characteristics of distribution. An estimation of the importance of distinctions between compared samples was carried out with use of parametrical criterion of Stewdent at 95 % a confidential interval.

Results and discussions.

The analysis of risk factors (table 1) has shown that is the most frequent factors at chronic asphyxia of brain are atherosclerosis and arterial hypertension that can be coordinated with the literary data. Nevertheless, frequency of the named risk factors at patients of the 1st group was smaller, than in the 2nd group. Heart troubles, adiposity and the burdened heredity prevailed also at representatives of the Viljujsky zone. Seldom there was a considered pathology at patients of the 1st basic group - northerners (accordingly). Sick of a diabetes and smoking suffered almost equally. Alcoholism has been most extended among patients of the 1st basic group – northerners.

The comparative characteristic of occurrence of various complaints is presented in table 2. It should be mentioned that at discirculatory encephalopathy - II the most frequent complaint there were headaches and dizziness. Headaches had different localizations, frequency (from 1 - 2 times a month to daily), character (compressing, pressing, pulsing, holding apart), arose at various times a day, more often in second half of day. The most frequent reasons of headaches were fluctuations of arterial tension, changes of weather conditions, intellectual or physical overfatigue. Dizzinesses had more often not system character were caused basically by the same reasons, as headaches. An occurrence immediate cause, initiation of this symptom could be changes of a body position and a head. Essentially a percent of occurrence of various subjective displays of disease at patients of 2nd basic group. For example, headaches met in 77,7 % against 68,4 % at representatives of the 1st group, dizziness - in 87,5 % against 68,18 % in the 1st group;

dream infringements - in 70,85 % against 54,54 % - at patients of the 1st group; memory decrease - in 7916 % against 72,72 % - in the 1st group.

By the end of treatments (table 2) subjective infringements regressed: the general condition improved, complaints to headaches, dizzinesses, noise in a head have decreased, the dream improved, emotional lability decreased. Improvement was more expressed at patients of the 1st group indicators of whom have appeared close to those in comparison group. The comparative estimation of frequency of objective neurologic symptoms of discirculatory encephalopathy-I and discirculatory encephalopathy-II on groups of observed patients is presented in table 4.

From it follows that at patients with discirculatory encephalopathy -II following neurologic symptoms were defined: ocularataxia often had bilaterial character, weakness of convergence and accommodation, infringement from craniocereberal nerves (CCN), pathological reflexes (hand and foot), an extrapyramid syndrome, symptoms of oral automatism. It is necessary to note rather low indicators of changes of reflex sphere (39,5%) sensitivity (26,3%) and cerebellum activity (47,8%) at patients of the 1st group (northerners) in comparison with representatives of Viljujsky region. In the course of treatment recourse focal neurologic semiology has appeared insignificant at representatives of II group, but nevertheless it distinctly was present at patients of group of comparison and 1st the basic group in the form of performance normalization of coordinator tests, improvement of gait, expressiveness reduction disartria. Increase in muscular force (on 0,5 point) and volume of movements was observed the tendency to normalization of a muscular tone, including at patients with extrapyramid frustration was traced, frequency and amplitude of a tremor decreased, the tendency to decrease in expressiveness of other infringements was found out.

Conclusions:

1. Group distinctions on risk factors, a clinical picture at patients with discirculatory encephalopathy elderly and senile age in dynamics of disease depending on region are revealed.

2. The leading reasons of vascular defeat of a brain at all patients were the atherosclerosis and an arterial hypertension, thus at patients of the 1st group at whom old traditions of a food and quieter, traditional way of life have remained, these risk factors were present less often.

3. Clinical symptoms of discirculatory encephalopathy, as well as numerous subjective clinical displays, have been most expressed.

Risk factors (discirculatory encephalopathy). **table №1**

symptoms	I main n = 38		II main n = 45		III group comparison n = 35	
	n	%	n	%	n	%
Hipodynamia	4	10,5	8	17,7	5	14,3
Diabetes sugar	1	2,6	1	2,2	2	5,7
Affection heart ischemic	6	15,8	17	37,7	6	17,2
Obesity	1	2,6	3	6,6	3	8,6
Dislipidemia	12	31,6	19	42,2	7	20
Smoking	7	18,4	8	17,7	4	11,4
Alcohol	7	18,4	2	4,4	3	8,6
Heredity	1	2,6	5	11,1	2	5,7
Arterial hypertensin	21	55,3	36	80	16	45,7

Subjective symptoms at discirculatory encephalopathy - II. table №2

cjmplaints	Before treatment						After treatment					
	I main n = 38		II main n = 45		III main n = 35		I main n = 38		II main n = 45		III main n = 35	
	n	%	n	%	n	%	n	%	n	%	n	%
Headaches	26	68,4	35	77,7	20	57,2	17	44,7	27	60	11	31,4
Tremor	3	7,9	5	11,1	2	5,7	2	5,2	4	8,8	1	2,8
dizzinsses	22	57,9	29	64,4	18	51,4	14	36,8	20	44,4	10	28,6
Hearing decrease	12	31,6	17	37,7	10	28,6	10	26,3	14	31,1	8	22,8
Stagger walking	13	34,2	25	55,5	3	8,6	5	13,2	19	42,2	1	2,8
Decrease memory	22	57,9	29	64,4	11	31,4	12	31,6	26	57,7	6	17,2
Stiffness	7	18,4	12	26,6	4	11,4	5	13,2	9	20	3	8,6
Speech disorder	3	7,9	6	13,3	-	-	1	2,6	4	8,8	-	-
Extremity weakness	18	47,4	28	62,2	10	28,6	10	26,3	19	42,2	4	11,4
Dysop(s)ia	12	31,6	19	42,2	6	17,2	9	23,7	16	35,5	3	8,6

Objectivte symptoms at discirculatory encephalopathy - II.
Before treatment. **table № 3**

symptoms	I main n=38		II main n=45		III main n=35	
	n	%	n	%	n	%
Extra pyramid syndrome	3	8,6	6	13,3	-	-
Oculomotor infringements	11	28,9	17	37,7	7	20
Symptoms of oral automatism	17	44,7	26	57,7	14	40
Anisoreflexion	15	39,4	40	88,8	18	51,4
Pathological reflex	7	18,4	10	22,2	7	20
Craniocereberal nerves	16	42,1	23	51,1	8	22,8
Changes of a muscular tone	8	21,1	13	28,8	6	17,2
Vestibular frustration	18	47,4	26	57,7	12	34,3
Sensitive frustration	10	26,3	13	28,8	6	17,2
Vegetative frustration	12	31,6	13	28,8	10	28,6

Objectivte symptoms at discirculatory encephalopathy - II.
After treatment. **Table № 4**

Symptoms	I main n=38		II main n=45		III main n=35	
	n	%	n	%	n	%
Extra pyramid syndrome	2	5,3	6	13,3	-	-
Oculomotor infringements	8	21,1	15	33,3	4	11,5
Symptoms of oral automatism	17	44,7	26	57,7	14	40
Anisoreflexion	12	31,5	35	77,8	15	42,8
Pathological reflex	7	18,4	10	22,2	7	20
Craniocereberal nerves	10	26,3	22	48,8	2	5,7
Changes of a muscular tone	5	11,1	9	20	1	2,8
Vestibular frustration	8	21,1	12	26,6	4	11,4
Sensitive frustration	5	13,2	9	20	3	8,5
Vegetative frustration	6	15,7	8	17,7	5	14,3