

Transcranial DOPPLEROGRAPHY Examination Results at TIA

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Abstract: in patients in the main and comparative group, the combination of stenoses with hemodynamic achamicity caused patients re-Tia and ischemic stroke in these patients, 76-77% of cases were diagnosed with recurrent Tia within a month, and 10-12% of patients observed ischemic stroke, which included all stages of transitory ischemic Ataka, penumbra moved to ischemic necrosis in 12% of cases.

Keywords: TIA, TKDG, stroke, autoregulation, oligemia.

In our study, we conducted a TKDG examination of patients of all groups in 1 hour. In this, patients were first diagnosed with angio spasm bulging blood vessels, which blood vessels were found to be in which pool. In patients who had a transistor ischemic ataka, had a recurrent transistor ischemic ataka, and had a stroke, stenosis in the vertebral basilar Basin and stenoses of hemodynamic importance were identified he gave the following indications, namely in the left spinal artery 50-75% 11(50%), 75-90% 5 (22.7%), and when a complete occlusion was observed, 6 (27.2%) indicators acquired ahamiyat. In the right vertebral artery 50-75% 14(63.6%) , 75-90% 4 (18.1%), total occlusion 5 (22.7%) was significant.

When patients in the main and comparative group were studied according to the stages of autoregulation, oligemia, penumbra, patients were diagnosed with stenosis, all stages of ham TIA in patients with 50% stenosis, in patients with reverse-proportional but achaematic stenosis to the research work, in patients with vertebral basilar Basin, autoregulation, oligemia, penumbra stages were all identified, which is, The reason is that the collaterals of the Zakharchenko ring are not necessary, and it is the location of important Centers for life in the industry. (Table 1).

Table – 1. TGDI of cranial mining vessels in the vertebral basilar Basin in the main and comparative groups (Main and comparative Guruh =22)

Cranial conic vein basins	No Stenosis	50 %	50-75 %	75-90 %	Full occlusion
LIUA	2 (9%)	5 (22.7%)	1(4.5%)	2 (9%)	0 (0%)
UIUA	4(18.1%)	6(27.2%)	3 (13.6%)	1 (4.5%)	0 (0%)
LCUA	(31.8%)	5 (22.7%)	1 (4.5%)	1 (4.5%)	0 (0%)
UCUA	2(9%)	7(31.8%)	2 (9%)	0 (0%)	0 (0%)
LEUA	6(27.2%)	4 (18.1%)	2 (9%)	0 (0%)	0 (0%)
UEUA	4(18.1%)	5 (22.7%)	4(18.1%)	0 (0%)	0 (0%)
LCA	0(0%)	2 (9%)	11(50%)*	5 (22.7%)*	6 (27.2%)*
UCUA	0 (0%)	2 (9%)	14(63.6%)*	4 (18.1%)*	5 (22.7%)*

Note: LIUA-left internal uyku artery, UIUA-ung internal uyku artery, LCUA-left common uyku artery, UCUA-ung common uyku artery, LEUA-left external uyku artery, UEUA-ung external uyku artery, LCA-left common artery, UCUA - ung common uyku artery.

In patients who had a transistor ischemic ataka, had a recurrent transistor ischemic ataka, and had a stroke, stenosis in the carotid Basin and stenoses of hemodynamic importance were identified-it gave the following indicators, i.e., all indicators, stenosis load, and were seen at the level of a complete occlusion cross section, became achamous.

When patients in the main and comparative group were studied according to the stages of autoregulation, oligemia, penumbra, all stages of stenosis in patients, all stages of ham TIA were identified in patients with 50% stenosis, in patients with reverse proportional to the research work, but with achamitic stenosis, in the carotid Basin, all stages of autoregulation, oligemia, penumbra were not identified, which, It is expressed in the fact that the collaterals of the Villiziev ring are unstable, and the strength of the contralateral blood vessels in this area. (Table 2)

Table 2. TGDI indicators of cranial blood vessels in the carotid Basin in the main and comparative groups (Main and comparative group =199)

Cranial conic vein basins	No Stenosis	50 %	50-75 %	75-90 %	Full occlusion
LIUA	3(1,5%)	119(59,8%)	40(20,1%)	28 (14%)	7 (3,5%)
UIUA	5(2,5%)	38(19%)	48 24,1%)	16 (8,0%)	4 (2,0%)
LCUA	7 (3,5%)	111(55,7%)	33 16,5%)	42 (1,1%)	5(2,5%)
UCUA	5(2,5%)	37 (18,6%)	22 (1,7%)	18 (9%)	2 (1%)
LEUA	9(4,5%)	29 (14,5%)	37(18,6%)	13 6,5%)	3(1,5%)
UEUA	4 (2%)	12 (6%)	14 (7%)	16 (8%)	1 (0,5%)
LCA	1(0,5%)	6 (3%)	5 (2,5%)	2 (1%)	0(0%)
UCUA	0(0%)	3 (1,5%)	2 (1%)	0 (0%)	0 (0%)

Patients in the control group did not identify stenosis in the vertebral basilar Basin and stenoses of hemodynamic importance – it gave the following show kichs, LCA -stenosis yuq-19(48%), up to 50%-9 (23.7%) to 50-75% - 6 (27.2%) .OUA-23 (63.6%), 4 (18.1%), 5(22.7%) that is, the indicators became immaterial. These patients were not diagnosed with Achaemenid stenoses, but vertebral basilar insufficiency was found in 98-99% of cases. Autoregulation of patients in the control group was observed at 88% -90%, with oligemia aniclated at 5-6% of cases. penumbra was not identified. (3. table)

3. table. TGDI indicators of cranial mining vessels in the vertebral basilar Basin in patients undergoing hypertonic crisis in the control group (control guru =39)

Cranial conic vein basins	No Stenosis	50 %	50-75 %	75-90 %	Full occlusion
LIUA	1(4.5%)	5 (22.7%)	2 (9%)	2 (9%)	0 (0%)
UIUA	3 (13.6%)	6(27.2%)	4(18.1%)	1 (4.5%)	0 (0%)
LCUA	1 (4.5%)	5 (22.7%)	7(31.8%)	1 (4.5%)	0 (0%)
UCUA	2 (9%)	7(31.8%)	2(9%)	0 (0%)	0 (0%)
LEUA	2 (9%)	4 (18.1%)	6(27.2%)	0 (0%)	0 (0%)
UEUA	4(18.1%)	5 (22.7%)	4(18.1%)	0 (0%)	0 (0%)
LCA	19(48%)	9 (23.7%)	6 (27.2%)	0 (0%)	0 (0%)
UCUA	23(63.6%)	4 (18.1%)	5 (22.7%)	0 (0%)	0(0%)

There are hypertension, diabetes mellitus and atherosclerosis, patients who have been contacted with hypertensive crisis have been diagnosed with stenosis in the carotid Basin and stenoses of hemodynamic importance, but it does not have achamicity, it gave the following indicators, namely, all indicators, stenosis load, 50%, 50-75%, 75-90% and at the level of complete occlusion cross section. Patients in the control group autoregulation stages acquired achamity, oligemia and penumbra are expressed in this research work by the high permeability of the reverse propositional vascular walls, the fact that the collaterals of the Villiziev ring are mucosal, and the strength of the contralateral blood vessels in this area. (Table 4)

Table 4. TGDI indicators of cranial blood vessels in the carotid Basin in patients with hypertensive crisis in the control group (basic and comparative guru =73)

Cranial conic vein basins	No Stenosis	50 %	50-75 %	75-90 %	Full occlusion
LIUA	40(20,1%)	1(4.5%)	1(4.5%)	1(4.5%)	0 (0%)
UIUA	48 24,1%	3 (13.6%)	3 (13.6%)	3 (13.6%)	0 (0%)
LCUA	33 16,5%	1 (4.5%)	1 (4.5%)	1 (4.5%)	0 (0%)
UCUA	22 (1,7%)	2 (9%)	2 (9%)	2 (9%)	0 (0%)
LEUA	37(18,6%)	2 (9%)	2 (9%)	2 (9%)	0 (0%)
UEUA	14 (7%)	4(18.1%)	4(18.1%)	4(18.1%)	0 (0%)
LCA	5 (2,5%)	6 (3%)	5 (2,5%)	2 (1%)	0(0%)
UCUA	2 (1%)	3 (1,5%)	2 (1%)	0 (0%)	0 (0%)

In patients in the main and comparative group, the combination of stenoses with hemodynamic achaemias caused patients re-TIA and ischemic stroke in these patients, 76-77% of cases were diagnosed with recurrent TIA within a month, and 10-12% of patients had ischemic stroke, which was followed by all stages of transitory ischemic Ataka, penumbra went to ischemic necrosis in 12% of cases.

Table 5. TGDI indicators of occlusion and stenosis, which came together in vertebral basilar and carotid basseny in patients of the main and comparative group (Main and comparative group = 27)

Cranial conic vein basins	No Stenosis	50 %	50-75 %	75-90 %	Full occlusion
LIUA	2 (9%)	5 (22.7%)	28 (14%)	40(20,1%)	1 (4.5%)
UIUA	4(18.1%)	6(27.2%)	16 (8,0%)	48 24,1%	1 (4.5%)
LCUA	7(31.8%)	5 (22.7%)	42 (1,1%)	33 16,5%	2 (9%)
UCUA	2(9%)	7(31.8%)	18 (9%)	22 (1,7%)	2 (9%)
LEUA	6(27.2%)	4 (18.1%)	13 6,5%	37(18,6%)	2(9%)
UEUA	4(18.1%)	5 (22.7%)	16 (8%)	14 (7%)	3 (13.6%)
LCA	0(%)	2 (9%)	11(50%)	5 (22.7%)	3 (13.6%)
UCUA	0 (0%)	2 (9%)	14(63.6%)	4 (18.1%)	2 (9%)

Duplex scanning of the main arteries of the head (DS mag) and transcranial duplex scanning (TKDS) made it possible to identify all types of combined biliary pathology in the aloxia of the main arteries and together in patients in the main group. In the main and comparative groups of patients, general stenosis and occlusion of the main arteries occurred at the same frequency in the internal sleeping artery (d=56.0% and s=55.0%) and in the spinal artery (d=s 8.8%) at right and left. At the same time, more than 70% of stenoses and occlusions were more frequently observed on the left side compared to the right, and more frequently in the carotid system (KS) (13.6%) than in the vertebrobasillary system (VBS) (8.8%). More than 70% of the main group of patients had stenoses, as well as occlusions in the internal sleep artery si and spinal artery, respectively, 13.6% and 8.8%, and in the comparative group, 16.1% and 22.1%, respectively; less than 70% of stenoses were found in the comparative group, 97.6% and 8.8%, in the main and comparative group, 75% penumbra and 10.7% ischemic stroke. (Table 5).

The presence of the same amount of stenosis and occlusion of the trunk arteries from the left and right of the internal sleep artery (IUA)(d=62.5% and s=70.8%) and spinal artery (UA (8.8% d=s)has been noted. At the same time, more than 70% of stenoses and occlusions are observed on the left side relative to the right (UUA s - 8.8%, uua d - 4.8%; nAs - 4.8%, nAd - 4.0%), in addition, in the KS (carotid system) (14.6%) more often than in the vertebro-basilar artery system (VBS) (8.9%). The

deformations of the main arteries without pathological and hemodynamic disorders are in the internal sleep artery (VSA): 57.6% - right, 60.0% - left, (with a slight predominance on the left), vertebral arteries (UA) - 56.0% and 68.0% respectively, with a significant (12% on the left) predominance. Vertebrogenic compression of the vertebral arteries has been found in 8% on the right and 11.2% on the left in the main group of patients. In the main group of patients, the hypoplasia of the vertebral arteries was 2.4% on the right and 0% on the left. The entry of the vertebral arteries in the main group from the top right and left (at the level of the C4-C5 vertebrae) is 2.4%.

Table 6. The most common are indications of combined pathology of the trunk arteries in patients in the main group with Tia Anamnesis (primary and comparative group =17).

Cranial conic vein basins	No Stenosis	50%	50-70%	75-90%	Full occlusion
ISA	66% (29,8%d-36,2% s)	9,2%	10,2%	8,5%	6,3%(4,2%d-2,1% s)
VA	12,8%(8,5%d-4,3% s)	53,5%	31,5%	2,1%	0

Note: ISA-internal sleep artery, SA-spinal artery

In the main and comparative group of patients, stenosis and occlusion of the internal sleep artery (iua) is 29.8% on the right and 36.2% on the left; vertebral arteries (VA) are 8.5% on the right and 4.3% on the left, that is, often almost 2 times more often in the internal sleep artery on the left and

Stenosis occurs in more than 70% of cases, occlusion of the right internal sleep artery (iuad) - 4.2%, occlusion of the left internal sleep artery (Iuas) - 2.1%. Occlusion of the Vertebral arteries has not been recorded, more than 70% of stenoses were detected only by the ISA - 2.1%. Deformations of the main artery without pathological and hemodynamic disorders: in the internal sleep artery (ISA) - 55.3% - on the right, 66.0% - on the left; in the vertebral arteries (VA) - 49.0% on the right and 65.9% on the left. It is important to note that the deformation of the internal sleeping artery (ISA) and the vertebral artery (VA) on the left side is significantly dominant .

In the control group, vertebrogenic compression of vertebral arteries (VA) was found - 10.6% on the right and 12.8% on the left, respectively, with dominance on the left; hypoplasia of vertebral arteries (VA) on the right - 2.1%, left - 4.3%; entry of vertebral arteries (PA) from above (at the level of C4-C5 vertebrae) - on the right - 2.1%, left - 8.5%.

Hemodynamically significant stenoses and occlusions of the right and left internal sleep arteries (Iuad and Iuas) in patients in the main group are in 21.5%, right and left vertebral arteries (VA D and s) - in 11.0%; pathological deflection of the right and left internal sleep artery (iua d and s) (A) in 18% of patients, pathological deflection of the vertebral artery (VA) - in 8.7% of patients; right and left vertebral arteries (VA d and s) vertebrogenic compression - 20.3% observed.

Table 7. Pathological changes in the trunk arteries during duplex scanning in patients in the control group.

Cranial conic vein basins	No Stenosis	50%	50-70%	75-90%	Full occlusion
VBP	66% (29,8%d-36,2% s)	9,2%	2,2%	1,5%	0
VA	12,8%(8,5%d-4,3% s)	53,5%	31,5%	2,1%	0

The most observed pathologies are: vertebrogenic effects on the vertebral artery in 61.3% of cases, with positive tests (head twisting and bending) identifying hemodynamic asymmetry of circulation in the vertebral arteries in 57.7% of patients; stenosis atherosclerosis of the main arteries was detected in 50% of 2.1% of patients; and hypoplasia of the vertebral artery is present in 30.6% of patients. Internal sleep artery (vvh) and spinal artery (UA) deformity (C and S Simon), which occurs without a decrease in blood flow, have been reported in 18.9% and 25.5% of cases, respectively.

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