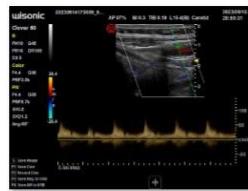


Objectification of cerebral dyschemia

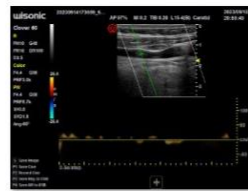
(Case patient MGS, f. 56 y.o.) BP 205/145 HR 105



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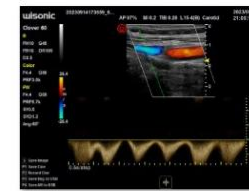
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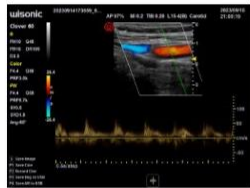
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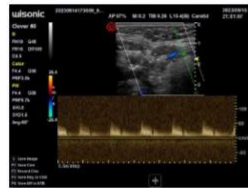
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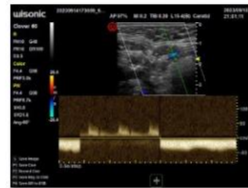
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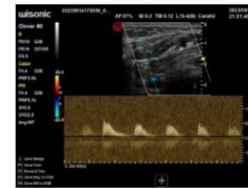
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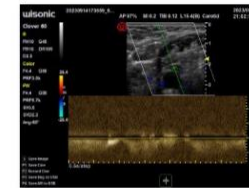
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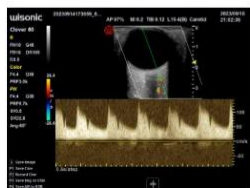
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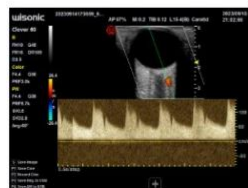
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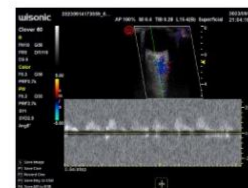
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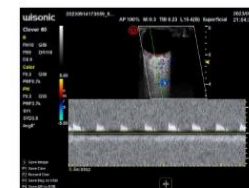
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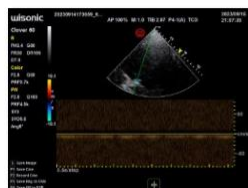


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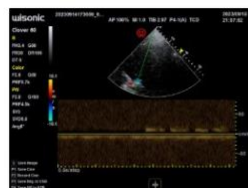


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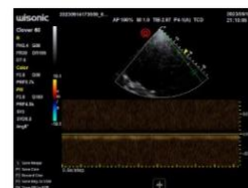
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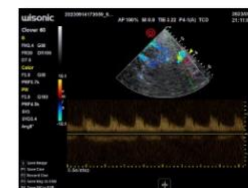
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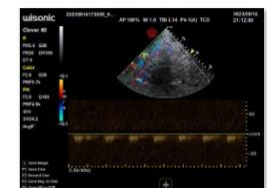
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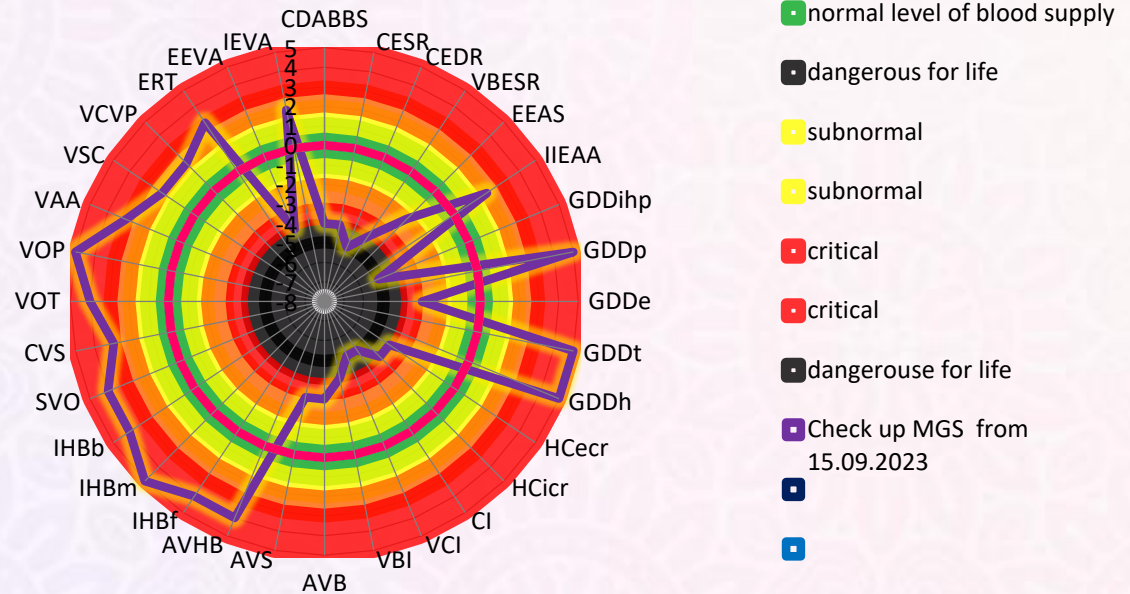


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Objectification of cerebral dyshemia

(Case patient MGS, f. 56 y.o.) BP 205/145 HR 105

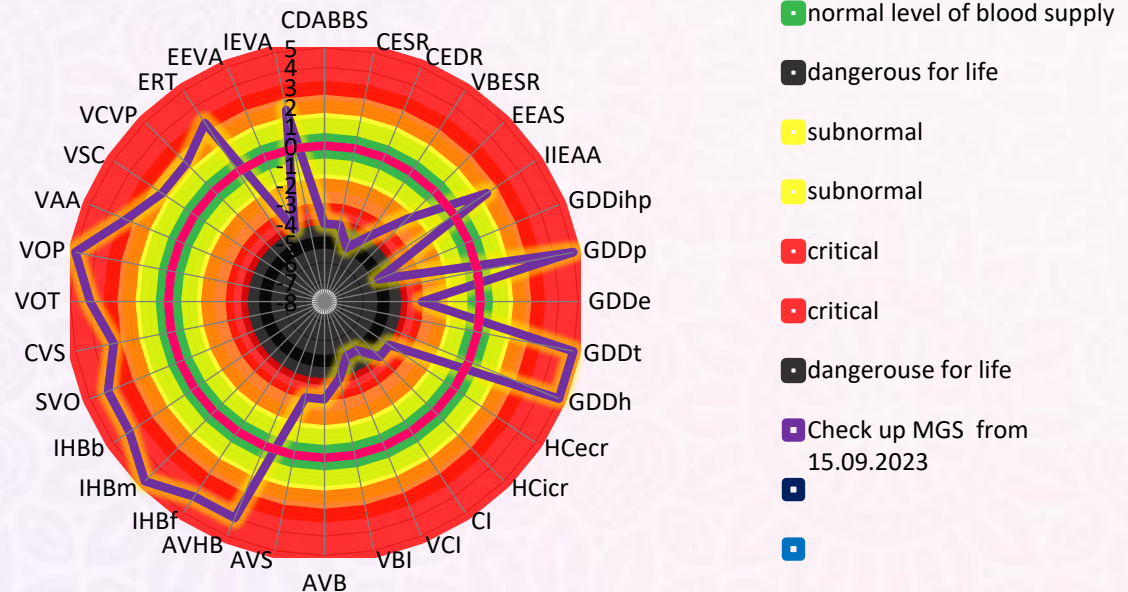


CDABBS - Common deficiency of the arterial brain blood supply, **CESR** - Carotid extracranial systolic reservoir, **CEDR** - Carotid extracranial diastolic reservoir, **VBESR** - Vertebro-basilar extracranial systolic reservoir, **EEAS** - Extracranial expressiveness of the arterial assymetry, **IIEAA** - Intracranial interhemispheric expressiveness of the arterial assymetry, **GDDihp** - General degree of disbalance — instable hemodynamic parameters (chaos 1,2,3), **GDDp** - General degree of disbalance of pressure, **GDDe** - General degree of disbalance of elasticity, **GDDt** - General degree of disbalance of tonus



Objectification of cerebral dyshemia

(Case patient MGS, f. 56 y.o.) BP 205/145 HR 105



GDDh - General degree of disbalance of the head, **HCecr** - Head in CVS — extracranial carotid reservoir, **HCicr** - Head in CVS — intracranial carotid reservoir, **CI** - Cardiovascular insufficiency, **VCI** - Vascular-cerebral insufficiency, **VBI** - Vertebro-basilar insufficiency, **AVB** - Arteriovenous balance, **AVS** - Arteriovenous shunting, **AVHB** - Arteriovenous hydrodynamic balance, **IHBf** - intracranial hydrodynamic balance, **IHBm** - intracranial hydrodynamic balance, **IHBb** - intracranial hydrodynamic balance, **SVO** - Sufficiency of the venous outflow, **CVS** - Correctness of the venous structure, **VOT** - Venous outflow tonus, **VOP** - Venous outflow pressure, **VAA** - Venous angioarchitectonics, **VSC** - Venous superocular collaterals, **VCVP** - Venous collaterals vertebral plexus, **ERT** - Expressiveness of retrograde throwing, **EEVA** - Extracranial eressiveness of the venous asymetry, **IEVA** - Intracranial eressiveness of the venous asymetry



Objectification of cerebral dyshemia

Patient A. m., 34 y.

Blood supply of the head and neck, USD-scanning of brain structure: there are dominant signs of chronic cerebral edema (probable post-traumatic or post-stress genesis) .

The pumping function of the myocardium is sharply reduced, to 1 point, worse on the left.

The venous outflow from the skull cavity is by a normotonic normotensive type. However with presence of chronic cerebral edema the venous outflow is insufficient, it is partly compensated by signs of the overload of collateral venous bed to 4 points on the left. There are expressed signs of disbalance in the system of blood supply for the brain with USD-signs of pressure of compensatory-collateral blood flow in the projection of supratrochlear arteries.



Objectification of cerebral dyshemia

Patient A. m., 34 y.

Visual nerve is without peculiar features.

Blood flow in the projection of precranial segments of both vertebral arteries is considerably increased on the left, on the right it is practically absent.

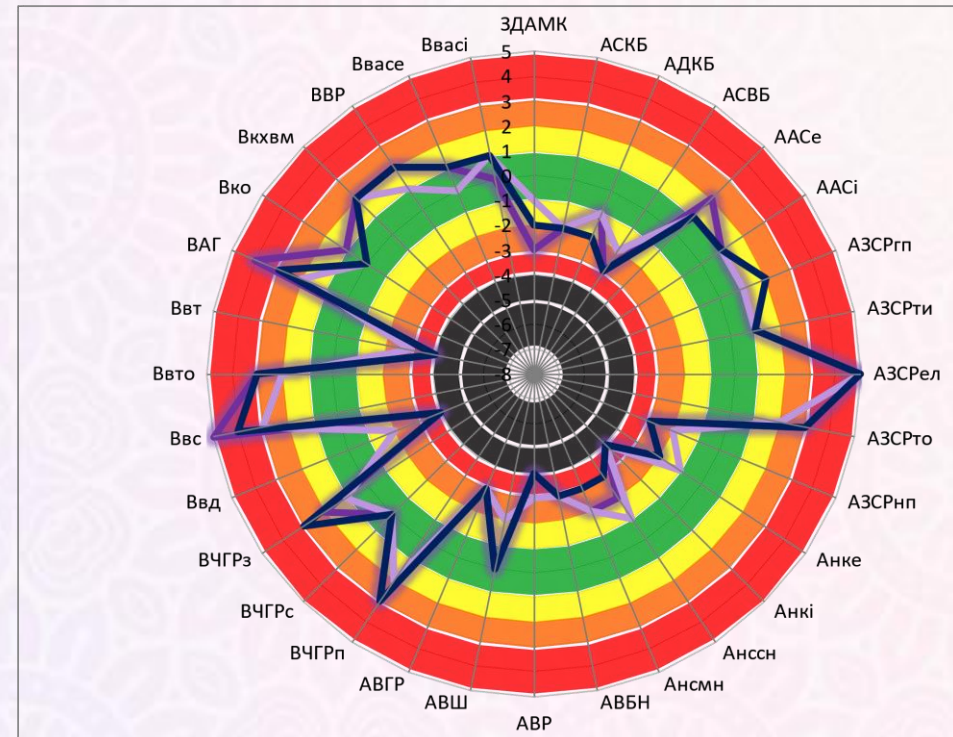
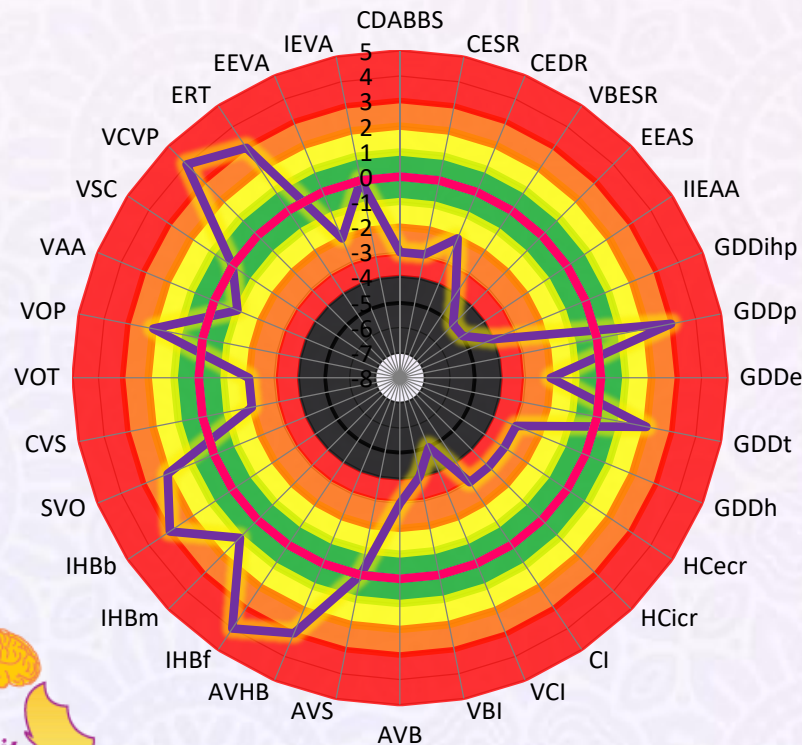
Cerebral blood flow in the arterial system is sufficient in the ICA projection, the angioarchitectonics is of the middle-caliber type, however there are expressed signs of the arteriovenous shunting on the right, which can result in the clinical signs of depression and decline of colour-perception in the range.

The blood supply of basilar artery is reduced due to the extravasal compression by the overloaded direct sine.



Aim

Objectification of cerebral dyshemia at the level of arteriovenous balance (AVB) and hydrohemodynamic (HHDB) conflicts for clinical interpretation of psychoneurological deficit



Clinical-analytical correlations
of ultrasound-angioscanning data
in the duplex- triplex mode
to establish pathohemodynamic patterns
of the development of psychoneurological deficits
in people of different ages

Innovative Vascular Technology

"Angiomarkers of the vascular brain reservoir"

**the original technique by Lushchyk Ulyana, Acad. of ATS of Ukraine, MD
(State Patent of Ukraine №85052 dated 11/11/2013)**



- ✓ **Based on ultrasound and Doppler ultrasound results** of examination of the main arteries of the head and the neck as a **method of evidence-based Angioneurology and objectification of hemodynamic deficiency**
- ✓ **Analytical assessment** of the hemodynamic parameters of the regional cerebral reservoirs,
- ✓ **Clinical and hemodynamic correlation** of psychoneurological deficit
- ✓ **Mathematical modeling** of arteriovenous hydrohemodynamic conflict with **the search for the optimal algorithm for Angiocorrection and Angiotherapy** individually for a specific case,
- ✓ **Dynamic monitoring of sanogenic changes** in cerebral hemodynamics and updating of AVB and HHDB



*A method for ultrasound diagnostics of vessels in the brain. Patent № 10262 A dated 19.07.95;

A method for assessment of the regional angioarchitectonics. Patent № 67707 A dated 31.12.03

- ✓ evaluates not only the hemodynamic parameters of the regional cerebral reservoir,
- **but also**
 1. the adequacy of the pumping function of the myocardium,
 2. the degree of venous stasis,
 3. the level of intracranial pressure,
 4. the displacement of the arteriovenous balance towards arterial ischemia and/or venous stasis,
 5. the violation of the elastic-tonic characteristics of the vascular wall,
 6. locally and/or hemodynamically marked deficiency in the vascular blood vessels of the whole organism and locally in the regional cerebral reservoir, related to assessment of cortical ischemia and atrophic processes of the brain.



*A method for ultrasound diagnostics of vessels in the brain. Patent № 10262 A dated 19.07.95;
A method for assessment of the regional angioarchitectonics. Patent № 67707 A dated 31.12.03

Results

- **The brain Angiomarker® technology** (Method of ultrasound diagnosis of cerebral vessels: **State Patent** of Ukraine. No. 10262. 19.07.1995) has proven itself as **a tool for evidence-based medicine in the diagnosis, monitoring and medicinal treatment of vascular pathology of the brain.**
- **Owing to the clinical-analytical algorithms** of the ultrasound examination of the cerebral arteries and veins, the assessment of the level of hydrohemodynamic intracranial conflict, it is **possible to correct the hemodynamic parameters and minimize the presence of psycho-speech disorders and psychoneurological deficits.**



**We have developed
analytical normative indicators
of changes**

**in cerebral arteriovenous
and hydrohemodynamics balances
in patients of various ages
for client-oriented treatment.**



Ultrasound in the duplex or triplex mode makes a new look at the etiopathogenesis of cerebral vascular disorders and become a monitoring mechanism of evidence-based medicine in daily routine work with patients of the psychoneurological profile.

The technology of brain ultrasound angiomarkers enables to restore the patient's health both in the preventive mode at the preclinical level of the disease, and in the case of expressed psychoneurological deficiency with the aim of its rapid regression.



The technology has been tested from both medical and economic points of view and accelerates the recovery process by 3-10 times.

For classically recognized incurable conditions, it enables to obtain positive results in the form of the inclusion of consciousness, restoration of vision, speech, and hearing during a year of personalized treatment under the control of brain ultrasound angiomarkers.



Thank you for attention!



**Greeting from
Ukraine!**

**We wish the peace
and prosperity
all over the world.**

**Transfer Angiology
Technology available
by e-mail
veritasangio@gmail.com**