OM and in 27 with PUB). 28 patients had an increased BWI (12 with OM and 16 with PUB). The glucose loading was carried out according to the standard practice, the lipid metabolism state was valuated on the content of high-density lipoprotein cholesterol (HDLPC) and triglycerides (TG) in blood. The age deviations frequency of the studied factors was found out. For the evaluation of authenticity of the results the method of Fisher's angular transformation (Pφ) was used.

It has been established that the lipid content ratio, the character of which is evaluated as atherogenic one (the HDLPC level decrease and the TG level increase), in patients with normal BWI was registered in 17, 5 % (equally frequent at OM and PUB). At the overweight the specified disorders were revealed 2, 5 times as often (42, 9 %; Pφ<0, 001). The Analysis of glucose tolerance test results has revealed a flat character of the "sugar curve" in 40% of the examinees irrespective of the BWI, that is indicative of carbohydrate metabolism disorders in a significant part of the teenagers with MFD.

The carried out research results testify to a high frequency of lipid and carbohydrate metabolism disorders in girls with MFD not only with an increased, but also with normal BWI, that can be considered as a risk of the metabolic syndrome early formation and it should be born in mind when carrying out a complex of medical and preventive treatment measures.

The work was submitted to V international scientific conference «Present-day problems of experimental and clinical medicine», Thailand, February, 20-28, 2008, came to the editorial office 18.01.2008.

USE OF ULTRASONIC DOPPLEROGRAPHY IN GLAUCOMA PATIENTS

Orenburkina O.I., Babushkin A.E.
Ufa Research and Development Institute of Eye Diseases
Ufa, Russia

Topicality

Glaucomatous optic neuropathy (GON) is the core of primary glaucoma. Alongside with ophthalmohypertension and specific changes of visual fields the GON enters into the triad of this disease cardinal symptoms (Yegorov Ye.A., 2002, Alyabyeva Zh.Yu., 2004). The GON pathogenesis includes some factors, one of which is a vascular one - optic nerve head microcirculation disorders (tendency to vasospasms, rheological disorders, venous stasis, perfusion pressure decrease) (Grigoryeva Ye.G., 2002, Galassi F., 2003). However, in spite of native and foreign researchers' works on the ocular blood flow study, the possibilities of modern eye circulatory dynamics and orbital region research methods have not been studied to the end by the present time.

The purpose is to study the circulatory dynamics in primary open-angle glaucoma (POAG) patients in the ophthalmic artery and central retinal artery by the ultrasonic duplex scanning method with color doppler mapping.

Materials and methods

Patients with obstructive affections in internal and external carotid arteries' regions were excluded from the examination.

We examined 38 patients (38 eyes) with the diagnosis of I-IV stage POAG (the main group). Among them, the I stage was registered in 9 patients, II stage – in 11, III – in 11 and IV – in 7 patients. In all the patients the intraocular tension (IOT) was normalized medicamentally or surgically and averaged 19, 4±2, 6 mm hg.

The control group was made up of 20 patients (20 eyes) with mature age-dependent cataract without glaucoma signs. The average age of both groups patients made 68, 3 ± 2, 4 years old.

The circulatory dynamics investigation was carried out on the multipurpose ultrasonic high definition imaging system (HDI – High Definition Imaging System) HDI 1500 of the ALT firm, USA, with a broad-band linear transducer of 5-12 mHz. The valuation of hemodynamic parameters was performed in the following vessels: ophthalmic artery and central retinal artery.

The ophthalmic artery was located with the help of the 5MHz frequency transducer, at the depth of 38-42 mm at the vessel's entry into the orbital cavity, transbulbarily through the patient's closed eyelids. The patient's gaze direction was inward and downward. The pathfinder position is upper-external quadrant of the eye-bulb. The location direction – is to the orbital height, 15-30 ° from the median line.

The central retinal artery was defined at scanning plane passing through the optic disk. The blood flow investigation in this artery was performed within the region of 0-10 mm from the place of its entering into the optic nerve trunk thickness up to the eye-bulb, with the following valuation of all parameters.

At the investigation findings analysis the following Doppler frequency shift spectrum parameters were evaluated:

- maximum systolic velocity (V syst., cm/sec);
- end diastolic velocity (V diast., cm/sec);
- average blood velocity (V m., cm/sec);
- resistance index (RI).

Results

It is found out that the maximum systolic velocity is the least variable parameter in the POAG patients. There are no statistically-valid V syst. values differences with those in the control group registered (p<0, 05).

The average blood velocity in the ophthalmic artery in the main group patients decreased against the

control group with the disease progression; the deviation from the control being authentic (p<0, 01) at the I stage POAG. Thereafter (II-IV stages) a gradual average blood velocity decrease was registered. it testifies to the importance of this factor in the progression of the process.

At the analysis of the end-diastolic blood velocity changes as the vascular resistance factor, the data were got that a slight V diast. decrease, authentically differing from the norm at the III and IV stages only (p<0, 05), takes place at the II-IV stages of the disease. The peripheral resistance index is in the inverse linear dependence on the end-diastolic velocity value (the lower the velocity – the higher the index value, and vice versa), that is why the RI dynamics in the ophthalmic artery according to the glaucoma stages was inversely as the described above changes of the end-diastolic velocity. The changes found out in the CRA look like this: At the initial stages of glaucoma The V syst. in the CRA decreased 1, 4 times compared to the control group. The Vm. at the OAG initial stage was 1, 5 times as lower. The CRA diastolic blood velocity was decreased beginning with the I stage (p<0, 05) and also decreased with the glaucoma progression. The maximal CRA diastolic velocity fall was registered at the IV stage of glaucoma; the diastolic component being missing in one case. It was found out that the peripheral resistance indexes in OAG patients, beginning with the I stage of the disease, is authentically higher than in the group of control.

Conclusion

Ultrasonic methods of diagnostics using Doppler methods allow evaluating quantitative blood flow indexes in the ophthalmic artery and its branches at various stages of open-angle glaucoma, that affords an opportunity to come around to the diagnostics, treatment and prognostication of its course in a more detailed way.

The work was submitted to III international scientific conference «Actual problems of science and education», Cuba, March, 19-29, 2008, came to the editorial office 17.01.2008

ACTIVITY OF SYMPHATO-ADRENAL SYSTEM AT DIFFERENT STAGES OF ONTOGENESIS

Pseunok A.A.
Adyghe State University
Maikop, Russia

The adaptive process, set as the program of actions by the regulator centres, is accompanied by mobilization of the visceral systems providing the physiological price and result. Research of catecholamines by separate parts discloses local mechanisms of regulation. At the same time functional activity of an organism is achieved owing to integrative processes. From this point of view studying the general metabolism - adrenaline and noradrenaline is justified.

The symphato-adrenal system excreting catecholamines - noradrenaline and adrenaline - is of great importance for the adaptation of a growing organism to conditions of environment. It carries out its regulator influence on functions of an organism through hormonal mediators which, according to L.A. Orbeli, promote a constancy of the internal environment and its adaptation to varied conditions of life.

At present the significant amount of works has been published which discover the dynamics of excretion of catecholamines and their predecessors in children basically of teenage age, including those with academic and physical loadings.

According to our data, excretion of adrenaline and noradrenaline in urine in children in the age of 6-8 years undergoes the wavy dynamics in both sexual groups, with the greatest expressiveness in boys in the age of 6 and 7 years. Judging from excretion of adrenaline and noradrenaline in urine, the character of synthesis and utilization of catecholamines varies essentially. In this age interval, the chronotropic function of heart is appreciably reconstructed. Physiological preconditions of this age form the adequate mechanisms of urgent adaptation influencing behavioral activity.

Our researches have shown that boys adapt more difficultly for conditions of school: within one academic year the exhaustion dependent on a sex and age of the child develops in children. During educational occupations children in the age of 6-8 years show the changes reflecting a functional condition of an organism. The character and intensity of these changes serve a mark of “physiological cost” of academic load.

The work was submitted to III international scientific conference «Basic Research», Dominican Republic, April, 10-20, 2008, came to the editorial office 19.01.2008.

MORPHO-TOPOGRAPHICAL FEATURES OF LARGE-SIZED OVARIAN CYSTADENOMAS

Razin A.P.[1], Pavlenko S.A.[2], Shtylev A.A.[2]
[1]*Salsk Central Hospital,*
Salsk, Russia
[2]*Nodal Hospital at Salsk Station,*
Salsk, Russia

Oothecomas occupy one of leading places among all the neoformations occurring in women. Except for mammary tumors the ovarian newgrowths among all the oncological diseases of woman genital sphere are second only to endometrial and endocervical carcinomas on frequency. About 80% of ovarian tumors are of nonmalignant nature and occur mainly in women aged 20-45 years old (Paltsev M.A., Anichkov N.M., 2001), 90% of all the neoformations make