THE BLOOD PLASMA CONTENT OF SOME FACTORS OF APOPTOSIS AND A SOLUBLE FORM OF THE FACTOR RECEPTOR OF THE STEM CELLS IN PATIENTS WITH VEGETOVASCULAR DYSTONIA

Authors: Krychun Ihor, Pashkovskyy Valeriy
University: BSMU, Ukraine

ICMS 2010 / OP 42 Therapy

Abstract:
It is not excluded, that a certain role is played by apoptotic disturbances in the pathogenesis of vegetovascular dystonia (VVD) in the pathogenesis at the level of endothelial cells that in consequence of a hyper-and hypofunction of endotheliocytes may lead to the development of a hypo-and hypertensive type of VVD respectively. 48 patients with constitutionally stipulated VVD (17 men, 31 women aged from 14 to 30 years (22,8±2,1 on the average). The hypertensive type was diagnosed in 18 patients anomy them, the hypotonic type in 12 persons and a mixed type of the disease – in 18 persons. The control group was made up of 15 apparently healthy persons of the corresponding age. It has been established that the blood content of protein P53 diminishes by 27 per cent, the sTRAIL blood level increases by 22 per cent, sCD 117 by 44 per cent in patients with VVD of the hypertonic type that is accompanied by an increase of the activity of caspase-1, however, the activity of caspases-3 and – 8 as well as the TNF-a blood content do not change. With VVD of the hypotonic type the concentration of blood plasma protein P53, TNF-a and sTRAIL and the activity of caspases-1,-3,-8 correspond to the control values against a background of an almost two-fold increase of the plasma sCD 117 level. A considerable elevation of the blood content of type II apoptotic factors is characteristic of the mixed type of VVD: the level of protein p53 increases 2,4 times, TNF-a – 1,9 times, sTRAIL – 2,3 times that is accompanied by an increased activity of caspase-1 – 4,1 times, caspase-3 – 3,3 times, caspase-8 – 3,8 times and an increase of the plasma concentration of sCD 117 – 3,5 times. Hereby that in case of the mixed type of VVD there occurs a sharp increase at the endothelial level of the intensity of both the division of cells and their apoptosis a process capable of bringing on an uncontrolled and unbalanced release of biologically active substance of the endothelium which possess a powerful and functionally antagonistic effect on the tonus of the vessels of the resistive type.

Keywords: VVD, apoptosis, cells
Contact authors at: krychun_i@mail.ru

DIAGNOSTIC ULTRASOUND IN PREMATURE NEONATES WITH INTRACRANIAL HEMORRHAGES

Authors: Nataliia Zavgorodnia

University: Kharkiv Medical, Ukraine

ICMS 2010 / OP 43 Therapy

Abstract:
The premature neonate is unique in many aspects and is affected by pathology which is largely unheard of in other patient populations. Most reports of intracranial hemorrhage (ICH) in the pediatric literature involve low-birth-weight infants. Diagnostic ultrasound provides a non-invasive method of imaging intracranial structures in the neonate. Because the equipment is transportable to the intensive care nursery and because the ultrasound examination does not involve the use of ionizing radiation, the procedure can be performed without risk to the infant. We observed 25 preterm newborns (13 male and 12 female) who were treated at the City Child Neurosurgery Centre. 16 children were born from 30 to 35 weeks of gestation , 5 - 25 to 30 weeks, 35 to 38 - 4 children. Weight ranged from 930 g to 3450 g: 11 children had low birth weight , 11 - extremely low birth weight . In a state of severe asphyxia (1-3 points on the Apgar score) were born 4 children, in moderate asphyxia (4-5) -13 , mild (6-7) - 5. In 15 cases required the use of mechanical ventilation, which lasted more than a day. On admission to the intensive care unit overall condition of children rated as extremely difficult due to severe respiratory insufficiency and hemodynamic disorders in 9 cases, severe in 8 cases , moderate - 4 , satisfactory in 3 cases . All newborns carried ultrasound of the brain. Ultrasound was performed on the 1 day of life in 2 cases, on the 2nd – 2cases, on the 4 - 5 cases, on the 5 - in 4 cases, in all other cases the study was conducted on the day of hospitalization of the child. In two cases cranial ultrasound scans were performed because of clinical suspicion of ICH at 10 and 8 days of hospitalization. Results: Intracranial hemorrhage was graded according to Papile et al., (1978): 1 grade-0; 2 grade-18 infants , 3 grade - 6 infants , 4 - 2 infants , subarachnoid hemorrhage - 1 infant . Thus in the two cases indicated a combination of hemorrhage grades 3-4 and 2 - 2-3 grades. All of tne surveyed noted hyperechogenic brain structures, grooves were smoothed in 6 patients , heterogeneity of the structure of vascular plexus occurred in 13 cases , pulsation of the vessels of the brain was reduced in 16 infants , in 1 case -raised. Ultrasound demonstrated the asymmetry of lateral ventricles in 6 cases , one a newborn due to tamponade the left lateral ventricle. Ventricular dilatation observed in 3 children . Verga ventricle visualized in 6 children , in 1 child - 5 ventricle as a variant of development. Brain oedema was observed in 2 children . Conclusions: ultrasound is an objective method to identify the presence of ICH, its grade, make differential diagnosis of vascular pathology of the newborn brain.

Keywords: neonates, hemorrhage, ultrasound
Contact authors at: z.nataliia@gmail.com