

Nosology of Brain Damages - The Leading Direction in Pediatric and Perinatal Neurology

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Abstract

At present, the world science is experiencing the formation of the nosology of lesions of the nervous system in children. The formation of nosology will lead to overcoming the widespread use in medical practice of diseases such as “encephalopathy” and progress in diagnosis and treatment.

Keywords: *Nosology; Encephalopathy; Radiological Methods of Diagnosis; Morphology*

At the present time, such diagnoses of brain lesions in newborn children as “encephalopathy”, “hypoxic-ischemic encephalopathy”, “posttraumatic encephalopathy”, “infectious encephalopathy”, etc. are still widespread. It is clear that these diagnoses suffer from uncertainty, diagnoses simply point to some pathology of the brain. The same applies to such a widespread diagnosis as “cerebral palsy”. It should be understood that these terms are not strict nosology (diseases), but are generalizing, general notions. They should not cause satisfaction to doctors that a correct and definitive diagnosis is formulated. Using the term “encephalopathy”, doctors should understand that in diagnoses they have determined only that part of medicine where it is necessary to search for clearer diagnoses and diseases.

You can't just treat a “brain disease” (encephalopathy). If this disease has a hypoxic or traumatic origin - this gives little in the resolution of the issue of the effectiveness of treatment. Treatment is most effective if we know what specific morphological changes (damages) have occurred in the brain. It is the damages to these structures that lead to the corresponding functional disorders and determine the prognosis of the disease. In order to develop diagnosis and treatment, it is necessary to identify specific nosological units, to develop a nosology based on the morphology of processes, that is, on the basis of the most fundamental knowledge. It is necessary to realize the significance of the development of nosology in pediatric and perinatal neurology. The formation of nosological units is the basis for the progress of pediatric neurology.

It is clear that the pathologist can formulate these nosology units based on the study of dead children. The clinician formulates a nosology based primarily on ray methods of research. At the same time, it is very important that the neuroimaging professionals interact with pathologists, and the leading role of pathologists should be taken into account. Unfortunately, there is insufficient research related to the comparison of neuroimaging and morphological data. Neuroimaging professionals take unreasonable courage, without agreement with morphologists, to classify diseases, for example, periventricular leukomalacia (PVL) and intraventricular hemorrhages, that do not stand up to criticism. Any neuroimaging method of diagnosis is only a reflection (shadow) of the pathological process. The pathologist studies the process itself, sees cells, capillaries, etc., and the specialist of neuroimaging methods is only a reflection of the pathological process (shadow) and, of course, does not see cells and tissue structures. As the shadow of the face profile, you can recognize a person (and often you can't even recognize), and by the results of ray methods you can determine (and not determine) the nature of the pathological process. As in accordance with the shadow of the face profile, it is possible to recognize a person (and often not to recognize), and by the results of ray methods one can determine (and not determine) the nature of the pathological process.

The main direction of my research [1,2] is the establishment of a nosology of brain lesions on the basis of morphological studies. These studies are reflected in the literature [3,4] and take into account the achievements of world science. A great achievement of science of the last 50 years is the formation of such nosology as PVL. At the same time, in the world there is a hyperdiagnosis of PVL, which arose due to the underestimation of the existence of other similar nosological units, which have not been studied enough. In the classification of hypoxic-ischemic lesions of the brain presents all the main nosological units that require further study. This refers to “diffuse leukomalacia,” different from PVL, “telencephalic gliosis,” “selective neuronal necrosis,” and others.

Conflict of Interest

No conflict of interests.

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