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МАТЕРІАЛИ СЬОМОЇ ВСЕУКРАЇНСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ З МІЖНАРОДНОЮ УЧАСТЮ

«ТЕОРІЯ ТА ПРАКТИКА СУЧАСНОЇ МОРФОЛОГІЇ»

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antibodies against von Willebrand factor with visualization of primary antibodies by a polymer system (DAKO) with diaminobenzidine dye. After obtaining digital copies of the image, the optical density of histochemical staining was measured by computer microdensitometry in relative units of optical density. The arithmetic mean and its error were calculated using the PAST 3.16 computer program. Differences in mean trends were performed using a two-sided unpaired Student's test. Differences at $p \leq 0.05$ were considered statistically significant

Results. The following results of the optical density of immunohistochemical staining in endotheliocytes of the chorionic plate of the placenta were obtained: physiological pregnancy (n=20) - 0.228±0.0025, iron deficiency anemia of pregnancy (n=21) - 0.322±0.0021, acute chorionamnionitis (n=23) - 0.323±0.0024, acute chorionamnionitis + IDA (n=21) - 0.386±0.0025 ($P<0.001$).

From the obtained data, it is noticeable that with IDA, the indicators of histochemical staining for the von Willebrand factor increase on average ($P<0.001$). In studies with acute chorionamnionitis, the optical density is higher than the indicators of physiological pregnancy, but in relation to IDA without inflammation, there are no statistically significant differences in the average trends between observations. At the same time, it was noted that during inflammation in combination with IDA in endothelial cells of the chorionic plate of the placenta, on average, quantitative indicators of the optical density of von Willebrand factor staining increase significantly compared to physiological pregnancy, IDA and inflammation.

Conclusion. In the endothelium of the blood vessels of the chorionic plate of the placenta in acute chorionamnionitis, the optical density of immunohistochemical staining for von Willebrand factor significantly increases on average compared to physiological pregnancy, the same trend is also observed in the combination of inflammation and iron deficiency anemia in pregnant women.

EVALUATION OF THE SHAPE OF THE HUMAN CEREBELLUM IN THE MORPHOMETRY OF MAGNETIC RESONANCE IMAGES

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Introduction. The variability of the shape of an organ is one of the manifestations of its individual anatomical variability. Magnetic resonance imaging and other modern neuroimaging methods make it possible to establish the morphological features of organs in

vivo and in their natural position.

The aim of this study was to develop a method for evaluation of the shape of the human cerebellum based on the results of morphometry of MR images.

Materials and methods. T2-weighted MR images of the brain of 30 people with no visible brain pathology (15 males and 15 females aged 20 to 40 years) were examined. MRI was performed on a 1.5 T MRI machine (Siemens Magnetom Symphony, Munich, Germany). The width of the cerebellum in the axial (W_{ax}) and coronal (W_{cor}) planes, the length in the axial (L_{ax}) and sagittal (L_{sag}) planes, and the height in the coronal (H_{cor}) and sagittal (H_{sag}) planes were determined.

Results and discussion. It was found that the width of the cerebellum is almost equally determined in two different planes. There is a greater discrepancy in the length determination. The maximum difference in values is in height measuring. A statistically significant moderate linear relationship was found between the variabilities of W_{ax} and L_{ax} ($r = 0.48$; $p<0.01$), W_{cor} and H_{cor} ($r = 0.39$; $p<0.05$). The variability of the values of paired linear dimensions measured in one plane and the lack of functional connection between them lead to variability of their ratios – shape factors (W_{ax} / L_{ax}, W_{cor} / H_{cor}, L_{sag} / H_{sag}). The variability of shape factors, in turn, affects the shape of intracerebellar structures, primarily the nuclei of the cerebellum.

To determine the shape of the cerebellum as a whole, we propose parameters that represent the ratio of one linear measurement of the cerebellum to the other two: relative width of the cerebellum ($W_r = (W_{ax} \times W_{cor}) / (L_{ax} \times H_{cor})$), relative length of the cerebellum ($L_r = (L_{ax} \times L_{sag}) / (W_{ax} \times H_{sag})$) and relative height of the cerebellum ($H_r = (H_{cor} \times H_{sag}) / (W_{cor} \times L_{sag})$). Further analysis of these parameters determines which linear size has more influence on the shape of the cerebellum, which, in turn, determines the features of its structure, such as the shape of lobules, the course of furrows, the three-dimensional organization of its nuclei, etc.

Conclusion. Determination of the shape of the cerebellum in vivo can be useful in MRI diagnostics of cerebellar diseases and in conducting neuromorphological studies.

ГІПЕРГОМОЦИСТЕЇНЕМІЯ ЯК ВАЖЛИВИЙ ЧИННИК В СЕРЦЕВО-СУДИННІЙ ПАТОЛОГІЇ

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Актуальність: Низкою досліджень було виявлено, що підвищений рівень