According to morphological characteristics giant cell epulis is divided into cellular, lytic and cystous forms. Cellular form is characterized by weak osteoclastic resorption of cortical substance of bone. Lytic form is characterized by quick aggressive growth and significant resorption of bone. Cystous form is characterized by subperiosteal excrescence with resorption of basal bone substance.

Conclusions: Giant cell epulis have expressed markers p53, Ki 67, OPN, CD3, CD79A, IgG, IgM, HSP90AA1and MGMT in different quantity. As a result of the fulfilled investigations we determined that peripherical giant cell epulis is a tumor of macrophage origin because expression of CD68 was observed in 100% of cases. There was no activity of giant cells in peripherical giant cell epulis because expression of protein s100 was not observed. In the controlled group of lump with giant cell foreign bodies expression of CD68 and s100 was observed in 100% of cases which testifies activity of these giant cells.

PHYSIOLOGICAL FEATURES OF ENDOTHELIAL NITRIC OXIDE SYNTHASE EXPRESSION IN NUCLEI OF MEDIOBASAL HYPOTHALAMUS

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Background. It is known, that hypothalamus is the major integrative center of autonomic nervous system. Thus the violation of its cellular regulatory enzymes' activity, such as endothelial nitric oxide synthase (NOS3), may lead to formation of discoordinative pathology of its nuclear structures.

The **purpose** was to define the physiological features of NOS3 expression in supraoptic (SON) and suprachiasmatic (SCN) nuclei, and in magnocellular (mcPVH) and parvocellular (pcPVH) parts of paraventicular nucleus of hypothalamus in intact male Wistar rats.

Materials and methods. The study was carried out in 10 male Wistar rats. Serial sections of the hypothalamus were obtained after common histological processing, then they were incubated with NOS3 antibodies. During the analysis of immunofluorescence reaction, we have measured the statistically significant area of fluorescence, its special area and concentration of immunoreactive material (IRM) to NOS3.

Results. The IRM was conditionally allocated in two components: neuronal one, presented by neurons' bodies, and vascular one, that was mainly due to small capillaries.

We have seen, the distribution of IRM in vascular component had a certain uniformity: predominantly single capillaries in hypothalamic nuclei were observed, however in SCN there were vessels of higher caliber. Among magnocellular nuclei the specific area of vascular component in SON was by 65,9% ($p<0,01$) higher than in mcPVH, and fluorescence content in SON compared with mcPVH also were by 22,31% ($p<0,001$) higher. In parvocellular nuclei the specific area of vascular component in SCN was more than in 3,8 fold ($p<0,001$) higher than respective index in pcPVH, and the enzyme content and concentration were significantly higher by 59,2% ($p<0,001$) and 14,25% ($p<0,001$) in SCN compared with respective indices in pcPVH.

The distribution of fluorescence in neuronal component also had a certain uniformity. Like in magnocellular mcPVH and SON, as well as in parvocellular SCN and pcPVH, the immunofluorescence to NOS2 was observed mainly at the periphery of cytoplasm. Specific area and maximal content of IRM and its concentration among magnocellular nuclei was by 65,47% ($p<0,001$) and 6,9% ($p<0,005$) and 13,6% ($p<0,01$) respectively higher in mcPVH compared with indices of SON. Specific area, concentration and maximal content of IRM in SCN was by 16,56% ($p<0,04$) and 9,76 ($p<0,005$) and 2,4% ($p<0,05$) respectively higher compared with pcPVH.

Conclusions. IRM to NOS3 in mediobasal hypothalamus is associated both with neuronal and vascular component. The distribution of IRM to NOS3 in neuronal component is characterized by its predominant submembranal localization.