
CHEMILUMINESCENT METHOD FOR THE DETERMINATION OF THE PHAGOCYtic ACTIVITY OF BLOOD MONOCYTES FROM PATIENTS WITH GASTRIC AND DUODENAL EROSIONS AND ULCERS

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Abstract

The aim of the research is to study oxygen-dependent phagocytosis of blood monocytes in children with gastric and duodenal erosions and ulcers by chemiluminescence analysis. The subjects of the research were blood monocytes, extracted from blood in 44 children with gastric and duodenal erosions and ulcers. The 1st group was represented by *H. pylori* high dissemination. As for the 2nd group, the patients showed low bacterization. First of all, we carried out tests of luminol- and lucigenin-dependent hemiluminescence. Further stage of the research was to identify CagA-positive strains of *H. pylori* in the patients. Studying chemiluminescence activity of blood lymphocytes in the patients with anti-CagA antibodies we found the true increase of the time of reaching the peak, the intensity and the area under the curve in spontaneous process in luminol-dependent response and the time of reaching intensity peak and the intensity of spontaneous chemiluminescence reaction, lucigenin being an activator. So we marked the increase of the activity of oxygen-dependent phagocytosis of blood monocytes in children with *H. pylori* associated with gastric and duodenal erosions and ulcers related to *H. pylori* increased bacterization. The growth of *H. pylori* dissemination results in the higher stage of stomach mucosa inflammation. Therefore active phagocytes generate more intensively the formation of active forms of oxygen, free radicals and the products of peroxide oxidation. CagA-positive strains of *H. pylori*, as a rule, are associated with the higher level of inflammatory activity than CagA-negative ones. As a result of such influence the functional activity of monocytes increases, because they are "professional" phagocytes. The ability to perform phagocytosis is better expressed in them as compared to other leukocytes. This work was supported by the Russian Foundation for Basic Research No.16-44-240668 and the Regional State Autonomous Institution "Krasnoyarsk Regional Fund for the Support of Scientific and Technical Activity".

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