

ceruloplasmin (CR), activities of catalase (CT) and gamma-glutamyl transpeptidase (GTP) in plasma, activities of glucose-6-phosphate dehydrogenase (G6PD) and glutathione reductase (GR) in erythrocytes as antioxidant markers were established. The parametric methods were used for statistical analyses.

The analysis of more than 50 possible perinatal risk factors promoting development of AKI in critically ill full-term infants was made. Mother's age more than 35, chronic urinary pathology and gestational pyelonephritis in mother, Apgar scoreless then 3, arterial hypotension, and prescription of some medications are statistically significant.

In the first group the level of OMP was 1.04 ± 0.02 optical density per milliliter of erythrocytes, in the second group was 1.16 ± 0.01 optical density per milliliter of erythrocytes, $p < 0.001$. The results of adduct formation on the protein level may be associated with numerous cytotoxic consequences including the disturbance of cell signaling, altered gene regulation, inhibition of enzyme activity, mitochondrial dysfunction, impaired energy metabolism, altered tertiary structure and finally loss of cytoskeletal formation.

The concentrations of MDA in erythrocytes were 24.2 ± 0.39 $\mu\text{mol/l}$ and 24.9 ± 0.48 $\mu\text{mol/l}$ respectively, $p > 0.05$. Additionally, we noticed that cut-off level of urine MDA 12.9 $\mu\text{mol/l}$ had high specificity (91.4 %) for identification of AKI. MDA is a toxic final product of lipid peroxidation and most of the time reactive compound. Thus, the high lipoperoxidation of membrane lipids in these newborn may lead to alteration in the functional properties of the lipid bilayer of cell membranes, with consequent deep changes in its permeability and develop of the pathological cascade of OS.

Our results have shown a considerable imbalance between different components of antioxidant system in newborns with AKI. In the first group the level of CP was 222.2 ± 6.04 mg/l, in the second group was 197.3 ± 3.15 mg/l, $p < 0.001$; activities of Ct were 7.03 ± 0.32 $\mu\text{mol/min}\cdot\text{l}$ and 9.8 ± 0.29 $\mu\text{mol/min}\cdot\text{l}$ respectively, $p < 0.001$; activities of GTP were 107.5 ± 1.19 UI/l and 66.6 ± 3.17 UI/l respectively, $p < 0.001$. The activity of G6PD in the first group constituted 1.56 ± 0.04 $\mu\text{mol/min}\cdot\text{l}$, in the second group – 1.88 ± 0.06 $\mu\text{mol/min}\cdot\text{l}$, $p < 0.001$; GR activities were 2.27 ± 0.06 $\mu\text{mol/min}\cdot\text{l}$ and 2.09 ± 0.06 $\mu\text{mol/min}\cdot\text{l}$ respectively, $p = 0.041$.

The full-term neonates with severe HIE and AKI were characterized by imbalance of the components of pro-oxidant system and antioxidant defense in comparison with those who did not have it. Nevertheless, our study is restricted to some extent: a single-center study; a small patient cohort; other mediators may possibly be more important; it would be useful to indicate oxidative markers in patients with therapeutic hypothermia.

Bodnar B.M.

ONLINE DIAGNOSTICS AND MANAGEMENT OF HEMANGIOMAS IN CHILDREN

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Hemangiomas constitute 80% of all benign tumors in children. There are no clear diagnostics criteria enabling to evaluate growing or regress of this kind of tumors. This leads to choosing of wrong tactics by general practice doctors of unreasonable "waiting". We have found that family physicians, emergency physicians who do not pay enough attention to this disease, in most cases recommend observation during a year, which is unacceptable, as precious time is lost.

Our aim is to draw the attention of the medical community and parents to the problem of hemangiomas in children. Treatment should begin from the first doctor's physical examination, after diagnosis verification.

The Department of Pediatric Surgery created an on-line service "Surgiderm" - "Together we will defeat the disease" for providing preventive work among parents of Chernivtsi region, timely diagnosis, treatment and rehabilitation of children.

This allows receiving a highly qualified remote consultation from the city and any district of the region, the consultant's e-mail is provided. If a child is diagnosed with hemangioma on any part of the body, regardless of age, parents should measure it with a simple ruler, take a photo on a

Smartphone and send this photo to the e-mail of the Department of Pediatric Surgery and receive a remote specialist's opinion.

In case of the diagnosis confirmation, parents need to contact a family doctor which will fulfill the e-appointment to the Children's Clinical City Hospital, Department of Pediatric Surgery.

The child receives a necessary treatment and appointment to the supervision of a family doctor with clear recommendations for further treatment in an outpatient care. Further monitoring can be provided on-line.

The online system provides fast and qualified aid to parents, pediatricians and family doctors. Practitioners can obtain through the online system the necessary verified information about hemangiomas in children. Children can receive a highly qualified remote consultation from the city and any district of the region, and receive the necessary treatment without losing of time.

The organization of the remote online system makes it possible in real time to improve diagnostics process, prevent losing of time of the treatment. It creates an opportunity to organize constant parents-child-doctor-child-parents contact, which will provide an opportunity to work together to defeat the disease.

Bodnar O.B.

LOCAL IMMUNITY STATUS AFTER SURGICAL TREATMENT OF PAYRE'S DISEASE IN CHILDREN

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Surgical treatment of Payre's disease in children should be comprehensive and consist of three stages: preoperative preparation, surgery, postoperative period. The success of treatment significantly depends on the state of local immunity status in the colon, disturbance of which leads to colitis, advance of endogenous intoxication syndrome and complications of the postoperative period. The formation of local immunity is significantly influenced by the intestinal microflora, under the influence of which the immune response is formed. Lysozyme and other active compounds that stimulate the immune system are released with the participation of microorganisms.

The aim of the research is to define the indicators of the immunity status before and after surgical treatment of Payre's disease in children and to compare with healthy children local immunity status.

Local immunity status of 20 children with Payre's disease before and after operation and healthy children (n-30) was compared. Secretory immunoglobulin A and lysozyme of children with Payre's disease and 30 practically healthy children were examined. The concentration of secretory immunoglobulin A and the level of lysozyme in coprofiltrates of children were studied as immunological markers.

The concentration of secretory immunoglobulin A in children with Payre's disease before surgery was 11% lower in comparison with the index in healthy children. Lysozyme concentration before the operation was 21% lower in comparison with concentration in healthy children. However, after the operative treatment, the concentration of secretory immunoglobulin A 10% increased in comparison with previous indicator but not gained the indicator of concentration of secretory immunoglobulin A in healthy children. Lysozyme concentration indicator reached the level of healthy children after performing surgery.

In children with Payre's disease there is a decreasing of specific (secretory immunoglobulin A) and nonspecific (lysozyme) factors of local immune protection to 11% and 21% respectively. Surgical treatment of Payre's disease allows to increase the indicator of concentration of secretory immunoglobulin A to 10% and indicator of concentration of lysozyme to normal level.