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FLU IN CHILDREN OF KHARKIV REGION

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Influenza is a deeply systemic infectious disease accompanied by pronounced endothelial dysfunction, a systemic inflammatory response (which can progress to a cytokine storm), and an extremely high risk of developing critical conditions in children of different age groups [1]. It is systemic endotheliotoxicosis that underlies severe toxic manifestations, influenza encephalopathy, hemorrhagic complications, and multiple organ failure [2]. According to the Center for Public Health of the Ministry of Health of Ukraine, in the current season (from September 29, 2025 to March 29, 2026), the number of deaths from influenza and acute respiratory viral infections is 198 cases [3]. A feature of this season was that the flu in the children's age group was more severe than in adults and the elderly.

The purpose of the study is to analyze the incidence of influenza at the current stage and study the features of the course of this disease in children in the Kharkiv region.

Over the past three years, an increase in influenza incidence has been recorded, according to the data of the Regional Children's Infectious Clinical Hospital of Kharkiv. This trend applies to both influenza A cases (97 in 2024 versus 129 in 2025) and influenza B (2 cases versus 70 in 2025 and 2026, respectively). Registration of influenza complicated by pneumonia is increasing (10 in 2024 versus 27 in 2025). During the influenza epidemic season in 2024, a clinical diagnosis was established in 2024 in 74 patients, and in 2025 in 104 patients.

In 2025, among all patients with influenza who were treated in a hospital, 30.6% were patients with severe symptoms, and 11% of patients were hospitalized in the intensive care unit (ICU). In terms of age, children aged 1 to 9 years prevailed. Among the factors that led to the admission of children to the ICU were signs of respiratory failure, convulsions, hemodynamic instability, and manifestations of encephalopathy. Unfortunately, over the past 10 years, 5 cases of influenza complicated by Reye's

syndrome have been registered in the hospital, including two cases during 2024-2026. As is known, this is a life-threatening condition that more often develops in children with acute respiratory viral infections against the background of the use of acetylsalicylic acid. It is characterized by the rapid development of fatty liver disease, damage to brain tissue (brain edema), liver failure with subsequent progression to multiple organ failure. We observed cases of both classical (idiopathic, associated with aspirin intake) and atypical (developing in children with congenital metabolic defects, liver pathology). The latter variant has been observed in children who were often treated with nonsteroidal anti-inflammatory drugs (NSAIDs), primarily ibuprofen. All cases of Reye's syndrome have been fatal.

Conclusions. At the present stage, there is a high incidence of influenza in children during the period of epidemic adversity. There is a high risk of severe influenza in children, complications of the disease with pneumonia. Uncontrolled repeated prolonged use of antipyretic drugs increases the risk of developing Reye's syndrome, the mortality rate of which is on average 20-30%, and in the coma stage it reaches up to 95%. Healthcare practitioners should remember the strict prohibition of the use of acetylsalicylic acid (Aspirin) in children under 15 years of age for acute respiratory viral infections. It can be extremely dangerous for patients with acute respiratory viral infections to take NSAIDs if they have any liver pathology.

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