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The Sentinel Surveillance System of Severe Acute Respiratory Infections Associated with Influenza in Children from Republic of Moldova

Ala Donos, Albina-Mihaela Iliev

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Abstract

Acute respiratory pathology has the highest incidence in children, the most vulnerable are still those aged up to 5 years. Extremely difficult are the cases with severe acute respiratory infections (SARI), manifested by pneumonia and bronchopneumonia associated with influenza. Essential method used is the sentinel epidemiological surveillance; molecular biology techniques in real time (rRT-PCR) to detect viruses in biological material (nasopharyngeal exudates); isolation of influenza viruses in cell cultures MDCK and MDCK-SIAT1 after WHO methodology; identification by the hemagglutination inhibition test with reference antisera for influenza A(H1N1) pdm09, A(H3N2) and B, provided by the WHO Collaborating Centre, National Institute of Health Researches (London, UK). Thus, it was found that SARI associated with the flu threatens the health and life of children, with a major risk in children aged between 0–4 years. In conclusion, the obtained results show, that the identification and evaluation of phenotypic, genotypic and antigenic properties of the influenza viruses, have a major importance, in the context of fairness policy, for the use of influenza vaccine in compulsory seasonal immunization of the children, optimizing the management of treatment and prophylaxis of influenza, including in combination with SARI, foreseeing epidemic process and reducing the negatively impact on the health system.

Keywords: childrens respiratory infections, influenza virus, surveillance, epidemic seasons, viruses

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