

Rotavirus infection in the incidence structure of diarrheal diseases in Kharkiv, Ukraine, 2013-2018

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Morbidity with rotavirus etiology has an important role among infections of the intestinal tract in Ukraine and worldwide. WHO annually records up to 125 million cases of rotavirus infection (RVI) in the world, 600-900 thousands of which are lethal. The aim of the work is to assess the incidence of rotavirus infection and its place in the etiological structure of acute intestinal infection (AII).

Materials and methods. An observational epidemiological study of rotavirus infections was carried out in Kharkiv during 2013-2018 according to the State Institution Kharkiv Regional Laboratory Center of the Ministry of Health of Ukraine.

Results. 2780 All cases were reported in Kharkiv, in 2013-2018 the long-term annual average rate was 317.01 per 100,000 population. Cases of gastroenterocolitis (GEC) were prevalent in the structure of AII, reaching the 75.5 % of cases. The proportion of salmonellosis and shigellosis cases was equal to 24.5 %: the proportion of salmonellosis — 18.3 %, the proportion of shigellosis — 6.2 %. The proportion of GEC with established etiology was 77.9 % among all cases of GEC, where 96.6 % cases had bacterial etiology and 3.4 % cases had viral etiology (3.37 % — cases caused by rotavirus and 0.03 % — enteroviruses). The food transmission prevailed; its average proportion was 87 %.

The long-term annual average incidence rate of rotavirus infection was 5.55 per 100,000 population (474 cases) in 2013-2018. Minimal rate was 3.0 per 100,000 population in 2018, maximal — 7.8 per 100,000 population in 2017.

Seasonality of rotavirus infection clearly dominated in winter and spring periods of year reaching a maximum of 81 cases in April.

Children from birth to 18 years old had rotavirus infection cases more often; their proportion was 97.2 % in average among all age groups. Among the child population, children of 1 to 4 years old and under 1 year of age were prevalent: 60.5 % and 27.6 % cases, respectively.

4146 laboratory studies of rotavirus infection were performed, only 35.2 % of samples gave a positive result.

Conclusion. The presence of rotavirus infection morbidity in Kharkiv indicates that causative agent of infection is circulating among the population of city and there are risks of outbreaks of this disease. It is necessary to strengthen the control over the supply of quality and safe food to the population and to improve laboratory monitoring.