



**Aim:** To assess the risk of human infection of rabies in the Kharkiv region.

**Materials and methods.** Epidemiological study of rabies in the Kharkiv region and Ukraine conducted using the report materials of the State Sanitary and Epidemiology Service (2007 – 2013). The incidence of rabies in humans and animals, appeals of the population for post-exposure prophylaxis (PEP) were analyzed.

**Results.** Analysis of animal morbidity on rabies in Ukraine found outhigh activity of epizootic process. Its feature was connection of chains of natural and urban types. We observed in structure of morbidity in animal species increasing a part of farm animals (from 53% in 2007 to 77.9% in 2013 in the Kharkiv region and from 53% in 2007 to 66.1% in 2013 in Ukraine), and increasing proportion of cats (from 33.6% in 2007 to 52.4% to 2013 in the Kharkiv region). Among the wild animals foxes dominated, but part of foxes decreased from 39.4% in 2007 to 15.9% in 2013 in the Kharkiv region. We found out tendency to decreasing number of people who applied for PEP in the Kharkiv region (from 239.7 per 100 000 population in 2007 to 167.8 per 100 000 population in 2013), and increasing the number of such persons in Ukraine. The majority of lesions of people were caused by dogs (72.6%). Results of analysis show 26,7 – 40% of bitten people was suffered from stray animals in the Kharkiv region and 20,5 – 24,1% of bitten people in Ukraine. On average 12,1-14,5% of patients in the Kharkiv region and 21,9-24,5% of patients in Ukraine received PEP. We observed 2 cases of human rabies in 2008 and in 2010. Persons who got rabies were bitten by their own dogs and didn't seek for PEP. In 2013, man had been bitten by fox, had refused from PEP and died.

**Conclusions.** Epizootic and epidemic processes of rabies in Kharkiv region are determined by the signs such as in Ukraine. The increasing of incidence of rabies of domestic animals cause increasing of risk of human infection and requires intensification of preventive work among the population. Effective treatment soon after exposure to rabies can prevent the onset of symptoms and death. Lack of routine immunization among dogs and cats increases risk of human rabies. Results of analysis show the necessary the enhancement of surveillance and control for rabies in Kharkiv region.

**Vinokurova O.M, Mohylenets O.I., Dulembova V.E., Onoprienko E.A.**

**BIOGENIC AMINES IN PATIENTS WITH ACUTE HEPATITIS B**

**Kharkiv national medical university, Kharkiv, Ukraine**

**Department of infectious diseases**

**Scientific adviser: professor V.M. Kozko**

**Introduction.** According to WHO data about 2 billion people in the world are infected with hepatitis B. Annually about 4 million cases of acute hepatitis B are registered, and 1 million people die from the consequences of chronic hepatitis B. Factors leading to development of chronic disease are still not fully understood. There is not enough data about the level of some biogenic amines in patients with hepatitis B.

**Aim** – to study the level of some biogenic amines in patients with acute hepatitis B.

**Materials and methods.** Surveys of 30 patients with acute hepatitis B in Kharkiv regional clinical hospital of infectious diseases were done. The control group included 30 healthy people. The diagnosis of acute hepatitis B was confirmed by immunoferment analysis and polymerase chain reaction methods. The serum level of biogenic amines (serotonin, tryptophan, 5-hydroxyindoleacetic acid) was detected by standard methods.



**Results.** Serum level of serotonin in patients with acute hepatitis B was significantly increased and amounted to  $0,92 \pm 0,03$  mM/l. As serotonin is a mediator of inflammation increase of serotonin level in the first stage of development of the inflammatory process (alterative or cytolytic phase) is natural. Serotonin increases vascular permeability, enhances the chemotaxis and migration of leukocytes into inflammatory focus, increases levels of eosinophils in the blood, increases mast cell degranulation and releasing of other mediators of allergy and inflammation. Serotonin is a neurotransmitter that controls appetite, sleep, mood, which changed in our patients. Serum level of tryptophan in patients with acute hepatitis B was increased to  $66,5 \pm 1,5$  mM/l ( $p \leq 0,05$ ). Tryptophan – is an essential amino acid that is not produced by human body, and coming from the outside with food; it is found in many proteins (e.g. fibrinogen and blood  $\gamma$ -globulin). Accumulation of tryptophan leads to increase of the serotonin level and to neurotransmitters block. Level of 5-hydroxyindoleacetic acid was significantly decreased and amounted to  $0,23 \pm 0,02$  mM/l. Significantly decreased level of 5-hydroxyindoleacetic acid in the serum in patients with acute hepatitis B may be used in the differential diagnosis with jaundice of other origins, e.g. with jaundice due to malignancy, which characterized with increased serum level of 5-hydroxyindoleacetic acid.

**Conclusions.** 1. Increased serum levels of serotonin and tryptophan was revealed in patients with acute hepatitis B. 2. Significantly decreased level of 5-hydroxyindoleacetic acid in the serum in patients with acute hepatitis B may be used in the differential diagnosis with jaundice of other origins.

**Zharcova T., Putria A., Dyachenko G**

### **EARLY DIAGNOSTIC SIGNS OF THE VARIANT OF CURRENT OF SHIGELLOSIS IN CHILDREN**

**Kharkiv national medical university, Kharkiv, Ukraine**

**Department children infections diseases**

**Introduction.** Intestinal infections are one of the most frequently registered groups of children diseases. Early diagnostic of Shigellosis (Sh) will allow to avoid additional invasively manipulation in organism of small patients.

**Aim:** improvement of the diagnostics of current of Sh in children, using Vald-Genkin's mathematical theory.

**Results.** We have revealed prognostic criteria(PC) of current of Sh in 98 children (66 patients with smooth current of Sh (SSh), 32 - wave-like(WLSh)). We took into account differences between signs of anamnesis, clinical picture, laboratory factors, special factors (level of cytokines (IL1,2,4,6,8, TNF), prostaglandins (PG), antioxidant activity of blood (AAB), vitamin E (VE), secretory immunoglobulin A (sIgA), and lysozyme (L). We used the Vald-Genkin's theory for determination of PC. For this we have separated all signs at ranges and have compared their frequency in both groups of patients. Prognostic sense has formed signs which reached factor of informativity more than 0,3. The prognostic of the current of Sh does adding PC at presence or absence of the signs. If amount PC reaches values "+13,0" and more, possible forecast SSh, but if "-13,0" and less - VLSh. The clinical and anamnestic signs had prognostic sense: carried earlier infections (acute respiratory infection-4,04, bronchitis+1,63, intestinal infection-0,13, children haven't diseases-13,94), anemia (no-1,53, presence +10,08), current to pregnancy (physiological-1,23, pathological+3,67), pathological admixtures in the stool (slime-10,1, blood-6,15, undigested