

and this was associated with CNS infiltration of CD4+ and CD8+ T cells, NK1.1+ cells and macrophages expressing the receptor. It is considered CCR5 is a critical antiviral and survival determinant in WNV infection of mice that acts by regulating trafficking of leukocytes to the infected brain (Glass W.G. et al., 2005).

In the Volgograd Region 23.6% cases of West Nile fever during the 1999–2002 without meningitis and encephalitis were reported (Petrov V.A., 2004). WNV infection leads to morphological alterations in different organs. Postmortal examination has found mononuclear aggregations in bronchial walls, perivascular mononuclear infiltration, pulmonary edema and focal hemorrhages, but clinical alterations of respiratory functions were not detected (Grigoryeva N.V., 2005). The morphological pathogenesis of pulmonary WNV infection is poorly understood.

Here, we characterize a mouse model for WNV infection using a intraperitoneal route of infection. White mice were infected i.p. with  $10^3$  focus-forming units (ffu) of strain WNV Astr 986, identical to WNV-NY99, which imitates the natural route of WNV infection in man. Mortality was 20% at that dose. The grope of surviving mice constitutes 8 animals. Lungs obtained from mice at day 9 after induction of WNV infection were fixed in 10% (weight/volume) neutral buffered formalin, were embedded in paraffin and were cut into sections 5  $\mu$ m in thickness. Sections were stained with hematoxylin and eosin for routine histological analysis.

In pulmonary bronchi mononuclear aggregations in bronchial walls were found. They occupied all layers, but the most prominent density of small lymphocytes was in the adventitia. Lymphoid infiltration spreads on the surrounding tissues and was more prominent around small blood vessels. Hemodynamic changes were also found: hyperemia, stasis in capillaries, perivascular hemorrhages. Inter-alveolar septa were edematous, infiltrated by small lymphocytes and macrophages. Alveolocytes were edematous, some of them desquamated. Inside alveoli serous liquid was found, but in some cases hemorrhagic infarctions were detected.

Intrapulmonary autonomic ganglia contained polygonal neurons with vacuolated cytoplasm of perikarya. They nuclei were

rounded vesicular with one or two ectopic nucleoli. Part of neurons had hyperchromic cytoplasm of perikarya. Satellite neuroglial cells were with minimal dystrophic alterations. Lymphoid infiltration and interstitial edema of ganglionar capsule and stroma were found.

Our findings suggest that endothelial cells in the lungs of WNV infected mice regulate migration of leukocytes to the infected lung. The damage of peripheral nervous system participates in pathogenesis WNV infection. The data also raise important new questions about the potential roles of regulatory systems that are induced by WNV in this model and in man.

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The article is admitted to the International Scientific Conference “Homeostasis and Endoecology”, Egypt, Hurgada, February, 21-28, 2007; came to the editorial office on 17.01.07

#### **DEMONSTRATION FEATURES OF SOMATIC MOTHERS' DISEASES WHO HAVE DAUGHTERS WITH BROKEN MENSTRUAL FUNCTIONS**

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Children's health is determined by somatic health of their mothers at the expense of both spontaneous communicate of genetic material and inside uterine (antenatalis) damages because of complicated flowing of pregnancy and childbirth. Infringement in the making of young girl's menstruation is the first clinic display of dysfunction of reproductive of reproductive system as a reflection of justifiability of their somatic health.

The aim of our work was lighting of demonstration peculiarity of mothers' somatic diseases who have daughters with broken menstrual function in pubescence (pubertatis) period.

Anamnesis and clinic characteristics of 232 women who have daughters at the age of 15-18 with gynaecological age duration more than 2 years were valued. The main group was 116 women who have daughters with broken menstrual function. Another

group of 116 women for comparison has daughters with physiological flowing of pubescence period.

The age of first menstruation and a character of the beginning of the women's menstrual function in the comparative groups aren't greatly different.

Real difference in the clinic demonstration of diseases of ears, noses, throats organs 57(49,1%) the daughters have their broken menstrual function and 14(12,1%) cases with of it, renals 24(20,7%) in the main mothers' groups and 5(4,3%) in the comparative group was revealed.

Somatic mothers' diseases serve not only as negative background for bearing their daughters with following problems in their beginning of the reproduction, but their early menses testifies to considerable lowering of general organism adaptive possibilities.

Diseases of endocrine (glands) 77(66,4%) and 31(26,7%), heart-vascular ones (59(50,9%) and 38(32,8%), ears, noses and throats 38(32,8%) and 15(12,9%), alimentary canal ones 39(33,6%) and 16(13,8%) as well were lighted among the mothers who have daughters with broken menstrual function after their mother's birthing and before the age of 40 (reproductive period) really oftener than among mothers who have daughters without such diseases.

Frequency of exposing of somatic diseases didn't have authentic differences among women after 40 in the comparative groups. Although heavy climacteric syndrome 12(10,3%) and malignant tumours of a reproductive in the main women's group after 40.

Thus presence of their mother's somatic diseases in their pregnant and their authenticity earlier clinic demonstration in their reproductive age influences on the reproductive girl's health negatively as the lowering display of their general adapted organism abilities.

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The article is admitted to the IV International Scientific Conference "Modern Problems of Experimental and Clinical Medicine", Thailand, 2007, January 17-28; came to the editorial office on 20.12.06

### IMMUNE STATUS OF HORSES AT CHRONIC STRONGYLOIDOSIS

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Strongyloidosis of horses refers to the class of helminthiases, which are caused by parasitizing intestinal worms Nematode of the superfamily Rhabditoidea, genus *Strongyloides*, species *Strongyloides westeri*.

The disease's agents parasitize in the small bowel, and though they are little pathogenic, under certain circumstances they can cause a nasty enteritis.

Strongyloidosis represents a unique genus: helminths are able both to parasitize in an animal's body and to be free to propagate out of an organism. Only ambosexous females, which strike their eggs containing larvae by parthenogenesis (i.e. the development occurs from infertile egg cells), parasitize in the small bowel. After getting rid of the eggshells the larvae go through 4 phases developing into free-living males and females, and then helminths can propagate in the ambient medium.

The vermination can occur when ingesting - alimentarily, or through skin - percutaneously, free-living 3<sup>rd</sup> stage larvae, which then migrate through low tension circulation, lungs, breathing tube to the small bowel, where they develop into full-grown females.

Though there are lots of reasons for the helminthism to appear and they are all interconnected, one of the most important ones is the immune status change of animals, as it is stated that animals become more responsive to helminthisms at the immunity weakening (G.M. Urkkhart and co-authors, 2000).

That is why the aim of our work is to define the immune status of horses at chronic strongyloidosis on the basis of studying of the value of humoral immunity indexes in blood serum.

The research was carried out in the cavalry school "Squadron", Sovetsky, Khanty-Mansi Autonomous Area, Tumen Region. In the