



indicating the significance of oxidative stress in the pathogenesis of rosacea and the appropriateness of the administration of antioxidant drugs in the comprehensive therapy of such patients.

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**CASE REPORT OF YERSINIA ENTEROCOLITICA INFECTION WITH PROLONGED POLYARTHRITIS
IN YOUNG CAUCASIAN MALE**

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The aim of the study is to describe the clinical case of secondary focal form with prolonged polyarthritis caused by *Y. enterocolitica* O:3 serogroup in a young patient and to focus on the issues of early clinical and laboratory diagnosis of Yersiniosis that would minimize the role of medical mistakes in diagnostics made by general practitioners.

A descriptive method of the clinical cases research with an analysis of medical records and laboratory test results is used.

A 23 year old male patient with complains on febrile temperature, pain in the knees, ankles, hands, swelling of these joints, feeling of tightness during the movement was admitted to the Rheumatology department of Chernivtsi Municipal Hospital March 18, 2016. The reactive arthritis with an involvement of the hands joints, knees, and ankles of unknown etiology was diagnosed. The patient was discharged from the Rheumatology Department April 14, 2016. The X-ray of hands joints demonstrated the signs of arthritis II degree. The magnetic resonance imaging of the head showed the signs of mild liquor discirculation. Due to the continuous fever it was offered to analyze blood within the indirect hemagglutination reaction. The positive titre of antibodies 1: 6400 with serovar O: 3 was revealed. During the stay in the Rheumatology department the patient was prescribed antibiotics, nonsteroidal anti-inflammatory, antifungal medications.

Considering the verification of the yersiniosis serological test, the patient was sent to the department of infectious diseases April 15, 2016. The detailed epidemiological and medical history analysis allowed us to find out: the illness had an acute beginning with a febrile temperature with abdominal pain and diarrhea at a frequency of 4 times a day (a liquid stool without pathological impurities) 4 days before hospitalization to the rheumatologic department of the hospital. Later a joint pain and the signs of functional stiffness appeared. Dyspeptic signs were 3 days. At the time of admission to the infectious disease department: a slight increase in body temperature, no changes in joints, stiffness and joint pain.

The final clinical diagnosis: Intestinal Yersiniosis (*Yersinia enterocolitica*), serovar O:3, is testified within the indirect hemagglutination reaction 1:6400, a secondary focal form, arthritis with prolonged course, moderate severity. The patient was prescribed treatment - antibiotics, probiotics, antihistamines, intravenously detoxication treatment. The patient's condition has significantly improved after a week of treatment at the department of infectious diseases: body temperature was normalized, the joint pain was decreased. The patient was discharged from the hospital in a satisfactory condition with a significant clinical improvement under the further follow-up supervision of an infectious disease doctor by the place of living.

Analysis of recent research and publications have been demonstrated that according to statistics, the incidence of Yersiniosis in Ukraine ranges from 0.20 to 0.56 per 100.000 population meanwhile in the USA the data confirmed 1 case per 100,000 population. The polymorphism of the infection caused by *Yersinia enterocolitica* requires a detailed clinical and epidemiological analysis of all risk factors (in this case the consume of unwashed apples and short-term diarrhea have not been noticed) by doctor during primary and secondary seeking of medical treatment by patient.

To sum it up, in case of doubtful or positive epidemiological data, the presence of arthralgic manifestations with intestinal disorders on the background of a fever needs bacteriological (by stool culture before the treatment) and serological studies for putting the final diagnosis of yersiniosis and serovar pathogen. The secondary focal form and the protracted course of intestinal yersiniosis are a manifestation of the infection generalization caused by *Y. enterocolitica*: accordingly, it can provoke a development of rheumatoid arthritis.

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**POLYMORPHISM OF XENOBIOTICS DETOXICATION SYSTEM GENES OF GLUTATHIONE-S-
TRANSFERASE IN PATIENTS WITH
PRIMARY DIAGNOSTIC TUBERCULOSIS**

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Set the allelic status of the genes of biotransformation of xenobiotics glutathione-S-transferase class T1 (GSTT1) and M1 (GSTM1) in patients with pulmonary tuberculosis. A total of 100 patients with newly diagnosed pulmonary tuberculosis, were hospitalized in Chernivtsi TB Dispensary. The control group consisted of 50 healthy individuals. Genomic DNA was isolated from whole venous blood. Polymorphic sites GSTM1 and GSTT1 multiplex isolated by polymerase chain reaction, according to the protocol for the momentary polymorphism analysis by M. Arana et al (1996). Deletion of the gene corresponds to the absence of the corresponding strips on electrophoregram. For statistical analysis of data using STATISTICA program, version 10.0.228.8.



In 39.99% of surveyed there a mutation in the promoter region of genes studied the GST (20.55 % in patients with tuberculosis and 16.44 % healthy), among them, more than half (64.81 %) are carriers of pathological 0/0 genotype GSTM1 gene haplotype, whereas the combination of a homozygous mutation of the GSTT1 0/0 occurs in 2.33 times less, and there is almost one in three (27.78 %) of the surveyed. 4.17 % of patients with pulmonary tuberculosis are carriers of abnormal genotypes of both isoforms of GST genes. So, the favorable combination of functional alleles in the haplotype is characterized by the frequent occurrence of lung VDTB to 26,09 % ($\chi^2_{22} = 4,37$ $p = 0,037$) in a mild clinical course, against the backdrop of a liquid co- and polymorbidity (on 31,01 %, ($\chi^2 = 5.53$, $p = 0.019$) and 31,38 % ($\chi^2 = 4,07$, $p = 0.044$), respectively) and more likely to bacteriological 60 dose of 18,40 % ($\chi^2 = 3,59$, $p = 0.052$) and 45,64 % ($p = 0.002$), respectively.

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DYNAMICS OF CYTOKINE REGULATION IN PATIENTS WITH DRUG RESISTANT TUBERCULOSIS

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Tuberculosis (TB) remains a global threat of mankind. One of the features of modern TB is the increase in the prevalence of drug-resistant mycobacteria (MBT) to TB drugs, which leads to a decrease of quality of care and, as a consequence, to increase of mortality. A global WHO survey stated that among all new TB cases 3.6% are multidrug-resistant tuberculosis (MDR); in 9.6% (8,1-11,2%) of all MDR cases, XDR is reported; 60.0% of all MDR cases in the world are diagnosed in Brazil, China, India and South Africa. The high level of primary MDR TB, exceeding 6.5%, was registered in Kazakhstan, Russia (Tomsk region), Uzbekistan, Estonia, Israel, China (Liaoning and Henan Province), Latvia, Lithuania, Ukraine (Donetsk region).

The study included 107 patients with pulmonary tuberculosis, with newly diagnosed pulmonary tuberculosis (NDTB), with preserved sensitivity to TB drugs; MDR and XDR TB patients. Clinical, radiological, bio- chemical, microscopic, microbiological, immune-enzymatic and statistical study (ANOVA and Pearson correlation) methods were used.

Pearson correlation analysis between pro- and anti-inflammatory cytokines showed that in patients with MDR TB there is a weak, negative correlation between the levels of IL-6/IL-10 and IL-18/IL-10 ($r = -0.22$, $p < 0,001$, and $r = -0.16$, $p < 0,001$, respectively). Production of IL-6 and IL-10 in TB patients is independent of drug resistance, but increases in response to increased synthesis of endotoxins by MBT; the magnitude of endogenous intoxication and cytotoxic hypoxia creates prerequisites for the development of drug resistant strains. The IL-18/IL-10 ratio in these patients characterizes the increase in severity of the patient's state, the spread of inflammation processes in the lungs and the development of drug resistance; there is a significant bulk of the T_H-lymphocyte type 2 (CD4⁺), which indicates the development of deep gap in cell-mediated immune response and prevalence of an ineffective anti-inflammation immune activation.

So, comprehensive assessment of integral indices of endogenous intoxication and level of certain pro- and anti-inflammatory cytokines in the blood plasma of patients with MDR TB show a moderate endogenous intoxication, break down of the cellular component of the immune reactivity due to the formation conditions for the development of MBT resistance MBT, by increase of cytotoxic hypoxia and activation of „systemic inflammatory response” syndrome. Analysis of plasma concentration of IL-6, IL-10 and IL-18 in patients with multidrug-resistant TB proved, that their level depends on the nature of the resistance of MBT and correlate with the spread of the specific process in the lungs.

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THE METABOLIC SYNDROME IN HIV-INFECTED PATIENTS WHO ARE HAVING A HIGHLY ACTIVE ANTIRETROVIRAL THERAPY SESSION

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Highly active antiretroviral therapy (HAART) transforms an infection with the human immunodeficiency virus (HIV) from a rapidly progressive and uniformly fatal disease into a chronic manageable condition. However, some HAART schemes application, especially those including protease inhibitors (PIs), causes in the majority of HIV-infected patients an iatrogenic metabolic syndrome (MS) (increased waist size, impaired fasting glucose, hypertriglyceridemia, low plasma high-density lipoprotein concentration, and hypertension) that is associated with an increased risk of cardiovascular cases that are connected with a process of accelerated atherosclerosis, even in young HIV-infected people. Metabolic complications and abnormal fat distribution were frequently observed after a few years of antiretroviral therapy and, as the wide range of antiretroviral drugs is still expanding, and long-term metabolic changes are becoming more common throughout the world. Nearly 20% of HIV-infected patients receiving treatment meet the criteria for the third report of the expert group on the detection, evaluation and treatment of hypercholesterolemia in adults (Third Report of the Adult Treatment Panel for MS), and about 50% for two out of five diagnostic criteria.

The etiology and pathogenetic mechanisms of the HIV / HAART-associated metabolic syndrome remain not fully clarified. There is controversial evidence as to which class of antiretroviral drugs can cause such changes. PIs is the most likely class, but the use of nucleoside reverse transcriptase inhibitors (NSAIDs) may also be a potential risk factor. In addition, PIs and NRTIs can work synergistically, or an effective HIV treatment can contribute to the