Introduction
Serous meningitis occupy a leading place among the lesions of the central nervous system, whose share in the structure neuroinfections ranges from 25% to 70%. In the pathogenesis of serous meningitis leading mechanisms involved in damage to nerve cells and causes their death is an imbalance in the functioning of prooxidant-antioxidant system.

Objective
Explore indicators of prooxidant-antioxidant regulation in the dynamics of the disease in patients with serous meningitis.

Materials and Methods
Under supervision there were 64 patients with serous meningitis aged 18 to 74 years who were treated in a communal institution Zaporizhzhya Regional Clinical Hospital of Infectious Diseases. All patients were included in the study on a random basis and the availability of informed consent.

The diagnosis of serous meningitis determined by the results of the clinical data and the availability lymphocytic cytosis by cytological study of cerebrospinal fluid.

Spectrophotometric method of determining the content in serum of patients with serous meningitis stable metabolites of nitric oxide - nitrites, performance and spontaneous metal-catalyzed oxidative modification of protein and catalase activity. The control group consisted of 30 healthy individuals.

Results
An examination of 64 patients with serous meningitis found that they were admitted to the infectious hospital an average of (3.5 ± 0.3) day of the disease. On admission to hospital in patients with serous meningitis in the clinical picture dominated general intoxication, cerebral, meningeal syndromes.

Changes prooxidant-antioxidant regulation in patients with serous meningitis at the time of admission were characterized by higher (p <0.0001) level indicators spontaneous and metal-catalyzed oxidative modification of protein content of nitrite (1.9 fold, p<0.0001) in combination with low catalase activity (1.4-fold, p <0.0001) in serum compared with healthy people.

Since the second week of conventional treatment in patients with serous meningitis registered a regression of clinical symptoms. However, in the second week of conventional treatment in patients with serous meningitis deepened imbalance indicators of prooxidant-antioxidant regulation towards free radical oxidation processes matched confirmed the persistence of higher level (p <0.0001) indicators spontaneous and metal-catalysed oxidative modification of protein and nitrite (in 11.9%, p <0.0001), combined with a low-catalase (21.1%, p <0.0001) in serum compared with those of on admission.
Regression of clinical symptoms and rehabilitation of cerebrospinal fluid in 29 patients with serous meningitis at the time of discharge from the hospital combined with a decrease in performance imbalance prooxidant-antioxidant regulation, as evidenced by reduction (p <0.02-0.0002) compared with the corresponding parameters on admission individual indicators spontaneous and metal-catalyzed oxidative modification of protein, nitrite content in blood serum. However, the preservation of pro-oxidant-antioxidant changes in regulation after conventional treatment in patients with serous meningitis showed significantly higher levels of performance and spontaneous metal-catalyzed oxidative modification of protein (p <0.0001) and nitrite (p<0.0001) in conjunction with decrease (p<0.0001) catalase content in serum compared with healthy people.

In patients with serous meningitis on admission clinical signs of dominance general intoxication, cerebral, general intoxication, syndromes combined with increased (p <0.0001) indicators spontaneous and metal-catalyzed oxidative modification of protein, nitrite content, and low (p <0.0001) catalase activity in serum compared with healthy people.

From the second week of treatment generally against the background of a certain regression of clinical symptoms in patients with serous meningitis deepened imbalance indicators of prooxidant-antioxidant regulation, as evidenced by a further increase (p <0.0001) indicators spontaneous and metal-catalyzed oxidative modification of proteins and nitrites in combined with a low-catalase (p <0.0001) in serum compared to the same period in the hospital.

At the time of discharge patients from hospital serous meningitis regression of clinical symptoms and rehabilitation were accompanied by a decrease in cerebrospinal fluid (p<0.02-0.0002) compared with the corresponding parameters on admission of certain parameters of spontaneous and metal-catalyzed oxidative modification of proteins and nitrite content in blood serum. Preservation pro-oxidant-antioxidant imbalance regulation at discharge in patients with serous meningitis showed higher levels (p <0.0001) indicators spontaneous and metal-catalyzed oxidative modification of proteins and nitrites in combination with a reduction (p <0.0001) content in serum catalase compared with healthy people.