

CLINICAL AND NEUROPHYSIOLOGY EFFECTS OF THE INTRATHECAL ADMINISTRATION OF OZONE-OXYGEN MIXTURE IN HIV-PATIENTS WITH ARACHNOENCEPHALITIS CAUSED BY HERPES VIRUS

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Purpose: This study was conducted in order to evaluate the safety and efficacy of the intrathecal administration of ozone-oxygen mixture (OOM) in HIV patients with CNS infections caused by herpes virus.

Material and Methods: The procedures were performed at the clinic's intensive care and detoxication unit (ICDU). All patients have the advanced form of HIV/AIDS (clinical stage IY) with multiorgan disorders and arachnoencephalitis (AE) caused by herpes virus. Informed consents were obtained. Thirty-eight patients (22 men, 16 women; age range was 23-42 years) were divided into two treatment groups. 16 patients (group A) underwent intrathecal injections of OOM as part of the complex treatment, and 22 patients (group B) were treated with conventional methods without OOM injections.

OOM was obtained from the universal medical ozonator "Ozone UM-80" (Institute of Ozonotherapy and Medical Equipment, Kharkiv, certified by MOH of Ukraine). The device provides the ozone concentration in the range of 0.2mg/l-80mg/l with the precision of measurement $\pm 5\%$ and the increment of 0.1mg/l.

The impairment of consciousness was assessed by the Glasgow Coma Scale (GCS). In addition to the clinical assessment of neurology status also blood and urine tests, liquor examination, EEG, MIR of brain and ophtalmoscopy were used.

OOM was administrated intrathecally by epidural injection performed between L3-L4; OOM was injected with the use of 20.0 ml syringe. The ozone concentration in the exit mixture was 5.0 mg/l. The course of treatment consisted from 6-7 procedures EOD during 2 weeks. We did not observe any adverse events and/or complications; the patients' condition was not affected by the performed procedures.

Results: The clinical and neurophysiology data showed that the recovering process was more active in patients in group A. The treatment effects on the psychoemotional status, asthenoneurotic syndrome, general and focal neurology symptoms, impairment of autonomic nervous system, and neurophysiology parameters were beneficial in patients of group A when comparing them with the outcome in patients of group B. However the intrathecal administration of OOM did not significantly improve the duration and intensity of neurological symptoms in 1/3 of the patients with persistent (more than one week) signs of liquor hypertension syndrome. The difference between terms for the improvement of changes in liquor parameters (group A vs group B) was 5 days in average.

All patients treated by the complex therapy with OOM intrathecal administration were discharged in stable condition. The positive effects of the ozonotherapy on CD4 changes, virus load and MIR parameters were not significant.

Conclusion: The study results showed that OOM intrathecal administration has a positive effect on liquor and its system, the therapy facilitate the efficacy of treatment in HIV patients with herpes virus AE. The therapy did not cause any adverse events and/or complications. It should be studied further in order to obtain appropriate amount of data for statistical processing.