КОРОТКІ ПОВІДОМЛЕННЯ

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COMPARATIVE EVALUATION OF PHARMACOKINETIC PARAMETERS ON THE ABSORPTION STAGE OF COORDINATION COMPOUND GERMANIUM OK-8 IN RATS IN NORMAL CONDITION AND IN CEREBRAL ISCHEMIA

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Ischemic stroke − one of the most challenging aspects of modern medicine, severity of which is explained by the consequences of each case of illness and level of morbidity. Therefore, the relevance of this problem necessitates further search of new remedies to treat the disease.

For deep preclinical research of the potential remedy is important to study it pharmacokinetic profile, that allows to get substantial information about the features of the drug passage in the body in different stages.

The purpose of this work was a comparative study of absorption of the potential cerebroprotector OK-8 in rats in normal condition and with acute cerebral ischemia.

Study of pharmacokinetic parameters of absorption was performed in serum in dynamics: 0,5; 2; 4; 12 and 24 hours after administration of OK-8.

On the background of the absence of reliable differences in the periods of absorption and constants of halfabsorption of studied compounds in the experimental group and in healthy animals, deserves special attention the fact that in condition of cerebral ischemia time to reach maximum concentration increased to 1,3 times compared to the group of rats without pathology, and the maximum concentration of OK-8 in norm is 14% higher than in the group of animals with cerebral ischemia.

Thus, current experimental data's enables expand to existing ideas about features potential cerebroprotector on the absorption stage and justifies further study of all pharmacokinetic stages.

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VALIDATION OF UV-SPECTROPHOTOMETRIC METHODS OF QUANTITATIVE DETERMINATION IN FORENSIC AND TOXICOLOGICAL ANALYSIS: LINEARITY AND RANGE

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The following procedure of linearity confirmation for UV-spectrophotometric methods of analytes quantitative determination in biological fluids used in forensic and toxicological analysis has been offered:

- application of the normalized coordinates (normalization by the reference solution, which absorbance is corrected by the value of recovery);
- the application ranges are 25 – 125%, 25 – 150%, 25 – 175%; as 100% the mean toxic or lethal analyte concentration in biological liquid is accepted;
- the number of concentration levels is g = 5, 6 or 7 (depending on the chosen application range) in constant increments of 25%;
- the number of «replicates» – replicate experiments – for each concentration level is determined by the results of calculation of $s_{nom,r}$ value, which acceptability estimation is carried out according to the following criterion:

$$s_{nom,r}(sample) \le \max s_{nom,r} = 0.707 \cdot \max \Delta_{As} \cdot \sqrt{n} / t(95\%, n-1).$$

- each replicate experiment is carried out within individual run/day using the matrix samples obtained from the same source;
- calculation of the parameters of linear dependence is carried out for each run (within-run (within-day) linearity) and by the mean values of replicate experiments (between-run (between-day) linearity).

The next criteria and the order of acceptability estimation of linearity for UV-spectrophotometric methods of analytes quantitative determination in biological fluids used in forensic and toxicological analysis have been offered:

- acceptability estimation of linear dependence parameters is carried out in two stages – for the lines obtained using model solutions (without matrix) and calibration samples respectively;
- it has been suggested two approaches for estimation of parameters of linear dependence obtained using model solutions; for both approaches the acceptability criteria have been offered for residual standard deviation RSD_0^{model}