VERIFICATION OF DIAGNOSTIC METHODS OF AMMONIA LEVEL IN PLASMA BLOOD IN CONDITIONS OF NATIONAL UNIVERSITY OF PHARMACY CLINICAL DIAGNOSTIC LABORATORY OF THE CLINICAL-DIAGNOSTIC CENTER

Svid N. O.
Scientific supervisors: prof. Dobrova V. Ye., assoc. prof. Misyurova S.V.
National University of Pharmacy, Kharkiv, Ukraine
clinpharm@nuph.edu.ua

Introduction. The main diagnostic feature of a large number of chronic liver diseases, associated with hepatocellular insufficiency, is an increase in ammonia concentration in the blood. Therefore, it is advisable to determine the level of ammonia in venous blood plasma to ensure early detection of hepatocellular insufficiency.

Aim. To verify the method of determining the concentration of ammonia in blood plasma on the base of the Clinical Diagnostic Laboratory of the Clinical-Diagnostic Center of the National University of Pharmacy (CDC NUPh).

Materials and methods. In order to standardize the procedure as a control material we used the blood serum. Measurements were performed on the Express Plus Biochemical Analyzer. In this work, we used analytical, biological and statistical methods of research.

Results and discussion. During the work, specificity, convergence, correctness and reproducibility of this procedure was established, extended uncertainty was calculated in the conditions of the Clinical Diagnostic Laboratory of the CDC NUPh. It was proved that according to the procedure obtained values could be interpreted as accurate and reliable. The assessment of the correctness of the procedure by the time factor was confirmed by the proper implementation of the method for determining the ammonia in the blood plasma, as evidenced by the analysis with the help of the control card Shuhart. It has been determined that during the experimental period the influence of the system error is insignificant, because the measurements were carried out properly.

Conclusions. The performed work has proved that this procedure has the performance characteristics that are in accordance to the relevant regulations, the stages of determination were carried out in accordance with the established criteria, and the measured parameters correspond to standardize ones. Based on the results of the work and evaluation of the verification, it is planning to develop reports and implement this procedure to the practice of the laboratory for conducting research on patient biological samples.