over the concentration range of 1 to 50 ng/ml. Linear calibration was obtained with correlation coefficients R2 = 0,996. The limit of detection was 1 ng/ml.

CONCLUSIONS

The highly sensitive and selective method of extraction and quantitative analysis of memantine in the blood plasma by high-performance liquid chromatography coupled with mass spectrometry was developed. The method is characterized by repeatability and low limit of detection (1ng/ml). With the help of developed HPLC/MS/MS method pharmacokinetics of memantine-containing drugs (10 mg) was studied after a single oral intake of the drug by volunteers.

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MICROCIRCULATORY BED IN ORGANS SUPPLIED BY DRAINING DUCTS SYSTEM: FOUR COMPARTMENTS INSTEAD OF THREE

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The paper describes the microcirculatory modules of the liver and kidney and generalizes the obtained results on microcirculatory beds of all organs, having the system of draining ducts. The research is conducted on 60 white Wistar rats (equal amount of male and female animals) using standard Histology, Histology after injection of contrast mass into tubular structures, Transmission Electron Microscopy and Scanning Electron Microscopy of Corrosion Casts of blood vessels and ductular/tubular systems.

The microcirculatory module for every given organ is specific, multiply repeated, more or less standard minimal fragment of microcirculation network. Classically it includes the finest blood vessels (arterioles, capillaries, venules), lymphatic initials (Lymphatic capillaries and post-capillaries) and interstitial spaces (channels). Taking into account the results of our research, we suggest to consider the liver and kidney (as well as other organs supplied by draining ducts system) as the basis of four different liquid circulation: blood, lymph, tissue juice and organ specific liquid — bile and urine. Correspondingly, the four compartments have to be identified in the microcirculatory beds of organs with draining duct system. Three of them are classical, but the fourth is organ specific. The organ specific compartment of the microcirculation starts blindly (in similar to the lymph capillaries) and gets its specific liquid through secretion (bile) or filtration (urine) by/through the cells, which create/border its lumen. The classical compartment of the microcirculatory network in the organs supplied by draining duct system contains two components with different architectonics: the first is typical (universal) for all organs. It is located in stroma, particularly around the ducts/tubes and contains standard arterioles, capillaries, venules, tissue channels and lymphatic capillaries; the second compartment of the microcirculatory network is sharply organ specific. It contains portal terminals and arterioles — sinusoidal capillaries — the central/sublobular venules (in liver); afferent arterioles — glomerular capillaries — efferent arterioles (in kidney). This second component is realizing the specific function of the given organ: to produce/drain the organ specific liquid (bile, urine). All four compartments of the microcirculatory modules of liver and kidney and their liquids are in dynamic morpho-functional relation to each other and reveal the great opportunities of mutual replacement; e.g. in condition of bile or urine congestion the lymphatic capillaries successfully undertake the evacuation of the mentioned liquids on the early terms of pathology.