

Liver Isolated Hepatocytes Transplantation with Usage of Hemosorbition Methods and their Role During Acute Hepatic Insufficiency

Davit Tophuria¹, Maia Matoshvili², Inga Kakhniashvili³, Levan Benashvili⁴

Tbilisi State Medical University Tbilisi, Georgia

Departments: Human Normal Anatomy¹, Topography anatomy², Clinical Skills³, Dermato-Venereology⁴

¹Supervisor MD, PhD, Associate Professor; ²MD, PhD; ³MD, PhD, Student; ⁴MD, PhD, Assistant Professor

Background/Aim: According to current experimental and clinical data the principles of treatment of liver toxic illness : liquidation of etiological factor; retention of the organism metabolism on such necessary level which provides the organ function recovery and stimulation of reparative regeneration processes in the toxically damaged liver. Complex method of treatment which unites hemosorbition and cellular transplantation on one side will provide metabolism and hemodinamics timely recovery, and on the other hand stimulation of the reparation regeneration of the damaged organ.

Methodology: In the experiment studies was conducted with usage of with 120 Wister Line white lab. rats with weight 170-200 g. The animals were divided in four groups. The animals of the first group after creation of the model of acute liver damage was under examination without treatment. The animals of II group in the conditions of ethylene-ester mask narcosis after three days of modeling was made one-time hemosorbition. In III group animals the conditions of ethylene-ester mask narcosis after three days of modeling occurred transplantation of allogenic hepatocytes , IV group animals the conditions of ethylene-ester mask narcosis as well as II group animals were made one time hemosorbition. Furthermore as well as in III group animals was conducted transplantation of allogenic liver isolated hepatocytes.

Results/Conclusion: after modeling liver acute insuficiency on 3-7 day all animals of the control group died, with transplantation method died - 70 %; with detoxication treatment method died – 26%. And combined method of liver isolated hepahocytes and with performing hemosorbition methods died – 20%. The main reason of death was acute liver insuficiency which was caused by liver damage by toxic agent.

Key words: *Hepatocyte, Transplantation, Incuficiency.*