

Two and a Half Hours of Cardiopulmonary Resuscitation in a Deceased Brain Dead Donor before Liver Transplantation - A Good Idea to Accept?

Dieter P. Hoyer, Gernot M. Kaiser, Andreas Paul, Nikolaos Machairas, Ernesto P. Molmenti, Georgios C. Sotiropoulos

Department of General, Visceral and Transplantation Surgery, University Hospital Essen, Germany

Abstract

The sequelae of cardiac arrest (CA) and cardiopulmonary resuscitation (CPR) in organ donors potentially results in ischemic organ injury and graft dysfunction after transplantation. Thresholds of resuscitation times in brain dead liver donors have not been established so far. We report the case of a brain dead liver donor who experienced 2.5 hours of CPR whose liver was successfully transplanted. A 75-year-old male experienced CA and was treated by CPR with streptokinase application for 2.5 hours until stabilization of cardiac function. Brain death was diagnosed at the day of admission and organ donation carried out within 24 hours. The DRI was 2.2 with a CIT of 8.8 hours. The liver was transplanted into a 64-year-old recipient suffering from alcoholic liver cirrhosis and a MELD-score of 10 non representative for severity of disease. During follow up of 4 years ERCP and stenting was performed regularly for biliary anastomosis stenosis. The patient remained in a very good overall state of health without any signs of liver dysfunction. This case demonstrates that an extensive period of CPR is not an obligatory exclusion criterion for liver donation. Thresholds of CPR times as well as predictive factors in donors with CA should be established.

Key words: donor risk, liver transplantation, ischemia reperfusion, ischemic preconditioning, extended criteria donor, clinical decision making