The effects of Temporary Portocaval shunt during live donor liver transplantation on the hemodynamic and laboratory parameters of the anhepatic and reperfusion phases.

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Background and Aim of Study

Temporary Portocaval shunt (TPCS) is a surgical procedure to help reduce gut congestion in post dissection phase of LDLT. Aim: Is to evaluate the effects of TPCS on systemic hemodynamic and laboratory parameters during the anhepatic and reperfusion phases

Materials and Methods

Randomized control study , ethical comity approval, consent applied, registered (PACT201712002857722). 64 LDLT, (4 excluded extended portal vein thrombosis), TPCS gp (n=30), Control C gp (n=30). Post induction, Trans esophageal Doppler(TED) probe at mid esophagus were applied. Hemodynamics,TED parameters(cardiac output CO l/min, systemic vascular resistance SVR dyns/s/cm-5\min), arterial blood gases (pH, bicarbonate HCO₃ mmol/l), serum lactate (mg/dl), dose of inotropic drugs were reported at: post induction (T0), end anhepatic phase (T1) and 5 min post reperfusion(T2). Postoperative ICU stay and complications were reported.

Discussion

More total Norepinephren support were required early in the anhepatic phase and throughout the procedure guided by TED to support mean BP and SVR in C gp vs,TPCS gp. Significantly less epinephrine boluses during (T2) were required in TPCS gp vs., C gp also, less blood products were indicated in TPCS gp. Although longer warm ischemia time(WIT) in TPCS gp vs. C gp postoperative liver enzymes were higher in C gp.

Conclusion

TPCS helps reducing acidosis and improving hemodynamic stability during the anhepatic phase of LDLT and immediately after reperfusion with less need for vasopressor support.

	AGE / y	MELD	W IT /min	ICU Stay /d	Lactate/ mg/dl
C gp	46.3	15.4	40	10.4	63.4
TPCS gp	46.8	16.4	50	8.8	29.8