

## RENAL TRANSPLANTATION. CLINICAL - 1

### SP665 RECOVERY OF RENAL FUNCTION IN LIVER TRANSPLANT ALONE VERSUS COMBINED LIVER KIDNEY TRANSPLANTATION: ANALYSIS FROM THE NHSBT UK REGISTRY

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**Introduction and Aims:** Recovery of renal function after liver transplantation is strongly influenced by pretransplant degree and duration of renal insufficiency, despite imprecise methods for measuring renal dysfunction. Indications for combined liver-kidney transplantation (CLKT) have been defined, but these are still under debate and hepatorenal syndrome (HRS) is a particularly challenging condition given the hardly predictable spontaneous improvement with liver transplant alone (LTA).

**Methods:** We analysed data of 6035 patients (Jan 2001-Dec 2012) from NHSBT UK Transplant Registry. Renal function at 1 years after transplantation was compared between CLKT and LTA with stratification on the basis of glomerular filtration rate (eGFR) at transplant (KDIGO Guidelines) and treatment with renal replacement therapy (RRT). Renal function post-transplantation was classified as eGFR >60, between 59-30 and <30 ml/min/1.73m<sup>2</sup>, the latter identified as non recovery of renal function. Univariate and multivariable analysis were performed.

**Results:** 5912 patients (98.0%) underwent liver transplant alone (LTA) and 123 (2.0%) patients received a CLKT. 305 (5.2%) of the LTA group were on RRT at time of transplantation, compared to 72 (58.5%) of the CLKT group. No patient with a MELD score <20 received RRT before transplant. No patients with eGFR ≥60 ml/min/1.73m<sup>2</sup> received CLKT. 27% of patients receiving CLKT were diagnosed with pre-transplant glomerular/tubular kidney disease, 39% with polycystic disease and 34% were not specified. LTA patients on RRT were more frequently presenting ascites (p<0.001), variceal bleeding (p=0.002), higher MELD score (p<0.001), higher INR (p<0.001) and bilirubin at transplant (p<0.001), suggesting the occurrence of HRS (data not available). Patients on RRT experience a significant difference of renal function recovery at 1 year post-transplant when receiving LTA versus CLKT, with the latter group experiencing a higher percentage of non-recovery (p=0.001; table 1). This difference was not detected for other eGFR stratifications. The univariate analysis identified recipient age >50 years, female gender, RRT in patients with MELD >20, polycystic disease and diabetes as predictive factors for non-recovery of renal function in patients undergoing LTA. In a multivariable model including all clinically relevant variables simultaneously, the independent predictors of renal function non-recovery were female gender (HR 2.76; 95% CI 1.52-4.99, p=0.001), RRT in patients with MELD >20 (HR 3.62; 95% CI 1.44-9.08, p=0.006) and diabetes (HR 2.55; 95% CI 1.38-4.73, p=0.003).

**Conclusions:** Recovery of renal function post-LTA is acceptable for patients with different stratifications of eGFR pre-transplant. RRT, female gender and diabetes may suggest to perform CLKT.

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	eGFR <30mL/min	eGFR ≥30 mL/min
LTA (244 pts)	14 (5.7%)	230 (94.3%)
CLKT (63 pts)	6 (9.5%)	57 (90.5%)