

## PATEY PRIZE SESSION

## O6

## EARLY ANASTOMOTIC BILIARY COMPLICATIONS AFTER LIVER TRANSPLANTATION

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**Introduction:** Biliary leaks and anastomotic strictures are common early biliary complications (EBC) following liver transplantation. However, their impact on outcomes remains controversial and poorly described.

**Method:** The NHS registry on adult liver transplantation between 2006 and 2017 was retrospectively reviewed (n=8304). Multiple imputations were performed to account for missing data. Adjusted regression models were used to assess predictors of EBC, and their impact on outcomes. 35 potential variables were included, and backwards stepwise selection enabled unbiased selection of variables for inclusion in final models.

**Result:** EBC occurred in 9.6% of patients. Adjusted cox regression revealed that EBCs have a significant and independent impact on graft survival (Leak HR=1.325; P=0.021, Stricture HR=1.514; P=0.002, Leak plus stricture HR=1.533; P=0.034) and patient survival (Leak HR=1.218; P=0.131, Stricture HR=1.578; P<0.001, Leak plus stricture HR=1.507; P=0.044). Patients with EBC had longer median hospital stay (23 versus 15 days; P<0.001) and increased chance for readmission within the first year (56% versus 32%; P<0.001). On adjusted logistic regression the following were identified as independent risk factors for development of EBC: donation following circulatory death (OR=1.280; P=0.009), accessory hepatic artery (OR=1.324; P=0.005), vascular anastomosis time in minutes (OR=1.005; P=0.032) and ethnicity 'other' (OR=1.838; P=0.011).

**Conclusion:** EBCs prolong hospital stay, increase readmission rates and are independent risk factors for diminished graft survival and increased mortality in liver transplantation. We have identified factors that increase the likelihood of EBC occurrence; further research into interventions to prevent EBCs in these at-risk groups is vital to improve liver transplantation outcomes.

**Take-home message:** Using a large registry database we have shown that early anastomotic biliary complications are independent risk factors for decreased graft survival and increased mortality after liver transplantation. Research into interventions to prevent biliary complications in high risk groups are essential to improve liver transplant outcomes.