Table 1

Median (range)	NODAT (n=7)	Non-NODAT, Non-DM (n=40)	p
Male	5	19	0.416
Age (years)	53 (38-59)	54 (19-73)	0.810
Hyperglycaemia in 14 days post-transplant (>15-≤20 mmol/L)	5	5	0.003
Hepatitis C	4	5	0.018
Tacrolimus concentration (g/L, average day 1-6)	4.0 (2.6-6.6)	7.0 (3.7-17.9)	0.005

Introduction New onset diabetes after transplantation (NODAT) is an important complication of liver transplantation associated with greater graft rejection, sepsis, renal impairment, and biliary complications. The aetiology of NODAT is unknown but recognized risk factors include calcineurin inhibitor immunosuppression and hepatitis C infection. There is limited evidence that hyperglycaemia within 14 days post-transplant may also contribute to NODAT.

Aims/Background We sought to assess the risk factors associated with NODAT in liver transplant recipients at a major European transplant unit.

Method We retrospectively studied 148 consecutive liver transplant recipients in 2009 at King's College Hospital. We gathered demographic and biochemical data, pre-transplant UKELD and MELD scores, aetiology of liver disease, daily glucose kinetics, total daily insulin requirement in the 14 days post-transplant, requirement for diabetes medications at 1 year, immunosuppression therapy (including steroids), intensive care and total hospital stay. Variables were analysed for their ability to predict NODAT using Fisher's exact test (categorical variables), unpaired t test (continuous variables), and logistical regression.

Results Of the 148 patients identified, 58 had complete blood glucose data and were included in the analysis. 11/58 had pre-transplant diabetes; 7/58 developed NODAT and 40 did not. Key results are shown in table 1. Of note, hyperglycaemia in the 14 days post-transplant was associated with NODAT (p=0.003), as was hepatitis C (p=0.018) and lower average plasma tacrolimus concentration on days 1–6 post-transplant (p=0.005).

Conclusion This is the largest study reported to date to demonstrate that hyperglycaemia within the first 14 days post-transplant is predictive of NODAT in a population given only moderate doses of steroid post-transplant (20 mg prednisolone daily). Hepatitis C also predisposed to NODAT in our population but, contrary to previous reports, higher tacrolimus concentrations did not. Whilst the pathophysiology remains unclear, being vigilant for this important complication and starting hyperglycaemic management in a timely fashion may reduce the incidence of and morbidity associated with NODAT.

55 HYPERGLYCAEMIA WITHIN 14 DAYS OF LIVER TRANSPLANTATION PREDICTS NEW ONSET DIABETES AFTER TRANSPLANTATION (NODAT)

A Turner, A Pierce, H Farne, S Kriese, D L Shawcross, N D Heaton, M A Heneghan
Institute of Liver Studies, King's College Hospital, London, UK

10.1136/gutjnl-2013-305143.55