between BKV load in urine and serum. Since the peak of viral load in urine appears 8 weeks earlier than the reactivation in serum and shows a clear correlation with viremia, the analysis of BKV load in urine will allow identifying patients with a high risk for BKVAN development at a very early stage.

Abstract# 1071 Poster Board #-Session: P207-II

Monthly Screening for Polyoma Virus Results in an Elimination of BK Nephropathy and Preservation of Renal Function. David J. Conti, Ossama Elbahloul, Michael H. Gallichio. *Surgery, Albany Medical College, Albany, NY.*

BK nephropathy (BKN) is a serious complication after renal transplantation and is associated with a high rate of allograft loss. In 219 patients transplanted at our center between 1/02 and 12/05, the BKN rate was 5%. In an attempt to decrease our BKN rate, in 1/06, we initiated a serum screening policy for all newly transplanted patients with monthly blood testing for polyoma determination by PCR. Patients with a positive PCR underwent a reduction in baseline immunosuppression, either a discontinuation (DC) or 50% daily dose reduction in mycophenolate mofetil (MMF). Serum PCR was repeated monthly and any patient with a 25% increase in serum creatinine from baseline underwent a renal transplant biopsy.

Between Jan 1, 2006 and Feb 28, 2007, 66 renal transplants were performed at our center. Immunotherapy consisted of Thymoglobulin induction followed by maintenance therapy with prograf, MMF and prednisone (n=13) or a steroid-free regimen of prograf, MMF and rapamune (n=53). Serum PCR became positive for polyoma in 11 patients (17%), 4 in the maintenance steroid group (31%) and 7 in the steroid-free recipients (13%). Mean time to positive PCR post-transplant was 5 months (range 2-9 months). Following DC or reduction in MMF dosing, 10/11 patients became negative for polyoma serum detection by PCR within 6 months. The mean time to a negative PCR was 4 months, range 2-6 months. Renal transplant dysfunction developed in one patient (9%) two months after DC of MMF therapy. Renal transplant biopsy in this recipient showed acute rejection. The serum creatinine returned to baseline in this patient after steroid therapy, however, the serum polyoma PCR remains positive. No other positive PCR recipient required a biopsy. Since the initiation of this screening protocol there have been no cases of BKN. Mean serum creatinine values for these 11 patients at one month post-transplant, time of initial positive polyoma PCR, 3 (n=11), 6 (n=11) and 12 months (n=6) after immunotherapy reduction was 1.5, 1.4, 1.5, 1.4, and 1.5 mg/dl respectively.

A trend towards a higher rate of positive serum polyoma PCR in maintenance steroid-treated patients compared to steroid-free regimen recipients was identified. Monthly serum screening for polyoma virus by PCR for early detection, with associated immunosuppresive regimen reduction, effectively prevents BKN. In addition, this screening protocol is associated with a low rate of acute rejection and preservation of excellent renal function.

Abstract# 1072 Poster Board #-Session: P208-II

Outcome of BK Viremia in Patients Treated with Leflunomide. Patricia M. West-Thielke,[1] Heather L. Herren,[1] James J. Thielke,[2] Ignatius Tang,[3] Jose Oberholzer,[1] Howard Sankary,[1] Enrico Benedetti,[1] Bruce Kaplan.[1] *[1]Transplant Surgery, University of Illinois Medical Center at Chicago, Chicago, IL; [2]Pharmacy Practice, University of Illinois Medical Center at Chicago, Chicago, IL; [3]Medicine, University of Illinois Medical Center at Chicago, Chicago, IL.*

Purpose: To analyze BK viral clearance, graft survival, and changes in renal function in patients treated with immunosuppression (IS) reduction with leflunomide compared to those treated with IS reduction without leflunomide.

Methods: We extracted data on 29 patients that were diagnosed with BK viremia from our institution's medical records between 11/18/2004 and 10/3/2007.

Results: Nine patients were treated for BK viremia with IS reduction with leflunomide and 20 patients were treated with only IS reduction. See table for results. The time to resolution of viremia and the time to 50% reduction in viral load were not statistically different between the 2 groups. Overall graft survival, MDRD, and BK nephropathy was worse in the group receiving leflunomide.

Summary of Results

	IS with leflunomide (n=9) n(%)	IS reduction only (n=20) n(%)	p-value
MDRD at time of BK diagnosis (μ, σ)	35.36 (12.40)	48.52 (18.78)	0.066
Average BK PCR from initial to final (μ, σ)	676866.6 (570327.80)	379394.70 (840463.61)	0.278
Resolution of viremia	3 (33.3)	13 (65.0)	0.226
Time to resolution	211.22 (122.69)	155.0 (111.78)	0.234
Time to achieving 50% max PCR	69.89 (44.55)	90.55 (88.94)	0.517
BK nephropathy	8 (88.9)	2 (10.0)	< 0.01
Graft failure	4 (44.4)	1 (5.0)	0.022
Graft survival (overall)	5 (55.6)	19 (95.0)	0.022
Patient survival (overall)	9 (100.0)	19 (95.0)	NS

Conclusion: The leflunomide group tended to have worse baseline characteristics; however, time to viral clearance and 50% viral load was not significantly different. Worse graft survival may indicate worse baseline characteristics but the results are still discouraging in terms of the ability of leflunomide to prevent allograft loss in patients with moderate to advanced BK viremia.

Liver - Complications, Recurrent Disease: Non-Hepatitis, Retransplantation II

Abstract# 1073 Poster Board #-Session: P209-II

Prediction of Postoperative Mortality and Long-Term Survival after Liver Transplantation, Based on Preoperative Parameters. Dionisios Vrochides,[1] Mazen Hassanain,[1] Jeffrey Barkun,[1] Jean Tchervenkov,[1] Prosanto Chaudhury,[1] Marcelo Cantarovich,[2] Marc Deschenes,[2] Phil Wong,[2] Peter Ghali,[2] Peter Metrakos.[1] *[1]Department of Surgery, Multi-Organ Transplant Program, McGill University, Montreal, QC, Canada; [2]Department of Medicine, Multi-Organ Transplant Program, McGill University, Montreal, QC, Canada.*

Introduction: MELD score predicts mortality of potential liver graft recipients while waiting on the transplant list. There is no pre-engraftment model predicting postoperative mortality and long-term survival after OLTx.

Purpose: To determine the preoperative parameters that can predict postoperative mortality and long-term survival after OLTx.

Methods: 454 primary adult liver transplants were performed between 1990 and 2006. Re-transplants and multi-organ recipients were excluded. 41 (9.03%) died during the first postoperative month. 16 more (3.52%) died within the second and third postoperative months. Of the remaining 397 recipients, patient survival and graft survival censored for patient death were retrospectively analyzed.

Results: Total bilirubin was 172.6 and 100.2 mmol/lt ($p<0.0001$), serum creatinine was 168.9 and 114.1 mmol/lt ($p<0.001$), INR was 3.06 and 2.23 ($p=0.002$) and warm ischemia time was 1.07 and 0.93 hours ($p=0.003$) for the patients who respectively died and survived during the first 3 postoperative months. Long-survival was positively correlated with female sex [$p=0.001$, Exp(B)=0.451, 95% Exp(B) CI:0.281-0.725], with recipient's age < 50 years [$p=0.003$, Exp(B)=1.028, 95% Exp(B) CI:1.009-1.047] and with absence of cancer from the explant [$p<0.0001$, Exp(B)=2.283, 95% Exp(B) CI:1.550-3.3362]. MELD score was not a predictor of long term survival [$p=0.444$, Exp(B)=0.992, 95% Exp(B) CI:0.972-1.013].

Conclusions: Postoperative (three-month) mortality after OLTx correlates with preoperative total bilirubin, serum creatinine, INR and warm ischemia time. On the other hand, long-term survival correlates with recipient's sex, age and presence of cancer in the explant. MELD score can't predict long-term survival.

Abstract# 1074 Poster Board #-Session: P210-II

Center Volume Predicts One-Year Allograft Failure for Re-Transplantation of Livers. Peter P. Reese,[1] Heidi Yeh,[2] James F. Markmann.[2] *[1]Medicine, Renal Division, University of Pennsylvania, Philadelphia, PA; [2]Surgery, Massachusetts General Hospital, Boston, MA.*

Background: Prior studies of liver transplantation have not consistently found associations between center volume and allograft survival. Liver re-transplantation surgery is often more technically demanding than initial transplant surgery and has an elevated risk of allograft failure. Success of liver re-transplantation may depend on experience and processes of care that relate to center volume. ***Methods:*** We performed a retrospective cohort study of all adult liver re-transplantation procedures performed during a 10-year period from 1/1/1996 through 12/31/2005 using registry data from the Organ Procurement Transplantation Network. The primary outcome was 1-year allograft failure. We divided patients into 3 equal tertiles on the basis of overall center volume of liver transplants. Mean annual volume of liver transplants was 1 - 85 in the low volume tertile, 86 - 152 in the intermediate quartile, and >152 in the highest tertile. ***Results:*** Re-transplants comprised 9% of total adult liver transplants. 2866 re-transplanted patients were included in the analysis. The risk of one-year liver allograft failure was 38.5% for re-transplanted patients. In multivariate logistic regression, intermediate volume centers had a decreased likelihood of one year allograft failure (OR 0.81, C.I. 0.66 - 0.99, p=0.047). High volume centers did not have a decreased likelihood of one-year allograft failure (OR 0.91, C.I. 0.75 - 1.11, p=0.35.) Results were similar when the analysis was limited to re-transplantation performed >30 days after initial transplantation. ***Conclusions:*** Intermediate volume centers have the lowest risk of one-year allograft failure with liver re-transplantation. Intermediate volume centers may benefit from sufficient surgical volume to optimize processes of care for liver re-transplantation. For this high risk procedure, center volume may have disadvantages above a certain threshold.

Relationship of center liver transplant volume to one-year allograft failure after liver re-transplantation * (n=2866.)

Volume	Odds ratio	Confidence interval	p value
Low	Reference		
Intermediate	0.81	0.66 - 0.99	0.047
High	0.91	0.75 - 1.11	0.35

* Results from multivariate logistic regression, with adjustment for donor, recipient and allograft factors including demographics, cold and warm ischemia. Mean values for MELD and donor height were imputed where missing