

underwent LDLTx (7M/4F, median age 53 yrs [range 28 – 67 yrs], median MELD 13 [range 7 – 28], median graft-to-recipient-weight ratio 1.06 [range 0.73 – 1.53] with a median warm ischemic time of 40 minutes [range 30 – 59 minutes]). Urinary flow and samples of arterial blood and urine were taken prior to, during and 2 hours after the anhepatic phase of the LDLTx. Data are expressed as median with range. Differences were tested using Wilcoxon's test. A $p < 0.05$ was considered statistically significant.

Results:

	Pre-anhepatic	Anhepatic	Reperfusion
Arterial Ammonia (umol/L)	84 [40 – 156]	136 [79 – 229] ##	87 [51 – 129] **
Urinary Ammonia excretion (mmol/hour)	0.44 [0.02 – 6.00]	1.96 [0.32 – 12.55] #	4.00 [0.79 – 9.51] #

Legenda: significance from pre-anhepatic value, # $p < 0.05$, ## $p < 0.001$; significance from anhepatic, ** $p < 0.01$.

Conclusion: The anhepatic phase induces hyperammonemia that returned to normal 2 hours after the reperfusion of a partial liver graft. The kidneys significantly increased urinary ammonia excretion during the anhepatic phase which sustained after reperfusion, thereby contributing to the rapid normalization of ammonia homeostasis, confirming the pivotal role of the kidney in interorgan ammonia metabolism.

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DEFINING TRANSPLANTATION SUCCESS

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Usual methods of providing survival data on liver transplant patients focus on either waiting list mortality or post-transplantation survival. Since these two concepts are strongly related, combined pre- and post-transplantation survival figures would allow optimal assessment of the quality performance of different liver transplant programs.

This study presents a relatively simple and uniformly applicable view on assessing the outcome of patients listed for liver transplantation, combining pre- and post-transplant survival figures.

All 542 patients having spent any time on the waiting time for liver transplantation in the Netherlands between September 2004 and December 2006 are included in this study.

Of 312 patients removed from the waiting list during the study period, 252 were transplanted, 46 died, 19 were removed due to contra-indications and subsequently died, 12 patients improved and four were lost to follow-up. The death rate per patient year on the waiting list was 10.4% as calculated in concordance with UNOS definitions. Mean waiting time for transplantation was 0.84 years.

The expected value for pre-transplantation mortality was $0.84 * 10.4\% = 8.7\%$.

One year post-transplantation patient and graft survival were 87.7% and 80.0% respectively.

Therefore, transplantation success, defined as the chance to survive up to transplantation and one year thereafter, without re-transplantation, was estimated at $91.3\% * 80.0\% = 73.0\%$.

In conclusion, this study presents a combined method of presenting pre- and post-transplantation survival data, allowing for quality assessment of the performance of different liver transplant programs.

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VERY EARLY HEPATIC ARTERY THROMBOSIS AFTER LIVER TRANSPLANTATION MAY NOT BE DETECTED BY POST-OPERATIVE TRANSAMINASE ELEVATION

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Purpose: To study the liver enzyme elevation secondary to very early HAT after liver transplantation.

Methods: A total of 231 primary, adult, single-organ liver transplants were performed from 1990 to 2007. Fifteen patients (6.49%), were diagnosed with very early HAT either by Doppler or by contrast enhanced computed tomography (ceCT) scan. Aspartate aminotransferase (AST) value ≥ 800 IU/ml within the first two postoperative days predicted early graft failure (within 90 days post-transplant) with 90% sensitivity and 100% specificity ($s=0.960$, $p=0.005$). Group A' patients ($n=9$) reached this threshold, whereas group B' patients ($n=6$) did not.

Results: All liver grafts with very early HAT finally failed, leading to either re-transplantation or patient's demise. Mean graft survival was 32.78 ± 22.82 and 221.17 ± 171.80 days for groups A' and B' respectively ($p=0.006$). Mean AST value two days after transplantation was 2688 ± 1226.18 and 375 ± 169.65 IU/ml for groups A' and B' respectively ($p=0.001$).

Conclusions: Very early HAT after liver transplantation has two distinct patterns of presentation. The first one is associated with high post-operative AST values and leads to rapid graft failure. The second is associated with mildly elevated post-transplantation AST values and leads to a much slower graft failure.

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THE EFFECT OF RECIPIENT RENAL FUNCTION ON SURVIVAL FOLLOWING ORTHOTOPIC LIVER TRANSPLANTATION (OLT)

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Background: One of the goals of the MELD system has been to give priority to patients with pre-transplantation renal insufficiency.

Aim: To evaluate the effect of recipient renal function on survival following liver transplantation.

Methods: This is a retrospective study of 138 patients that underwent OLT at a University Transplant Center in Greece during a period of 15 years. The demographic and clinical data of

donors and recipients were analyzed. The renal function, pre- and post-transplantation, and survival were compared between the following two groups: group A (123 patients with pretransplant Cr \leq 1.5) and group B (15 patients with pretransplant Cr > 1.5).

Results: The mean pretransplant Cr value for group A was 0.9, whereas for group B it was 1.8. There were no statistically significant differences between the two groups regarding donor and recipient age, quality of donor based on the DRI and cold ischemia time. One and five year patient survivals were 80% and 78% for group A, whereas they were respectively 70% and 60% for group B (statistically significant differences). There was also a statistically significant difference in the one-year post transplantation Cr level, which was higher in group B at 2.1, versus 1.2 in group A.

Conclusions: The presence of renal dysfunction or renal insufficiency pre-transplantation can affect survival in a negative manner following orthotopic liver transplantation. This raises the question of whether these patients should be considered for combined liver-kidney transplantation.

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THE VALUE OF CUSA AND ARGON BEAM COAGULATION IN LIVING DONOR LIVER TRANSPLANTATION: EXPERIENCE OF 188 CASES

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Introduction: Limited and inconsistent data are currently available concerning the efficacy and safety of the various liver parenchymal transection techniques available for living donor liver transplantation (LDLT). This study aimed to compare the Clamp Crushing (CC) with the Cavitron Ultrasonic Dissector (CUSA) transection techniques for LDLT-related hepatectomy. **Methods:** Data from all LDLT, performed by a single surgeon in a single centre, were prospectively collected over a 6-year period. Data included demographics, type of procedure, transection technique, peri-operative blood-loss (actual measured blood loss, cell-saver replacement and transfusion requirements), total operative time, length of ICU and hospital stay, and morbidity and mortality. The CC technique was utilised for LDLT between June 1998 and February 2000; and the CUSA between February 2000 and June 2007. Standardised operative resection techniques and peri-operative management protocols were utilised in all patients.

Results: A total of 188 patients underwent LDLT over the study period, 40 via the CC technique and 148 utilising CUSA. 101 patients were male, mean age was 35 (\pm 10) years and mean BMI 24 (\pm 3) kg/m². Procedures performed included 30 left lateral, 12 left and 146 right hepatectomies. Comparison of the CC and CUSA groups revealed no significant differences in demographics, procedure type, length of ICU and hospital stay, or morbidity and mortality. Total operative time was significantly longer in the CUSA group [390 (CUSA) vs. 298 (CC) min, $p < 0.0001$] but was associated with a significantly lower mean blood loss [314 (CUSA) vs 846 (CC) ml, $p < 0.0001$].

Conclusions: This large series demonstrates that, despite significantly longer total intra-operative times, the bloodless parenchymal transection facilitated through the use of CUSA significantly reduces peri-operative blood loss and transfusion requirements, in patients undergoing LDLT.

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DE NOVO HEPATOCELLULAR CARCINOMA (HCC) OF DONOR ORIGIN IN A LIVER ALLOGRAFT, 3 YEARS AFTER LIVER TRANSPLANTATION. A CASE REPORT

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Background: De novo HCC in liver transplants without preceding HCC have rarely been reported. We report of a de novo HCC of donor origin, determined by molecular DNA-analysis, in a liver allograft 3 years after LTx without pre-existing HCC and no history of hepatitis associated or other type cirrhosis.

Case report: A 59 year-old male with a history of alcoholic cirrhosis underwent an orthotopic-LTx. The native liver was free of HCC. The donor was a 67 year-old man, with no history of cancer, who died of intracerebral hemorrhage. The recipient's immunosuppression consisted of CSA, prednisone and MMF. After the LTx the patient developed ischemic type intra biliary lesions with cholangitis. He was medical treated and repeated endoscopic interventions were performed. Under these regimens transplant function remained stable. 3 years after the LTx, US revealed an echogenic mass in the liver allograft. A biopsy was performed and the histology was compatible with HCC. The patient underwent atypical partial liver graft resection of segment 7. The resection margins were free of tumour. Hepatic resection was considered a graft saving option. The donor origin of the tumour was confirmed based on genotype match on the DNA from the donor and recipient, compared with the tumour tissue.

Conclusion: Organ transplant recipients are considered at a greater risk of de novo malignancies related to immunosuppression. Donor transmitted malignancies are theoretically preventable by meticulous donor evaluation. Surveillance would allow early detection of such tumours which, in turn, would enable graft saving therapeutic methods to be performed.

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PANCREAS TRANSPLANT WITH ENTERIC DRAINAGE IN TAIPEI VETERANS GENERAL HOSPITAL

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Objectives: Insulin-dependent diabetes mellitus (IDDM) eventually leads to nephropathy, neuropathy, retinopathy and angiopathy. Nowadays, pancreas transplantation is the treatment of choice in tight control of blood sugar for IDDM patients. S

Methods: From September 2003 to November 2008, 34 cases of pancreas transplant were performed. The clinical courses including blood sugar, C-peptide and HbA1 C levels and renal function after operation were fully recorded and presented. The compli-