LATE BREAKING POSTER

LBP01 - LATE BREAKING EPOSTER

LBP001 NURSING CARE OF THE CHILD WITH MUCOPOLYSACCHARIDOSIS AFTER A STEM CELL TRANSPLANTION: A CASE REPORT

Derya Suluhan[1], Dilek Yildiz[2], Selda Sen[3], Orhan Gürsel[3]
[1]Saglik Bilimleri University; [2]University of Health Sciences; [3]Gulhane Research and Training Hospital

Introduction and Aim: It is a genetic and metabolic disease characterized by accumulation of metabolic wastes in lysozomes as a result of muopolysaccharides that have been destroyed in the body. In this study, care of the child with mucopolysaccharidosis has been mentioned as a case report after stem cell transplantation.
Method: Medical history of H.E.,18-month-old male patient, was taken according to Mjory Gordon's Functional Health Patterns. Nursing care was planned according to Dorothy Orem's 'Self-Care Theory.
Results: Within the scope of nursing process, "change in growth and development", "deterioration of respiratory functions", "change in nutrition", "activity intolerance", "anxiety", "change in maternal and infant bonding", "inability to manage care", "difficulty in caring role", "fatigue", "deterioration of oral mucous membranes" and "risk of aspiration" were determined.
Conclusion: Existing and potential nursing diagnoses for case H.E. undergone stem cell transplant has been identified and holistic nursing care was performed.
Keywords: self-care, nursing care, functional health patterns, mucopolysaccharidosis.

LBP002 A CASE OF ABO INCOMPATIBLE RENAL TRANSPLANTATION FOLLOWING BLOOD GROUP SWITCHING IN THE TRANSPLANT RECIPIENT

Susanna Lam, Sebastian Hultin, John Preston, Scott Campbell
Princess Alexandra Hospital

Aim: We describe an unanticipated ABO incompatible renal transplant in a recipient with a previous allogeneic stem cell transplant, who was found to have reverted to his original blood group, after organ allocation.
Case: A 66 year old male with ESKD secondary to membranous was listed to undergo deceased donor renal transplantation at our centre. His blood group changed from B to A following allogeneic stem cell transplantation for thrombocythaemia in 2007. It had been confirmed to be A several times. The recipient was unsensitised with a cPRA of 0%. He was offered a donation after circulatory death (DCD) 0/6 HLA mismatch organ with a donor blood group A. Blood tested at admission revealed reversion to his original blood group B. An urgent anti A titre was 1:2. We proceeded to transplantation following ABOi protocol with standard immunosuppression. Following delayed graft function attributed to a prolonged cold ischaemic time of 17 h, his creatinine fell spontaneously on day 5. His post-operative anti-A titre was persistently 1:1.
Conclusion: Despite confirmed ABO conversion after stem cell transplantation, the recipient's original blood group B cells had regrafted with only low anti-A titres. We demonstrate a successful DCD ABOi transplant with standard immunosuppression in a recipient with possible bone marrow chimerism. Although a rare circumstance, it is important to consider regrafting of patient's own stem cells with altered blood group in this clinical situation.

LBP003 A CLINICAL STUDY INVESTIGATING METABOLISM OF MACHINE PERFUSED CADAVERIC KIDNEYS PRIOR TO TRANSPLANTATION USING 13C ENRICHED GLUCOSE AS METABOLIC TRACER

Kamlesh Patel[1], Thomas Smith[2], Alpesh Thakker[2], Nick Inston[1], Andrew Ready[1], Christian Ludwig[2], Jay Nath[1]
[1]University Hospital Birmingham; [2]University of Birmingham

Introduction: The aim of this study was to describe *de novo* metabolism in *ex vivo* human kidneys undergoing hypothermic machine perfusion prior to transplantation using a clinical grade metabolic tracer to better describe metabolism according to donor subtype.
Methods: Cadaveric human kidneys were perfused with 1L modified clinical grade perfusion fluid (KPS-1 Kidney Perfusion Solution, Organ Recovery Systems) using a LifePort Kidney Transporter at 30 mmHg.

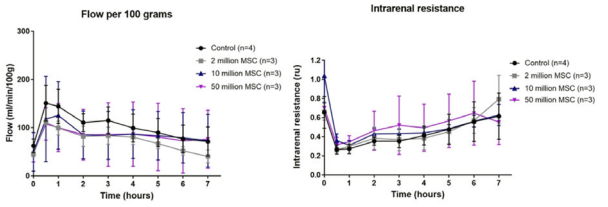
All glucose in the KPS-1 perfusion fluid was uniformly enriched with the stable isotope13C([U-13C] glucose). Functional outcome measures included serum creatinine and development of DGF. Perfusion fluid was flash frozen prior to analysis using 1D and 2D nuclear magnetic resonance spectroscopy, in addition to gas chromatography-mass spectrometry.
Results: Between October 2016 and July 2018, 14 kidneys were perfused with modified [U-13C] glucose KPS-1 and successfully transplanted. Mean duration of HMP was 8.7 h. DCD kidneys accounted for 40% of the cohort ($n = 4$).

Anaerobic metabolism was indicated by the presence oflabelled glycolytic products [U-13C] lactate and [U-13C] alanine in the circulating perfusion fluid. The proportion of *de novo* U-13C labelled alanine and *de novo* U-13C labelled lactate in circulating perfusate was significantly higher in DCD kidneys as soon as 1 hour after commencing HMP. As a result, the concentration of U-13C lactate was higher in the perfusate of DCD kidneys by a magnitude of 4.7, 4.4 and 3.5 at 1 hour, 4 h and perfusion endpoint although this only reached statistical significance for latter endpoint samples ($p < 0.05$).
Conclusion: DCD kidneys are reliant on anaerobic metabolism with a relative thirst for glucose to fuel such metabolism early in in the perfusion period. This may be explained by exposure to warm ischaemia at the time of organ retrieval with scope for target of these organs with resuscitative interventions during the preservation period.

LBP004 WHAT HAPPENS WHEN YOU ADMINISTER MESENCHYMAL STROMAL CELLS DURING NORMOTHERMIC MACHINE PERFUSION OF PORCINE KIDNEYS: POSSIBLE AND HELPFUL OR NOT?

Kaithlyn Rozenberg, Laura Knijff, M Letizia Lo Faro, James Hunter, Rutger Ploeg
University of Oxford

Background: Normothermic machine perfusion (NMP) of donor organs may become an important diagnostic and therapeutic tool to assess organ viability, condition function and initiate repair prior to transplantation. Mesenchymal stromal cells (MSC) have been shown to possess potent anti-inflammatory and regenerative properties ameliorating ischaemia reperfusion injury. The purpose of this study was to determine the dose of MSC needed to allow successful homing in donor kidneys during NMP without adversely affecting renal perfusion dynamics.
Methods: Porcine slaughterhouse kidneys with 20 min warm ischaemia were retrieved, underwent 3 h hypothermic machine perfusion followed by NMP at 37°C for 7 h. An oxygenated, autologous blood-based solution containing albumin, electrolytes and nutrients was used as perfusate. Following 1 h of stable perfusion, either a vehicle, 2×10^6, 10×10^6 or 50×10^6 labelled (Qtracker) porcine adipose derived MSC were injected into the cannulated renal artery. Physiological recordings were taken at 30 min intervals. Perfusate and urine samples were obtained for biomarker analysis. Biopsies were taken to identify MSC with flow cytometry and confocal microscopy.
Results: No difference was found in average renal blood flow/100 g (ANOVA, $p = 0.2879$) or intrarenal resistance (ANOVA, $p = 0.7524$) between MSC groups compared to controls. Acid/base balance, urine production and serum electrolytes remained similar between the groups. Damage markers such as LDH ($p = 0.702$) and AST ($p = 0.432$) were similar throughout perfusion between the groups. Preliminary results show that Qtracker fluorescent signal was detected in the cortex with flow cytometry
Conclusion: Administration of different doses of MSC to the donor kidney during NMP did not impair renal perfusion dynamics. This model provides us with the opportunity of getting a better insight in the interaction between MSC and the injured donor kidney: where and when do MSC home, how do they affect tissue and which injury markers reflect changes in renal function.



LBP005 IMPACT OF PRE-TRANSPLANT INFLAMMATORY RECIPIENT STATUS ON 12-MONTH SURVIVAL AFTER SIMULTANEOUS PANCREAS AND KIDNEY TRANSPLANTATION

Michal Macech[1], Tadeusz Grochowiecki[1], Krzysztof Madej[1], Tomasz Jakimowicz[1], Magdalena Durlik[2], Leszek Paczek[3], Slawomir Nazarewski[1]
[1]Department of General, Vascular and Transplant Surgery, Medical University of Warsaw; [2]Department of Transplantation Medicine, Nephrology and Internal Medicine, Medical University of Warsaw; [3]Department of Immunology, Transplantology and Internal Diseases, Medical University of Warsaw

Background: Diabetes type 1 and end-stage renal disease with necessity of renal replacement therapy can induce severe inflammatory response which leads to increased risk of death. In this study we investigate impact of pre-transplant inflammatory status on 12-month patient survival after simultaneous pancreas and kidney transplantation (SPKTx).
Material/Methods: Data of 103 patients after SPKTx was retrospectively analyzed. Recipients were in stable cardiovascular and respiratory condition with no symptoms of infection before SPKTx. Preoperatively, white blood cells (WBC), neutrophils (NEU), monocytes (MON), lymphocytes (LYM), platelets (PLT), C-reactive protein (CRP), albumins (ALB) were assessed as markers of inflammatory response. Uni- and multivariate analysis was performed.
Results: 12-month survival of SPKTx recipients was 82% with 72% pancreas and 90.5% kidney survival.

Univariate analysis with mean values with standard deviation (SD) in 12 months survival are presented in Table below

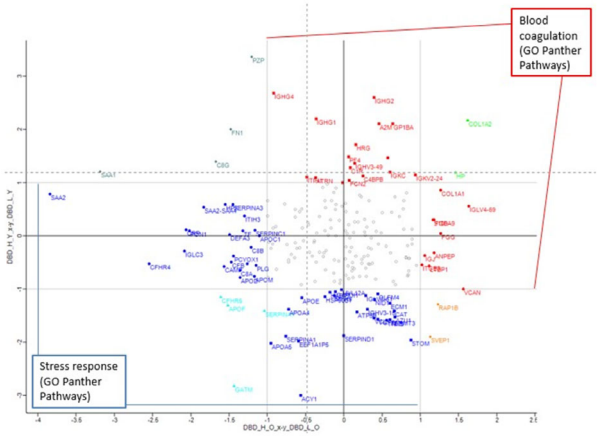
Parameter	Normal values	Mean ± SD over 12-month survival	Mean ± SD under 12-month survival	OR (CI)	*p*-value
WBC ($\times 10^3/\mu l$)	4–11	7.52 ± 2.63	7.78 ± 2.28	2.29 (0.8–6.5)	ns
NEU ($\times 10^3/\mu l$)	1.9–8	5.06 ± 2.23	5.37 ± 1.58	2.9 (1–8.6)	ns
MON ($\times 10^3/\mu l$)	0.16–1	0.65 ± 0.82	0.53 ± 0.29	2.13 (0.6–6.9)	ns
LYM ($\times 10^3/\mu l$)	0.9–5.2	1.78 ± 0.71	1.68 ± 0.75	4.56 (0.56–36.6)	ns
PLT ($\times 10^3/\mu l$)	150–400	247 ± 70	230 ± 134	0.15 (0.05–0.47)	<0.05
CRP (mg/ml)	0–10	2.51 ± 4.97	5.78 ± 3.4	5.5 (1.6–18.1)	<0.05
ALB (g/dl)	3.5–5.3	4.17 ± 0.71	3.71 ± 0.83	0.25 (0.08–0.76)	<0.05

In multivariate analysis PLT value at the level 180 × 10^3/microliter and CRP under 2.15 milligram/milliliter were found to be significant. In such prognostic model, Area Under Curve (AUC) was 0.7. The test was validated with 100 *boots-trap* form resulted 0.756 accuracy. ALB also had the same value as CRP and could be replaced in the model. Cut-off point for this factor was under 3.65 gram/deciliter.
Conclusions: Pre-transplant level of platelets, albumins and CRP has an impact of 12-month survival. It allows to differentiate recipients with higher risk of death due to pre-transplant inflammatory status.

LBP006 IDENTIFICATION OF EXOSOME PROTEINS FROM DECEASED DONOR SERUM ASSOCIATED WITH TRANSPLANT OUTCOMES

Adam Thorne, Honglei Huang, Letizia Lo Faro, Benedikt Kessler, Rutger Ploeg
University of Oxford

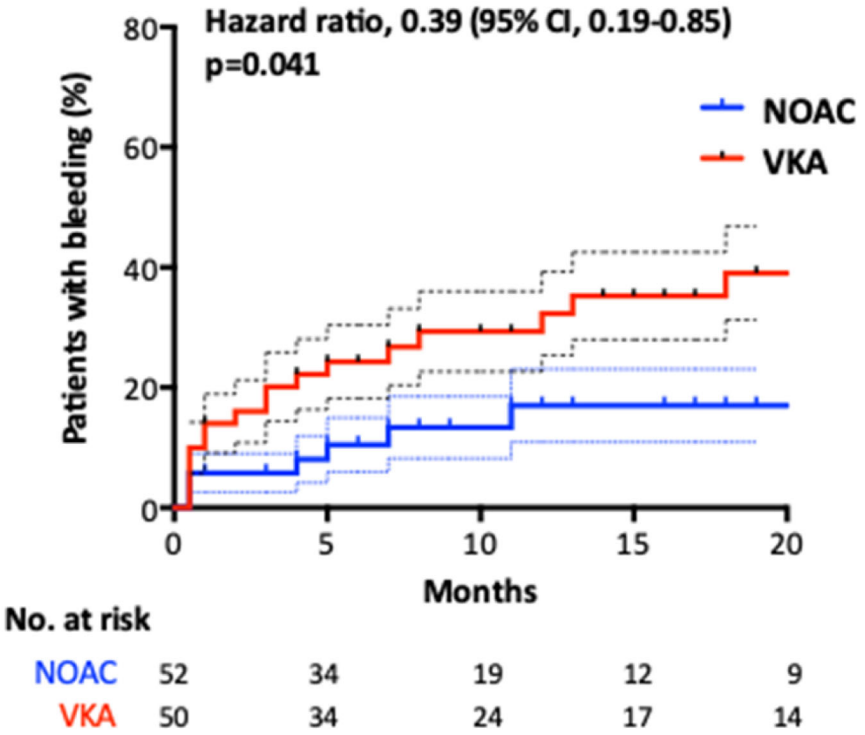
Introduction: Despite organ shortage for transplantation, many high-risk organs retrieved from donation after brain death (DBD) or circulatory arrest (DCD) are discarded due to lack of specific and sensitive molecular markers to support the clinical decision. Exosomes are 40–100 nm vesicles and function as mediators regulating exchange of proteins and genetic material between cells. We hypothesise that there is a differentiated exosome signature per donor type that may help and serve as marker to predict kidney transplant outcome.
Methods: Using the UK QUOD biobank with integrated clinical data, DBD and DCD donors were divided into two groups [High: eGFR > 60 ml/min (N = 40); Low: eGFR < 30 ml/min (N = 40)] according to kidney function at 12 m post-transplant. Serum samples were pooled according to eGFR (High vs Low), DBD vs DCD, age (<59 vs > 59 years old). Exosomes were extracted from 300ul of pooled serum samples using a size exclusion column. Proteins and microRNA of exosomes were measured by label free proteomics and Q-PCR, respectively.
Results: In DBD donors, 29 proteins showed > 2-fold increase in high eGFR vs low eGFR, with statistical enrichment analysis associated with blood coagulation pathways[L1]. Thirty-six proteins showed a decrease in high eGFR, affiliated with stress response pathways. In DCD donors, 23 proteins showed > 2-fold increase in high eGFR, related to blood coagulation pathways. The expression level of miR-21, miR-423 and miR-1825 were found to be similar in High and Low eGFR, but were significantly increased in DCD vs DBD.
Discussion: Exosomal proteomes in deceased donor serum reveal proteins associated with post-transplant eGFR. These proteins show higher expression in DBD than DCD, involving blood coagulation and acute phase response pathways, reflecting systemic inflammation caused by cerebral injury. Three specific microRNAs appear associated with donor types but not eGFR. In summary, exosome molecules differentiate between donor types and may serve as markers to predict eGFR.



LBP007 NOVEL ORAL ANTICOAGULANTS IN KIDNEY TRANSPLANTATION: RESULTS FROM A MULTICENTER PROSPECTIVE PILOTE STUDY

Juliette Leon[1], Julien Zuber[1], Lucile Amrouche[1], Dany Anglicheau[1], Gillian Divard[1], Dominique Bertrand[2], Jerome Olange[3], Christophe Legendre[1], Rebecca Sberro-Soussan[1]
[1]Necker Hospital; [2]CHU Rouen; [3]CHU Strasbourg

Background: Oral anticoagulation therapy is frequently prescribed to kidney transplant recipients (KTRs), for prevention and treatment of thrombotic events. Over the past ten years, novel oral anticoagulants (NOACs) have shown similar efficacy, with a safety profile equal or superior to those of vitamin K antagonists (VKAs) in the general population. However, little data is available for kidney transplantation.
Methods/Materials: All KTRs that have received NOACs for more than one month between 2013 and 2018, were included, followed and compared to a control cohort under VKA. Patients older than 80 years, with a renal function less than 30 ml/min or with mechanical valves were excluded. Thrombotic events, hemorrhagic complications and allograft outcomes were reported.
Results: 52 KTRs started NOAC therapy at Necker hospital at a mean of 87 months after transplantation. Patients were 63% men, with a mean age of 62 years old and a mean renal function of 59 ml/min. The major indication was atrial fibrillation (60%), followed by venous thromboembolic disease (29%). Apixaban was the most commonly used agent (69%). No thrombotic complications were reported through the final follow-up (mean 13.3 ± 12.5 months). In comparison to the VKA group (n = 50), the bleeding rate under NOAC was significantly lower (11.5 versus 22.9 per 100 patient-years) No significant changes in kidney function were reported in the two groups. These results were concordant with 2 validation cohorts under NOAC (Strasbourg (n = 11) and Rouen (n = 9)).
Conclusion: NOACs appear to be effective and safe anticoagulants in a subset of selected KTRs. A randomized clinical trial is required to confirm these results.



	NOAC (N = 52)	VKA (N = 50)	*p* Value
Duration of follow-up under NOAC therapy, mean ± SD, months	14.1 ± 13	22.0 ± 20	0.08
Primary outcomes			
Stroke or transient ischemic attack in patients with NVAF, *n* (%)	0 (0)	0 (0)	1.00
Pulmonary embolism or vein thrombosis, *n* (%)	0 (0)	4 (8)	0.054
Bleeding rate per 100 patient-years at risk	11.5	22.9	0.037
Secondary outcomes			
Acute rejection, *n* (%)	1 (2)	1 (2)	1.00
Graft survival, *n* (%)	52 (100)	47 (94)	0.11
Other side effects related to anticoagulant therapy, *n* (%)	3 (6)	1 (2)	0.62
Patients requiring NOAC dose adjustment, *n* (%)	3 (6)	–	
Anticoagulant discontinuation for side effects/contraindication*, *n* (%)	12 (23)	13 (26)	0.82
Change in eGFR** from initiation to last follow-up, %	−4.6 ± 21	−3.4 ± 33.5	0.80

LBP009

VA ECMO SUPPORT IN A HEART TRANSPLANT CENTER: BRIDGE TO TRANSPLANT AND BRIDGE TO RECOVERY FROM SEVERE PRIMARY GRAFT DYSFUNCTION

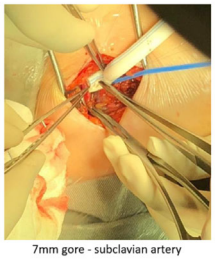
Samuel Steffen, Vitor Abaurre, Fabio Gaiotto, Ronaldo Honorato, Domingos Loureço, Shirlyne Gaspar, Fabiana Braga, Monica Grinberg, Sandrigo Mangini, Luiz Seguro, Lascara Wosniak, Filomena Galas, Fernando Bacal, Fabio Jatene

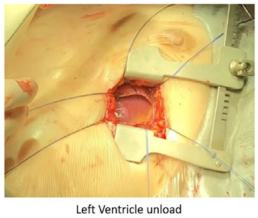
Heart Institute - Sao Paulo

Background: Heart Transplant is the definitive treatment of end-stage heart failure. VA ECMO can be used as a bridge to transplant with good results, and also may be used as a bridge do recovery due to Primary Graft Dysfunction (PGD). The purpose of this study is to present our perioperative experience with ECMO in the context of Heart Transplant.
Methods: We analyzed retrospectively all adult patients submitted to heart transplant between January 2017 and March 2019. A total of 105 patients were operated in this period. Medical records were collected from our electronic database. We screened patients who required VA ECMO as a bridge to transplant or as a bridge to recovery after heart transplant with PGD.
Results: 11 patients required perioperative VA-ECMO support. Of those, 9 patients before transplant and 2 patients after transplant. The mean age was 39.6 years within the preoperative group and 48 years within the postoperative group. The main indication for transplant (45.4%) was dilated cardiomyopathy. The overall mortality observed was 33% at the preoperative group and 50% at the postoperative group. The group's characteristics are listed at table 1.
Conclusion: VA ECMO is a safe, viable and not expensive support to bridge patients to heart transplant who are worsening despite optimal medical therapy. A "hybrid" configuration (figure 1) offers good support, with less limb and lung complications, usually observed with peripheral femoral cannulation.VA ECMO can be used as a bridge to recovery in patients with severe PGD, showing satisfactory results.

	Preoperative VA-ECMO Support (*n* = 9)	Postoperative VA-ECMO Support (PGD) (*n* = 2)
Time Interval ECMO before HT (days)	13.8	0
Time Interval ECMO after HT (days)	0	3.5
ECMO Type		
- Peripheral	6 (66.6%)	1 (50%)
- Hybrid	3 (33.3%)	1 (50%)
Complications	Peripheral Hybrid	
- Bleeding	2 (22.2%) 0	0
- Leg ischemia	3 (33.3%) 0	0
- Lung complications	2 (22.2%) 0	0

ECMO VA – "Hybrid" Configuration


7mm gore - subclavian artery


Left Ventricle unload

Hybrid Configuration: Drainage (femoral vein and left ventricle)
Inflow (subclavian artery)

LBP010 TRANSPLANTATION OF KIDNEYS FROM HCV-INFECTED DONORS TO UNINFECTED RECIPIENTS FOLLOWED BY TREATMENT WITH SOFOSBUVIR/VELPATASVIR (S/V)

Gong Bin Lan, Shanbiao Hu, Yu Wang, HeLong Dai, LongKai Peng
The Second Xiangya Hospital, Central South University

Background: Due to the advent of direct-acting antivirals (DAA) for treatment of hepatitis C (HCV), utilization of HCV-infected donors is now becoming a promising strategy to increase the organ donor pool.
Method: Between August 2018 and April 2019, 8 HCV-negative patients underwent kidney transplantation from donors with active HCV viremia and were subsequently treated with Sofosbuvir/Velpatasvir. One recipient had a prior diagnosis of HCV and had achieved sustained virologic response (SVR) with DAA-based regimens before kidney transplantation. Clinical data for kidney transplant recipients were extracted from the medical record.
Results: The mean age of recipients was 38.9 ± 9.1 years, 62.5% were male, 50% were type A. The median viral load in the HCV-infected donors was 7.79 million IU per milliliter (interquartile range, 4.815 million to 9.21 million). All recipients (100%) had detectable HCV viremia within 4 days after kidney transplantation. The median initial viral load was 358.5 IU per milliliter (interquartile range, 252 to 1950). Of the 8 recipients, 5 have completed DAA therapy with cure demonstrated by absence of viremia at 12 weeks post-treatment (SVR12), and the remaining three recipients who have achieved sustained virologic response at 8 weeks post-treatment (SVR8) are still under treatment. There have been no instances of graft loss or death, with median follow-up of 173 days (interquartile range, 72 to 234) posttransplant. No treatment-related serious adverse events were noted.
Conclusions: Kidneys from HCV-Infected donors to uninfected recipients have excellent short-term outcomes and represent a method to safely expand the donor pool.

LBP011 PERITRANSPLANT COMPLEMENT FACTOR C5A LEVEL AS A POTENTIAL PREDICTION MARKER FOR DELAYED GRAFT FUNCTION

Arturo Blazquez-Navarro[1], Kim Silberreis[2], Annemarie Müskes[1], Constantin Thieme[1], Jens Dernedde[1], Felix Seibert[3], Frederic Bauer[3], Richard Viebahn[4], Toralf Roch[1], Timm H. Westhoff[3], Nina Babel[5]
[1]Charité-Universitätsmedizin Berlin; [2]Freie Universität Berlin; [3]Marien Hospital Herne; [4]Universitätsklinikum Knappschaftskrankenhaus Bochum; [5]Ruhr University Bochum

Background: Delayed graft function (DGF) is a common complication during the first days after renal transplantation associated with reduced long-term graft survival. As the anaphylotoxin C5a plays an essential role in the development of inflammation, we hypothesised that C5a can be associated with DGF appearance. Therefore, the objective of this study is to determine whether the serum concentration of the complement component C5a is a predictive marker of DGF.
Methods/Materials: Patients were monitored for C5a blood levels at days 0 (pre-transplantation) and day 3 (post-transplantation). Estimated glomerular filtration rate (eGFR) was calculated employing the CKD-EPI formula. Quantitative variables are described as mean ± standard deviation; differences between continuous variables are assessed using the t test.
Results: 42 kidney recipients of deceased-donor renal transplantation were examined, of which 20 (47.6%) suffered from DGF. Patients suffering DGF demonstrated an impairing of renal function at the end of the study, with a significant lower eGFR 60 days post-transplantation (54 ± 18 vs. 37 ± 20 $ml \cdot min^{-1} \cdot 1.73\ m^{-2}$, $p = 0.007$).

Patients that suffered DGF had a significantly higher pre-transplantation C5a concentration (6.18 ± 4.07 vs. 3.87 ± 2.39 $ng \cdot ml^{-1}$, $p = 0.035$). In addition, the differences between the groups became even more evident, if the oscillations in peritransplant C5a concentrations have been considered. So, there was a highly significant difference in the change of pre and post-transplant (day 3) level between DGF and non-DGF groups the post-transplantation C5a increase (-1.45 ± 4.38 vs. 5.09 ± 6.90 $ng \cdot ml^{-1}$, $p = 0.002$).
Conclusion: Our results demonstrate the performance of C5a as a potential predictive marker for DGF. Further research including a larger number of patients are needed for better understanding the mechanism behind the differential C5a dynamics and for establishing a DGF predictive risk assessment tool.

LBP012 EBV-ASSOCIATED POST-TRANSPLANT LYMPHOPROLIFERATIVE DISORDER: IN VITRO MODEL FOR A RATIONAL MODIFICATION OF IMMUNOSUPPRESSION

Constantin Thieme[1], Malissa Schulz[2], Toralf Roch[1], Patrizia Wehler[1], Leila Amini[1], Mira Choi[1], Richard Viebahn[3], Michael Schmück-Henneresse[1], Petra Reinke[1], Timm Westhoff[4], Nina Babel[5]
[1]Charité - Universitätsmedizin Berlin; [2]Hochschule für Technik unf Wirtschaft Berlin (HTW), Berlin; [3]Knappschaftskrankenhaus Bochum, Ruhr-University Bochum; [4]Marien Hospital Herne, University Hospital of the Ruhr-University Bochum; [5]Marien Hospital Herne, University Hospital of the Ruhr-University Bochum; Charité - Universitätsmedizin Berlin

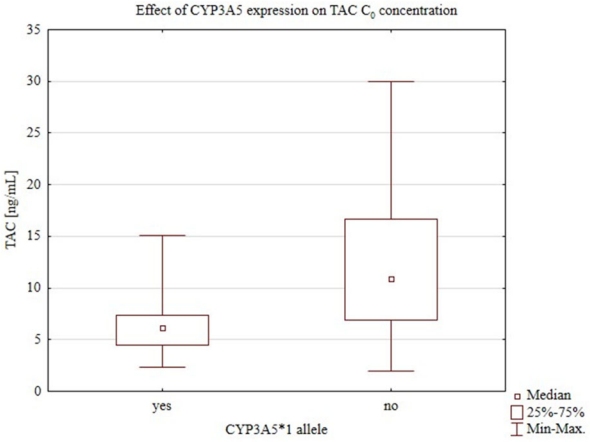
Background: Post-transplant lymphoproliferative Disorder (PTLD) is a life-threatening complication of long-lasting immunosuppression following transplantation. The most important reason is a failure of the immune system to control Epstein-Barr-Virus (EBV)-infected and transformed B-lymphocytes. This control is provided mainly by T cells differently impaired by certain types of immunosuppressants. Therefore, a modification of immunosuppression is the first and most common treatment that has to be balanced with respect to the risk of allograft rejection.
Methods: We performed an in vitro study of EBV-antigen specific T cell cultures from healthy donors in the absence or presence of the immunosuppressants tacrolimus (TAC), cyclosporin A (CSA), prednisolone (PRED), rapamycin (RAPA) and mycophenolic acid (MPA) in three different clinically relevant concentrations. After a total of three weeks of culture we measured the proliferation, viability and phenotypes of the T cells and their activation marker profile, cytokine production as well as cytotoxicity upon restimulation with autologous lymphoblastoid cell lines (LCLs).
Results: T cells treated with RAPA showed the most favourable outcome in terms of proliferation, viability and cytolytic activity. Proliferation and viability of T cells was most prominently affected by MPA, while TAC was the strongest suppressor of cytokine production and cytolytic activity in a dose dependent manner. The effects of CSA were less pronounced in clinically relevant doses compared to TAC.
Conclusion: With our data, we provide a basis for the clinical decision for the reduction of immunosuppression in patients in risk of or affected by PTLD and add information to the complex puzzle of maintaining anti-viral immunity while preventing acute rejection. In line with the published clinical studies on this topic, a reduction of calcineurin inhibitors while keeping mTOR inhibitors seems to be a promising strategy for the modification of immunosuppression according to our in vitro model.

LBP014 DONORS' CYP3A5 GENOTYPE HAS AN INFLUENCE ON TACROLIMUS BLOOD THROUGH CONCENTRATION IN EARLY POST-OPERATIVE PERIOD

Karola Warzyszyńska[1], Michał Zawistowski[1], Edyta Karpeta[2], Maurycy Jonas[3], Maciej Kosieradzki[3]
[1]Infant Jesus Teaching Hospital, Warsaw; [2]Department of Surgical and Transplantation Nursing and Extracorporeal Therapies of Warsaw, Medical University of Warsaw; [3]Department of General and Transplant Surgery, Infant Jesus Teaching Hospital, Warsaw

Background: Recent studies demonstrated, that both recipients' and donors' CYP3A5 gene polymorphisms are the main genetic factors influencing tacrolimus blood through concentrations (C0) in patients after kidney transplantation. The presence of at least one CYP3A5*1 allele results in expression of the cytochrome, and in effect increases drug metabolism. The aim of this study was to investigate the effect of donors' CYP3A5 expression on tacrolimus C0 in early post-transplant period.
Methods/Materials: We conducted retrospective study of 104 kidney recipients transplanted between 2012–2016. First tacrolimus C0 measurement at a standard dosage of 0.2–0.3 mg/kg was noted. Real-time PCR (RT-PCR) analysis was applied to determine the genotype of correspondent deceased donors' CYP3A5 genes.

The association between donors' CYP3A5 genotype and tacrolimus C0 was assessed with U Mann-Whitney test. p-value < 0.05 was considered statistically significant.
Results: CYP3A5*1 allele was observed in 18 (17.3%) donors, in all cases heterozygotes were noted – the expressors group. Donors of the other 86 recipients had CYP3A5*3 genotype (homozygotes) – non-expressors. Median tacrolimus C0 was 6.2 ng/ml (range: 2.3–15.1) in the expressors vs. 10.9 ng/ml (range: 2.0–30.0) in the non-expressors group. Tacrolimus C0 was significantly lower in the expressors group ($p < .01$; dCohen = 0.8).
Conclusions: Donors' CYP3A5 genotype has an influence on tacrolimus C0 in early post-operative period. The CYP3A5 donors' genotyping before initiation of tacrolimus treatment may be beneficial for adjustment of individual drug doses.



LBP015 TREATMENT WITH DIRECT-ACTING ANTIVIRALS (DAAS) NEITHER INCREASES THE RISK OF HEPATOCELLULAR CARCINOMA PROGRESSION DURING WAITING LIST NOR RECURRENCE AFTER LIVER TRANSPLANTATION

Federico Pinero[1], Ilka Boin[2], Fernando Rubinstein[3], Aline Chagas[4], Emilio Quinonez[5], Sebastian Marciano[6], Mario Vilatoba[7], Adriana Varon[8], Margarita Anders[9], Sergio Hoyos Duque[10], Agnaldo Soares Lima[11], Josemaria Menendez[12], Martin Padilla[13], Jaime Poniachick[14], Rodrigo Zapata[15], Martin Barrabino[16], Ricardo Chong Menendez[17], Linda Munoz[18], Diego Arufe[19], Rodrigo Figueroa[20], Manuel Mendizabal[1], Leticia Zanaga[21], Claudia Maccall[4], Rodrigo Vergara Sandoval[5], Carla Barmudez[6], Oscar Beltran[8], Isabel Aenas[10], Solange Gerona[12], Alexis Iracheta[22], Alexandra Ginesta[15], Adrian Gadano[6], Juan Mattera[5], Raquel Stucchi[21], Flair Carrillo[4], Mauricio Silva[1]
[1]Hospital Universitario Austral; [2]State University of Campinas; [3]IECS; [4]HC FMUSP; [5]Hospital El Cruce; [6]Hospital Italiano de Buenos Aires; [7]Instituto de Ciencias Medicas Salvador Ubiran; [8]Fundacion Cardio Infantil; [9]Hospital Aleman de Buenos Aires; [10]Hospital Tobon Uribe; [11]Santa Casa de Belo Horizonte; [12]Hospital de Clinicas Montevideo; [13]Hospital Guillermo Almenara; [14]Hospital de la Universidad de Chile; [15]Clinica Alemana de Santiago; [16]Hospital Privado de Cordoba; [17]Hospital Carlos Andrade Marin; [18]Hospital Universitario Dr Jose E Gonzalez; [19]Sanatorio Sagrado Corazon; [20]Sanatorio Allende - Cordoba; [21]Unit of Liver Transplantation HC - Unicamp; [22]Hospitalde la Universidad de Chile

Uncertainty regarding hepatitis C virus (HCV) treatment with direct-acting antivirals (DAAs) before or after liver transplantation (LT) in patients with hepatocellular carcinoma (HCC) and its association with tumor progression has been proposed. We evaluated the association between DAAs and HCC tumor progression during waiting list and post-LT recurrence.

Methods: Three cohorts of patients with HCC who were listed for LT were compared: without HCV (n = 503), HCV+ untreated with DAAs (n = 327) and HCV+ treated with DAAs (n = 164). Primary separate end-points were HCC radiological progression during waiting list and post LT recurrence; analyzed by multivariable competing risk regression analysis adjusted by a propensity score matching and inverse probability weighting of DAAs treatment probability.

Results: During the waiting list, 13.4% of HCV+ patients received DAAs treatment (n = 66), while 86.6% (n = 425) did not. Based on DAAs treatment prior to transplantation, patients treated with DAAs before LT presented a similar rate of tumor progression when compared with HCV+ without treatment with DAAs (26.2% vs 26.9%; p = 0.47). Lower rates of tumor progression were observed in HCV- cohort. treatment with DAAs was not associated with tumor progression when compared with HCV- patients and HCV+ not treated with DAAs prior to transplantation [SHR 1.08 (CI 0.68;1.70; p = 0.74)]. Drop-out rates due to HCC unequivocal progression were similar between HCV+ patients treated with DAAs [12.1% (CI 0.4–8.1%)] when compared with HCV+ without DAAs [12.9% (CI 3.8–27.2%)] and HCV- cohort [9.5% (CI 7.1–12.4%); p = 0.24]. Cumulative incidence of HCC recurrence was 6.3% (CI 1.5%-19.9%; n = 41). a lower rate of HCC recurrence was observed in treated patients [0.7% (CI 0.2–4.0%)] when compared with HCV+ not treated with DAAs [11.2% (CI 6.9–17.0%)] with a SHR of 0.11 (CI 0.01;0.89; p = 0.039).

Conclusion: Treatment of HCV with DAAs is not associated with an increased risk of tumor progression during the waiting list or recurrence after transplantation.

LBP016 SETTING UP AND RUNNING LIVING KIDNEY DONATION QUALITY SYSTEM ON NATIONAL LEVEL IN POLAND

Małgorzata Hermanowicz[1], Sylwia Borczon[1], Dorota Lewandowska[2], Jolanta Przygoda[1], Iwona Podobińska[1], Jarosław Czerwiński[3], Artur Kamiński[4]
[1]Polish Transplant Coordinating Center Poltransplant, Warsaw; [2]Polish Transplant Coordinating Center Poltransplant & Department of Nephrology, Transplantology, University of Warsaw Poland; [3]Polish Transplant Coordinating Center Poltransplant, Poland; & Department of Emergency Medicine, Medical University of Warsaw; [4]Polish Transplant Coordinating Center Poltransplant, Warsaw, Poland; & National Tissue and Cell Banking Center, Warsaw, Poland

Kidney transplantation from living donors (LD) increases the access of patients with end-stage renal disease to kidney transplantation. In Poland, the percentage of transplants from LD is only5%, therefore in 2018Poltransplant initiated the network of LD transplant coordinators (TC) in Poland.

The aim of this project was to create and introduce the quality system of kidney donation for transplantation from LD in hospitals (tx centers, dialysis centers, nephrology departments) and at national level in Poltransplant and Ministry of Health.

The data from TC is being reported and collected through Polish Transplant Registry System. All the data was transferred to Poltransplant till the end of 2018.

Analysis was based on monthly reports sent by TC through the online tool to Poltransplant from15transplant centers.

The data was divided into particular stages of the recruitment of possible kidney LD. The LD TC duties concern the identification of the potential donor, confirmation or exclusion the possibility of kidney procurement from the LD. Moreover, the duties after transplantation concern further follow-up of the LDand recipient and proceeding of all relevant notifications or serious adverse reactions and safety hazards.

During the period from June to December 2018, 209potential recipients were interviewed, in order to identify potential kidney LD.54potential recipients did not have a potential live kidney donor.88potential LD were disqualified at the initial or extended level of qualifications due to medical reasons.9 couples were included in kidney paired donation program.

As a result, the organs were procured and transplanted from26LD. 31 December 2018, 40 potential LD were waiting for further qualifications.

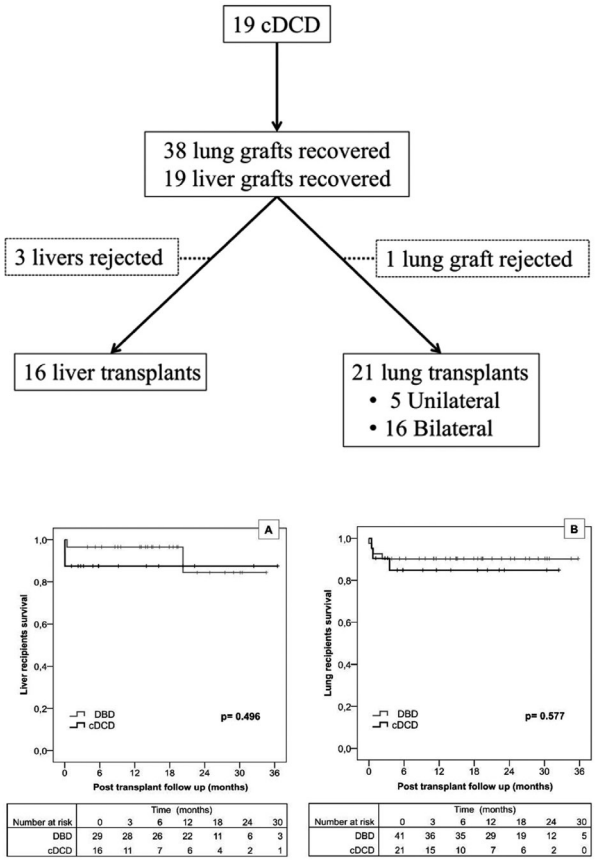
The short period of activity of LD coordinators has not increased the number of kidney transplants performed from a LD, but has created the possibility of reaching the knowledge of transplantation from a LD to all concerned. We count on the fact that increasing the activity of coordinators should significantly increase the number of transplantations in the following years.

LBP017 COMBINED LUNGS AND LIVER PROCUREMENT IN CONTROLLED DONATION AFTER CIRCULATORY DEATH USING NORMOTHERMIC ABDOMINAL PERFUSION. INITIAL EXPERIENCE IN TWO SPANISH CENTERS

Eduardo Miñambres[1], Patricia Ruiz[2], Maria Angeles Ballesteros[3], Laura Sanchez[4], Lander Atutxa[5], Roberto Fernandez-Santiago[6], Jose Manuel Cifrian[7], Alberto Ventoso[2], Mikel Gastaca[2]
[1]Transplant Coordination Unit & Service of Intensive Care. Hospital Universitario Marqués de Valdecilla, IDIVAL; [2]Hepatobiliary Surgery and Liver Transplantation Unit. Hospital Universitario Cruces; [3]Transplant Coordination Unit & Service of Intensive Care. Hospital Universitario Marqués de Valdecilla, IDIVAL; [4]Service of Thoracic Surgery. Lung Transplantation Unit. Hospital Universitario Marqués de Valdecilla, IDIVAL, Santander, SPAIN; [5]Transplant Coordination Unit & Service of Intensive Care. Hospital Universitario Donostia, San Sebastian, SPAIN; [6]Hepatobiliary Surgery and Liver Transplantation Unit. Hospital Universitario Marqués de Valdecilla, IDIVAL, Santander; [7]Service of Neumology. Lung Transplantation Unit. Hospital Universitario Marqués de Valdecilla, IDIVAL, Santander

Background: Combining simultaneously lungs and liver procurement in controlled donation after circulatory death (cDCD) using normothermic abdominal perfusion (NRP) for abdominal grafts and cooling and rapid recovery technique (RR) for the lungs increases the complexity of the procurement procedure and might injure the grafts.

Methods: A retrospective review of all actual cDCD performed in two centers using identical procedures in which lungs and liver were simultaneously evaluated, using NRP for abdominal preservation and the RR technique for lung recovery from the start of the two programs (September 2014 and March



2015) to December 2018. As controls, we evaluated all DBD donors in which lungs and liver were simultaneously recovered.

Results: A total of 19 cDCDs from two centers using this combined procedure were evaluated, and 16 liver and 21 lung transplants were performed. As controls 34 donors after brain death (DBD) were included (29 liver and 41 lung transplants were performed). Two cDCD liver recipients developed primary non-function (12.5%). No cases of ischemic cholangiopathy was observed among cDCD recipients. The 1-year and 2-year liver recipients' survival was 87.5% and 87.5% for the cDCD group, and 96% and 84.5% for the DBD group, respectively ($p = 0496$). The 1-year and 2-year lung recipients' survival was 84% and 84% for the cDCD group and 90% and 90% for the DBD group, respectively ($p = 0.577$).

Conclusion: This is the largest experience ever reported in cDCD with the use of NRP combined with RR of the lungs. This combined method offers an outstanding recovery rate and comparable liver and lung recipients' survival with those transplanted with DBDs. Further studies are needed to confirm our findings.

Grants: This work was supported, in part, by the Fundación Mutua Madrileña (FMM 16/05).

LBP018 THE IMPACT OF HBV INFECTION ON HEPATOCELLULAR CANCER TREATMENT IN THE ERA OF PROGRESSIVE HCV ERADICATION: AN ITA.LI.CA. STUDY GROUP ANALYSIS

Quirino Lai[1], Alessandro Vitale[2], Franco Trevisani[3], All the Authors[4]

[1]Sapienza University of Rome; [2]Padua University; [3]University of Bologna; [4]for the Italian Liver Cancer (ITA.LI.CA) group.

The recent introduction of the direct-acting antivirals in the hepatitis C virus treatment is rapidly modifying the scenario of hepatocellular cancer (HCC) management, thus refreshing in the Western world the interest on an "orphan" condition like the hepatitis B virus (HBV) infection. This study, based on the ITA.LI.CA database aimed to investigate the prevalence of HBV-related HCC observed in the last years in a large Italian cohort and to identify the risk factors for HCC-related death in HBV-positive patients treated with curative therapies. A total of 11,483 patients with the diagnosis of HCC were collected in the ITA.LI.CA database during the period Jan 1986-Dec 2016. After removing cases reported before Jan 2000 ($n = 969$) and recurrent tumors ($n = 5,077$), we lastly enrolled 5,437 patients with a first diagnosis of HCC.

The prevalence of HBV infection was 13.6% ($n = 741$), with 128 cases presenting an HBV-HCV coinfection. After removing co-infected cases, we analyzed the risk factors for HCC-related death in the 302 cases treated with a curative approach (ablation = 153; resection = 99; transplantation = 50).

During a median follow-up of 44 (inter-quartiles = 20–73) months, 126 (41.6%) deaths were reported, of whom 65 (21.5%) were HCC-related deaths. Five-year overall and HCC-related death rates were 41.9% and 24.4%, respectively. Using a competing-risk analysis of the cause-specific hazards, we identified the size of the largest lesion (HR = 1.10 per each mm of increase, 95%CI = 1.02–1.18; $p = 0.01$), HBV viremia < 100,000 copies/ml at the time of treatment (HR = 0.36, 95%CI = 0.14–0.95; $p = 0.04$), any anti-viral therapy before treatment (HR = 0.55, 95%CI = 0.31–0.98; $p = 0.04$), and liver transplantation (HR = 0.08, 95%CI = 0.02–0.35; $p = 0.001$) as independent predictors of survival.

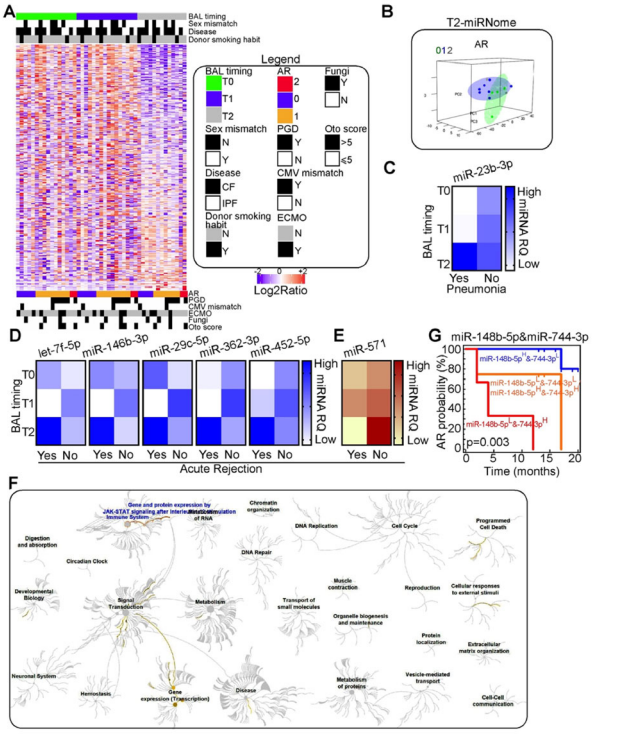
HBV infection still requires attention due to the not negligible prevalence observed in HCC patients. Antiviral therapy represents an important tool to improve survival of patients diagnosed with HCC since high viremia heralds a poorer prognosis.

LBP019 MICRORNAS ON BRONCHOALVEOLAR LAVAGE FLUID AS PRECLINICAL BIOMARKERS OF ALLOGRAFT DYSFUNCTION AFTER LUNG TRANSPLANTATION

Valentina Vaira[1], Alessandro Palleschi[2], Gabriella Gaudioso[3], Valeria Edefonti[4], Valeria Musso[5], Andrea Terrasi[6], Federico Ambrogi[7], Lorenzo Rosso[8], Paolo Tarsia[9], Letizia Corinna Morlacchi[9], Stefano Ferrero[6], Mario Nosotti[8]

[1]Division of Pathology, Fondazione IRCCS Ca' Granda - Ospedale Maggiore Policlinico; [2]Division of Thoracic Surgery and Lung Transplantation, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico; [3]Division of Pathology, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan; [4]Department of Clinical Sciences and Community Health, University of Milan, Milan; [5]Division of Thoracic Surgery and Lung Transplantation, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan; [6]Division of Pathology, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan; [7]Department of Clinical Sciences and Community Health, University of Milan, Milan; [8]Division of Thoracic Surgery and Lung Transplantation, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan; [9]Respiratory Unit and Cystic Fibrosis Adult Center, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan

Background: Events in the first year after lung transplantation (LTx) significantly impact long-term graft outcome and patient's survival. Therefore,



we profiled the miRNome in bronchoalveolar lavage (BAL) fluid of LTx patients to identify preclinical biomarkers of early graft dysfunction.
Methods: BAL-miRNAs collected after 7 days (T0), 15 days (T1) and 3 months (T2) from surgery were profiled from 16 patients who underwent bilateral LTx at our Institution. 11 patients had cystic fibrosis (CF) and 5 had idiopathic pulmonary fibrosis (IPF). Patients' follow-up lasted at least 12 months during which occurrence of infections ($n = 4$), acute rejection (AR, $n = 6$) or death ($n = 1$) were recorded. BAL-miRNA signatures or variation of expression was correlated with clinical features and patients' outcome. Prediction of targeted signaling was performed (Reactome).
Results: Globally, T2 BAL-miRNome shows an opposite profile respect to previous times (Figure 1A) and classifies patients with AR (Figure 1B). The increase at T2 of miR-23b-3p is associated with pneumonia while higher let-7f-5p, miR-146b-3p, miR-29c-5p, miR-362-3p and miR-452-5p levels are associated with AR (Figure 1C,D). This modulation is even more significant when only CF patients are analyzed. Moreover, CF patients that experience AR have a drop at T2 of miR-571 (Figure 1E). Predicted targeted pathways are inflammation, cell response to stress and apoptosis (Figure 1F). Lastly, concomitant low miR-148b-5p and high miR-744-3p expression stratifies LTx patients into three classes with different AR risk (Figure 1G).
Conclusions: Our data give preliminary insights into BAL-miRNAs dynamics associated with biological changes of the pulmonary environment after LTx. Moreover, our results provide initial evidence that BAL-miRNAs could be novel non-invasive molecular markers of ALAD.

LBP020 INCOMPATIBILITY LIVING DONOR KIDNEY TRANSPLANT, WHERE ABO INCOMPATIBLE, POSITIVE CROSSMATCH AND KIDNEY PAIRED DONATION TRANSPLANTS HAVE A PLACE!

Ignacio Revuelta[1], Erika De Sousa-Amorim[1], David Cucchiari[1], Miguel Lozano[2], Mireia Musquera[3], Eduard Palou[4], Maria O Valentin[5], Pedro Ventura-Aguiar[1], Joan Cid[2], Jaume Martorell[4], Lluis Peri[3], Marta Garcia[5], Nuria Esforzado[1], Frederic Cofan[1], Jose Vicente Torregrosa[1], Gaston Julio Piñeiro[1], Jessica Ugalde-Altamirano[1], David Paredes[6], Ramon Adalia[6], Josep M Campistol[1], Antonio Alcaraz[3], Federico Oppenheimer[1], Fritz Diekmann[1]
[1]Department of Nephrology and Kidney Transplant. Hospital Clínic. Barcelona; [2]Apheresis Unit, Department of Hemotherapy and Hemostasis. Hospital Clinic. Barcelona; [3]Department of Urology. Hospital Clínic. Barcelona; [4]Department of Immunology, Hospital Clinic. Barcelona; [5]Medical Department. Organizacion Nacional de Trasplantes. Madrid; [6]Donation and Transplant Coordination Unit, Hospital Clinic. Barcelona

Introduction: Differentt allocation options and therapeutic squemes are being purposed for transplant incompatibilities in living donor kidney transplantation(LDKT). Controversies about the best strategy are in debate for each patient. Our aim is to analyze the results about the different options for immunology transplant incompatibilities in our center.
Method: ABO incompatibility(ABOi) or Positive crossmatch(PCM) LDKT under desensitization (rituximab, plasma exchange or immunoadsortion, and intravenous immnuoglobulin) versus Kidney Paired Donation (KPD)LDKT (2006–2018). Analysis with compatible LDKT, and between all the incompatibility options. The study was approved by the Local Ethical Committee.
Results: 160 (ABO:89; PCM:34; KPD:37) out of 603 LDKT. Media-FU:65.9 ± 40.9 months. Younger (45.9 ± 12.3 vs 48.9 ± 13.6 years; $p = 0.017$), different ethiology of CKD ($p = 0.040$), no-preemptive (29.2% vs 42.9%; $p = 0.05$), and under induction (97.5% vs 86.7%; $p = 0.000$) were recipients in incompatibility group, and with more rejection (45% vs 26.6%; $p = 0.000$) due to not borderline-or-chronic (26.8% vs 13.3%; $p = 0.000$), higher death-censored graft loss (15% vs 8.6%; $p = 0.018$), but same graft loss (20.6% vs 15.7%; $p = 0.081$), and patient survival (6.8% vs 5.6%; $p = 0.384$). No differences in graft or patient survival were found comparing ABOi (16.8% vs 16.7%, $p = 0.540$; 5.6% vs 6.6%, $p = 0.472$) or KPD (5.4% vs 6.5%, $p = 0.905$) with ABOc, opposite to PCM (36.6% vs 15.3%, $p = 0.001$; 7.3% vs 6.4%, $p = 0.505$). Comparing the three options, worse graft survival in PCM than ABOi and KPD (33.3%/16.8%/13.9%, $p = 0.005$), death-censored graft loss (27.3%/11.2%/8.3%, $p = 0.001$), and renal function at one ($p = 0.033$), two ($p = 0.018$), three ($p = 0.021$), and four year ($p = 0.000$), with no differences in no chronic or borderline rejection rates (42.4%/23.6%/19.4%, $p = 0.107$) or patient survival (93.9%/ 94.4%/94.5%, $p = 0.989$).
Conclusions: Incompatibilities in LDKT are still a challenge; however, acceptable results comparing with compatible LDKT make these options suitable for any transplant, although with better results with KPD or ABOi.

LBP021 CONTROLLED DONORS AFTER CARDIAC DEATH IN ELDER RECIPIENTS OFFER AN OPTION FOR GRAFT SURVIVAL, BUT ONLY IN SELECTED PATIENTS, AND WITH WORSE RESULTS THAN LIVING DONORS

Ignacio Revuelta[1], David Cucchiari[1], Angel Ruiz[2], Mireia Musquera[3], Erika De Sousa-Amorim[1], Pedro Ventura-Aguiar[1], Lluis Peri[3], Nuria Esforzado[1], Frederic Cofan[1], Jose Vicente Torregrosa[1], Gaston Julio Piñeiro[1], Jessica Ugalde-Altamirano[1], David Paredes[2], Ramon Adalia[2], Josep M Campistol[1], Antonio Alcaraz[3], Federico Oppenheimer[1], Fritz Diekmann[1]
[1]Department of Nephrology and Kidney Transplant. Hospital Clínic. Barcelona; [2]Donation and Transplant Coordination Unit, Hospital Clinic. Barcelona; [3]Department of Urology. Hospital Clínic. Barcelona

The profile of transplant patients is changing over the years, being ager and with more comorbidities, resulting in not improving patient survival. New implemented transplant options, such as those with controlled donors after cardiac death (cDCD KT) are under discussion in elder patients, and the benefit of receive expanded criteria living donor kidney transplant (LDKT) to these patients are in debate. Our aim is to compare cDCD KT with LDKT in elder transplant population.
Method: cDCD KT and LDKT patients aged ≥ 60 year old in our center (2014–2018). The evaluation for cDCD KT was performed in age- independent manner with pre-implant biopsy and pulsatile kidney preservation machine. Immunosuppressive (IS) therapy in cDCD is based on induction with thymo, calcnineurin inhibitor (CNI), mTOR inhibitor vs mycophenolate, and steroids. The study was approved by the Local Ethical Committee.
Results: 650 single kidney transplants (LDKT/DDKT 217/433) out of 740 transplants were performed in our center. 47(21.6%) vs 85(61.5%) were older than 60 years in LDKT and cDCD, respectively. Donors from cDCD were older (68,53 ± 9,835 (42–84) vs 61,09 ± 8,993 (38–73) years; $p = 0.000$) and males (61.7% vs 15.9, $p = 0.000$). Due to IS protocol, cDCD received more induction (88.6% vs 100%; $p = 0.008$), more thymo (29.5% vs 93.8%; $p = 0.000$), and more mTOR inhibitors (65.4% vs 38.6%; $p = 0.015$). No differences in recipient age, sex, chronic kidney disease ethiology, previous transplants, or de novo CNI were found. Higher DGF rate (37.0% vs 0%; $p = 0.000$), worse graft loss (18.5% vs 4.5%; $p = 0.023$) with same death-censored graft loss ($p = 0.559$), and worse patient survival (16% vs 2.3%; $p = 0.015$) were found in cDCD. Type of donors (cDCD vs LDKT) and DGF were the factors associated to graft and patient survival in the multivariate analysis.
Conclusion: cDCD KT could be considered an options in terms of graft survival; however selected, non- comorbidity patients, and with low- DGF expected cases has to be offered to patients over 60 years old to reduce worse pat

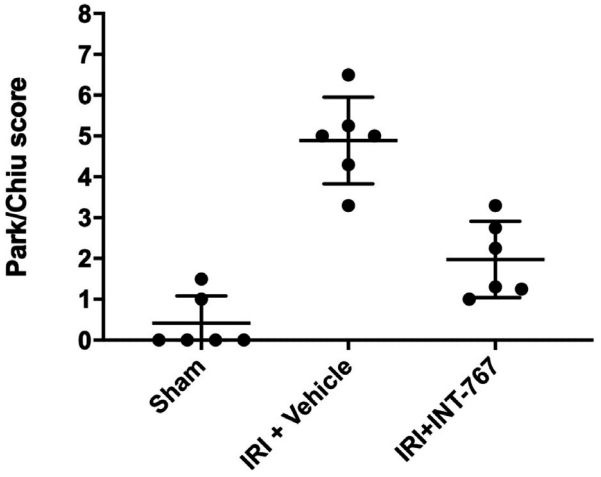
LBP022 INT 767: A NOVEL, DUAL FXR AND TGR5 AGONIST, ATTENUATES INTESTINAL ISCHEMIA REPERFUSION INJURY

Emilio Canovai[1], Ricard Farré[2], Alison Accarie[2], Gert De Hertogh[1], Tim Vanuytsel[1], Jacques Pirenne[1], Laurens Ceulemans[1]
[1]Leuven Intestinal Failure and Transplantation center (LIFT), University Hospitals Leuven; [2]Translational Research Center for Gastrointestinal Disorders (TARGID), KU Leuven

Background: Ischemia reperfusion injury (IRI) inevitably occurs during intestinal transplantation. This leads to loss of villi, resulting in systemic translocation which contributes to poor outcomes. The Farnesoid-X receptor (FXR), is a member of the nuclear receptor family. TGR5 (Takeda G protein-coupled receptor 5) is a G-protein-coupled bile activated receptor. Both are abundantly expressed in the gastro-intestinal tract. In pre-clinical models, both have been shown to reduce inflammation and improve epithelial permeability. The aim of our study was to test the effect of a dual FXR/TGR5-agonist, INT-767 (Intercept Pharma, USA) as treatment for intestinal IRI.
Methods/Materials: In a validated rat model of intestinal IRI (laparotomy and clamping of superior mesenteric artery), 3 groups ($n = 6$/group) were investigated: i/ Sham (only laparotomy); ii/ Ischemia 60 min + reperfusion 60 min + vehicle; iii/ Ischemia 60 min + reperfusion 60 min + INT-767. For each group, 10 additional animals were included for a 7-day survival analysis. INT-767 or vehicle was administered intravenously in a single dose at 10 mg/kg, 15 min after start of ischemia. Analyzed endpoints: 1/ Histology 2/ intestinal barrier function 3/ Inflammatory cytokines: IL-6 (ELISA), IL-1-β and TNFα (qPCR); 4/ Anti-inflammatory cytokines: IL-10, IL-13 (qPCR) and 5/Survival
Results: IRI led to pronounced damage resulting in high Park/Chiu scores (Figure 1), increased intestinal permeability and systemic inflammation. INT-767 treatment dramatically improved all these alterations. Survival was substantially improved after treatment ($p < 0.05$). Results are summarized in the Table.
Conclusion: We demonstrated that treatment with a dual FXR/TGR5 agonist significantly reduced intestinal damage caused by IRI. These results show that FXR and TGR5 receptors are promising targets for intestinal graft protection. The ability to administer this substance intravenously greatly enhances the potential applicability.

Endpoints Median (range)	SHAM	IRI + Vehicle	IRI + INT-767	*p*-value (IRI + 767 vs IRI + vehicle)
Park/Chiu (0–8)	0 (0–1.0)	.0 (3.3–6.5) ***	1.8 (1.0–3.3) ***	$p = 0.0005$
Villus length (μm)	273 (205–286)	104 (66–118) ***	201 (168–280) ***	$p = 0.0001$
TEER (Ohm*cm2) (Villus length corrected)	49 (39–63)	14 (9–21) ***	32 (24–37) ***	$p < 0.0001$
FD 20 Permeability (pmol/cm2)	18.5 (5.3–40.8)	204.7 (147.9–247.9) ***	108.5 (61.1–119.8) ***	$p = 0.0007$
IL-6 (fold change)		207.4 (148.3–403.1)	155.5 (8.7–181.7) *	$p = 0.0492$
IL-1-β (fold change)		7.8 (5.0–13.8)	3.5(1.9–11.1) *	$p = 0.0140$
TNF-α (fold change)		6.9 (2.4–9.9)	3.6 (2.7–4.4) **	$p = 0.0019$
IL-10 (fold change)		10.7 (5.4–14.6)	16.6 (11.2–21.0) *	$p = 0.0257$
IL-13 (fold change)		11.4 (4.2–15.9)	17.0 (11.6–20.4) *	$p = 0.0139$
7-day survival (%)	100%	0%	50% *	

Figure 1



LBP023 CLAZAKIZUMAB (CLZ, ANTI-IL-6) AND TOCILIZUMAB (TCZ, ANTI-IL-6 RECEPTOR) DIFFERENTIALLY AFFECT IL-6/IL-6R SIGNALING BY MODULATING SOLUBLE IL-6R & GP130 IN PATIENTS TREATED FOR CHRONIC ANTIBODY-MEDIATED REJECTION (CABMR)

Bongha Shin, Ashley Vo, Shili Ge, Anna Petrosyan, Noriko Ammerman, Stanley Jordan, Mieko Toyoda
Cedars-Sinai Medical Center

Introduction: We previously reported successful use of TCZ for cABMR treatment in HLA-sensitized Pts. CLZ is 3-120x more potent than TCZ in IL-6/IL-6R signaling inhibition in vitro. IL-6/sIL-6R complex initiates more pathogenic trans-signaling pathways via interactions with gp130, and sgp130 is a selective inhibitor of this pathway. Here, we measured sIL-6R & sgp130 levels pre- & post-treatment in CLZ & TCZ -treated pts w/ cABMR to determine effects on trans-signaling pathway.
Methods: Plasma samples obtained pre- & at 6-month post-CLZ (25 mg SQ, monthly) from 8 Pts and post-TCZ (8 mg/kg, monthly) from 11 Pts were submitted for sgp130 & sIL-6R Luminex assays. IL-6 & C-reactive protein (CRP) levels were also tested in CLZ-treated Pts.
Results: IL-6 levels significantly increased post- vs. pre-CLZ (1541 ± 649 v. 12 ± 14 pg/ml, $p = 0.001$) and post- v. pre-TCZ (56 ± 32 v. 3 ± 2 pg/ml, $p = 0.0003$). Near significant reduction of CRP post-CLZ (1.2 ± 1.2 v. 0.3 ± 0.1 μg/ml, $p = 0.09$) in all Pts indicates that high levels of IL-6 detected post- CLZ were mostly CLZ-bound IL-6, and the IL-6/gp130 trans-signaling was efficiently blocked by CLZ. Although the difference was small, sgp130 levels reached significance post- v. pre- CLZ (292 ± 50 v. 260 ± 75 ng/ml, $p = 0.04$), while there was no significant change post-TCZ (289 ± 51 v. 271 ± 46 ng/ml, $p = 0.4$). In contrast, sIL-6R levels significantly increased post- v. pre-TCZ (114 ± 70 v. 60 ± 14 ng/ml, $p = 0.03$), while there was no significant change post-CLZ (80 ± 16 v. 78 ± 14 ng/ml, $p = 0.7$).
Conclusion: CLZ and TCZ may differentially affect IL-6/IL-6R/sgp130 biology, which may result in different risk for progression of cABMR. Significant increase of sIL-6R post-TCZ may contribute to rejection observed after TCZ cessation, via enhancing trans-signaling. Significant increases of sgp130 post-CLZ may reduce trans-signaling, potentially reducing pathogenicity to allografts. A larger study with longer follow-up is required for confirming this possibility.

LBP024 ACTIVATION OF HMGB1-TLR4 PATHWAY AND INFLAMMASOME CONTRIBUTE TO ENHANCED STERILE INFLAMMATORY RESPONSE IN ECD AND KDPI > 80% DONORS

Mario Abbud-Filho, Greiciane Florim, Naiane Gonçalves, Giovanna Bueno, Ida Fernandes-Charpiot, Maria Alice Baptista, Heloisa Caldas
Laboratory of Immunology and Experimental Transplantation - LITEX, Medical School of Sao Jose do Rio Preto

Background: Metrics for evaluating "low-quality" kidneys have failed to predict outcomes or reduce the kidney refusal and discard rates. Kidneys from extended-criteria donors (ECDs) and kidneys with ≥ 80% kidney donor profile indexes (KDPI) might have different sensitivities to the proinflammatory milieu generated by brain death. We aimed to identify gene expression profile differences in innate immunity pathways.
Methods/Materials: Preimplantation kidney biopsies from ECDs and kidneys with ≥ 80% KDPIs were compared to standard-criteria donor (SCD) kidneys and those with KDPIs < 80%, respectively. Gene expression profile measured by Real Time qPCR Array representing expression levels of genes indicative of inflammation (TLR4, HMGB1, NFK-β, MyD-88, INF-γ, IL1-β, TNF-α, CASP-1, ICAM-1, IL-10, HO-1, HIF-1, MCP-1, TGF-β, TRIF, TRAM, IRF3, RIP1, IFNβ-1 and NLRP3).
Results: ECD biopsies showed significantly higher expression of IL-10, TLR4, HMGB1, IFN-γ, TRAM, IRF3, HIF-1, NLRP3, CASP-1, and IL-1β ($p < 0.05$) compared to SCD biopsies. IRF3, HIF-1 and CASP-1 were exclusively upregulated in ECD kidneys. Compared to kidneys with KDPIs < 80%, kidneys with KDPIs ≥ 80% had the same gene transcripts as those observed in ECD kidneys, except that TNF-α and MCP-1 expression were only elevated in kidneys with KDPIs ≥ 80%. Significant positive correlations were found between the different genes upregulated and the increase in KDPIs.
Conclusion: Our results showed that TLR4 and inflammasome pathways were enhanced in low-quality kidneys, which suggested that blocking these targets might improve transplant outcomes and reduce kidney discard rates.

LBP025 INTRA-OPERATIVE NEAR-MISS EVENTS DURING LEFT LIVER LOBE DONATION SURGERY: THE HIDDEN FACE OF THE PAEDIATRIC LIVING DONOR LIVER TRANSPLANTATION

Eliano Bonaccorsi Riani[1], Victoria Daudré-Vignier[2], Olga Ciccarelli[2], Laurent Coubeau[2], Samuele Iesari[2], Roberto Tambucci[2], Catherine De Magnée[2], Aurore Pire[2], Raymond Reding[2]
[1]Université catholique de Louvain; [2]Cliniques Universitaires Saint-Luc

Introduction: Living donor liver transplantation (LDLT) is a well-established alternative to alleviate post-mortem organ shortage in liver transplantation. Optimal living donor (LD) safety is a priority in each LDLT program. We hypothesized that serious unexpected perioperative medical and/or surgical events during LD procedure indeed occur in a high volume LDLT center, being a major threat to donor safety.
Methods: Medical records of 433 pediatric LDLT performed at our institution over a period of 25 years were reviewed. NME was defined as any potentially perioperative harmful event that was identified and controlled before definitive patient harm has happened.
Results: Sixty-seven patients (15.3%9 presented postoperative complications, mainly classified as Clavien-Dindo I and II, only 19 patients presented a grade III complication. LD postoperative complications consisted mainly in cut-surface collections, mild infections, and incisional hernias. However, eight (1.8%) serious intraoperative NMEs occurred: accidental vena cava clamp releasing, left hepatic artery (HA) clip sliding both resulting in massive bleeding, donor right HA ligature and section, accidental section of left HA at liver graft hilum, tension pneumothorax following right subclavian vein catheterization, LD intravenous full-heparinization, donor common hepatic duct section, an injury of

segment II bile duct. All NME were timely recognized and controlled without subsequent donor or recipient harm.
Conclusions: Despite our minimal morbidity and no mortality rates, 8 serious and potential harmful NMEs were identified in these 433 LDs. None of these NMEs resulted in donor or recipient postoperative morbidity. NMEs systematic debriefing led to safety refinements in our LD protocol. LD/NMEs' systematic record may be used as quality control tool to assess donor safety in LDLT programs.

LBP026 NO NEED TO DISCONTINUE HEPATITIS C VIRUS THERAPY AT THE TIME OF LIVER TRANSPLANTATION

Catarina Skoglund[1], Martin Lagging[2], Maria Castedal[1]
[1]Institute of Clinical Sciences, Department of Surgery, Sahlgrenska Academy, Sahlgrenska University hospital; [2]Institute of Biomedicin, Department of Infectious Disease, Sahlgrenska Academy, Sahlgrenska University hospital

Background and Aims: Interferon-free treatment with direct antiviral agents (DAA) has dramatically improved the outcome of hepatitis C virus (HCV) infection, both on the waiting-list and post liver transplantation (LT). DAAs are generally well-tolerated in patients with mild to moderate liver- and kidney failure, but some combinations are contraindicated in patients with severe dysfunction. The use of DAA combinations in the immediate perioperative period may have safety issues secondary to operative trauma adding to frequent preexisting liver and kidney impairment. In this study we evaluated DAA therapy in the immediate peri-operative liver transplantation period in a real-life setting in Sweden.
Method: In total 10 patients with HCV-associated liver cirrhosis and a mean age of 60 years (range 52–65) were treated with DAA on the waiting-list for LT, and continued in the peri- and post-operative period without interruption. Sofosbuvir and a NS5A inhibitor with or without ribavirin, or sofosbuvir and ribavirin only, were given for a total of 17. 1 weeks (w) (range, 12–30w). The distribution of HCV genotypes was 40% (4 of 10) genotype 1, and 60% (6 of 10) genotype 3, respectively. Six of the 10 patients had previously been treated with interferon-based therapy.
Results: All 10 recipients achieved sustained viral response 12 weeks after end-of-treatment (SVR 12). There were no adverse events leading to premature DAA discontinuation. At LT median MELD- score (Model For End-Stage Liver Disease) was 15.5 (range, 7–21), creatinine 92 μmol/l (range 56–135, reference 60–105), bilirubin 38.9 μmol/l (range 16–79, reference 5–25) and PK-INR 1.5 (range 1.1–1.8, reference < 0.9). The DAA-therapy was in median continued for 54 days post-LT (range 8–111 days).
Conclusion: Interferon-free treatment with DAAs in the immediate peri-operative liver transplant setting was safe and yielded high SVR rates in liver recipients.

LBP027 TIMING OF URETERIC STENT REMOVAL AND OCCURRENCE OF UROLOGICAL COMPLICATIONS AFTER KIDNEY TRANSPLANTATION: A SYSTEMATIC REVIEW AND META-ANALYSIS

Isis Visser, Jasper van der Staay, Anand Muthusamy, Michelle Willcombe, Jeff Lafranca, Frank Dor
Imperial College Renal and Transplant Centre, Imperial College NHS Healthcare Trust, Hammersmith Hospital, London,

Background: Implanting an ureteric stent during ureteroneocystostomy reduces the risk of leakage and ureteral stenosis after kidney transplantation (KTx), but it may also predispose to urinary tract infections (UTI).
Methods: The aim of this study is to determine the optimal timing for ureteric stent removal after KTx. Searches were performed in EMBASE, MEDLINE Ovid, Cochrane CENTRAL, Web of Science and Google Scholar (until Nov 2017). For this systematic review, all aspects of the Cochrane Handbook for Interventional Systematic Reviews were followed, and it was written based on the PRISMA-statement. Articles discussing JJ-stents and their time of removal in relation to outcomes, UTI, urinary leakage, ureteral stenosis or re-intervention, were included.
Results: 1043 articles were identified, of which 14 articles (three randomized controlled trials, nine retrospective cohort studies, and two prospective studies) were included (describing in total $n = 3612$ patients). Meta-analysis using a random effect model showed a significant reduction of UTI when stents were removed earlier than three weeks (OR 0.49, CI 95%, 0.33 to 0.75, $p = 0.0009$). Regarding incidence of urinary leakage, there is no significant difference between early (< three weeks) and late stent removal (> three weeks) (OR 0.60, CI 95%, 0.29 to 1.23, $p = 0.16$).
Conclusion: Based on our results, earlier stent removal (< three weeks) is associated with a decreased incidence of UTI and does not show a higher incidence of urinary leakage compared to later removal (> three weeks). We recommend that the routine removal of ureteric stents implanted during KTx should be performed around three weeks postoperatively.

Figure 3 Forest plot of urinary tract infection for early (<3 weeks) vs late (>3 weeks) stent removal

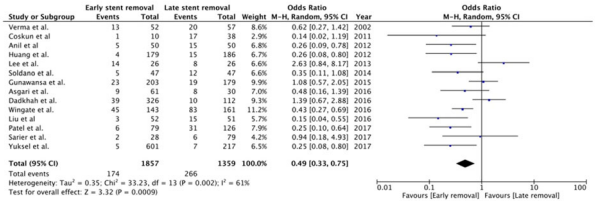
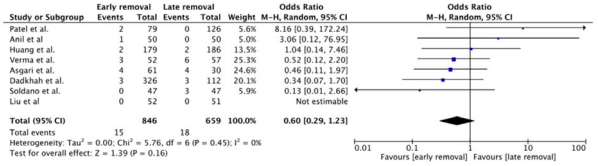


Figure 4 Forest plot of urinary leakage for early (<3 weeks) vs late (>3 weeks) stent removal



LBP029 LISTING, DROPOUT AND TRANSPLANTATION FOR HEPATOCELLULAR CARCINOMA IN LATIN AMERICA: UNEXPECTED AND PREVIOUSLY NOT REPORTED RESULTS

Federico Pinero[1], Ilka Boin[2], Aline Chagas[3], Emilio Quinonez[4], Sebastian Marciano[5], Mario Vilatoba[6], Adriana Varon[7], Lucas McCormack[8], Sergio Duque[9], Agnaldo Soares Lima[10], Josemaria Menendez[11], Martin Padilla[12], Jaime Poniachik[13], Rodrigo Zapata[14], Martin Maraschio[15], Ricardo Chong Menende[16], Linda Munhoz[17], Diego Arufe[18], Rodrigo Figueroa[19], Ariel Gonzalez Campana[1], Simone Reges Perales[20], Claudia Maccali[21], Rodrigo Vergara Sandoval[4], Carla Bermudez[22], Luiza Santos[23], Matias Balmer[8], Isabel Arenas[24], Solange Gerona[25], Victor Henriquez[26], Alexandra Ginesta[14], Martin Barrabino[15], Pia Raffa[16], Adrian Gadano[22], Juan Mattera[4], Elaine Cristina Ataide[27], Flair Carrilho[3], Marcelo Silva[28]
[1]Hospital Universitario Austral; [2]State University of Campinas; [3]HC-FMUSP; [4]Hospital El Cruce; [5]Hospital Italiano; [6]Hoapital Italiano; [7]Funacion Cardio Infantil; [8]Hospital Aleman de Buenos Aires; [9]Hospital Tobon-Uribe; [10]Santa Casa de Belo Horizonte; [11]Hospital de Clinicas - Montevideo; [12]Hospital Guillermo Almenara; [13]Hospital de la Univeridad de Chile; [14]Clinica Alemana de Santiago; [15]Hospital Privado de Cordoba; [16]Hospital Carlos Andrade Marin; [17]Hospital Universitario Dr Jose E Gonzalez; [18]Sanatorio Sagrado Corazon; [19]Sanatorio Allende- Cordoba; [20]Unit of Liver Transplantation HC Unicamp; [21]HC FMUSP; [22]Hospital Italiano de Buenos Aires; [23]Fundacion Cardio Infantil Bogota; [24]Hospital Tobon Uribe Mendellin; [25]Hospitalde Clinicas - Montevideo; [26]Hospital de Universidad de Chule; [27]Unit of Liver Transplantation HC-Unicamp; [28]HospitI Universitario Austral

Background & Aim: The dropout cumulative incidence of potential candidates for liver transplantation (LT) for hepatocellular carcinoma (HCC) has been reported to be close to 10% at six months in different observational studies. We aimed to describe dropout rates in a Latin American cohort study.
Methods: This multicenter and multinational cohort study conducted in Latin America included adult patients listed for LT with HCC between years 2011–2018. Delisting or dropout for any reason (death, tumor progression, other causes) was evaluated as the primary event. As secondary objective, we evaluated exposure variables associated with dropout due to tumor progression by a multivariable competing risk analysis (competitive event = death or withdrawal from other causes), with Sub-Hazard Ratios (SHR) and respective 95% (95% CI) confidence intervals calculated.
Results: A total of 1117 patients with HCC were evaluated for liver transplantation, 994 (89%) were listed, 799 (80.4%) granted with supplementary MELD points. 65% ($n = 650$) were transplanted, 10% ($n = 91$) still remained on the waiting list at the end of the study and 25% ($n = 253$) were delisted. Overall cumulative incidence of dropout in a median time on the waiting list of 6.1 months (IQR 2.4–10.4 months) was 25.3% (CI 22.7%-28.2%). Of these, the dropout rate due to death or other causes was 14.3% (CI

12.2%-16.6%), while the dropout rate due to tumor progression was 11.2% (CI 9.7%-13.8%). Overall dropout rate due to tumor progression was significantly higher among patients without than with supplementary MELD points [21.0% (CI 15–27.8%) vs 8.8% (CI 6.8–10.9%); $p < .0001$]. In the competing risk multivariable analysis, independent variables at listing associated with dropout due to tumor progression were Milan criteria SHR 0.60 (CI 0.36–0.98; $p = 0.04$) and the AFP model SHR 0.56 (CI 0.33–0.96; $p = 0.003$).
Conclusions: In this cohort, the risk of delisting and dropout was unexpectedly high compared to other reported series. However, the dropout rate due to tumor progression, although high, was as accordingly expected.

LBP031 CLINICAL APPLICATION OF DIASTOLOGY IN THE 2016 ASE/EACVI RECOMMENDATIONS TO PATIENTS WHO UNDERGOING LIVING DONOR LIVER TRANSPLANTATION

Jaesik Park, Jiyoung Lee, Ami Kwon, Ho Joong Choi, Hyun Sik Chung, Sang Hyun Hong, Jong Ho Choi, Chul Soo Park, Min Suk Chae
Seoul St.Mary's Hospital

Background: The aim of this study was to compare the prevalence of diastolic dysfunction between the 2016 American Society of Echocardiography (ASE)/European Association of Cardiovascular Imaging and 2009 ASE/European Association of Echocardiography recommendations in patients undergoing living-donor liver transplantation (LDLT).
Patients and methods: A total of 312 adult patients who underwent LDLT at our hospital from January 2010 to December 2017 were retrospectively analyzed. Exclusion criteria were systolic dysfunction, arrhythmia, myocardial ischemia, and mitral or aortic valvular insufficiency.
Results: The study population was largely male (68.3%), and the median age was 54 (49–59) years. The median MELD score was 12 (6–22) points. The prevalence rates of diastolic dysfunction and indeterminate diastolic function were lower according to the 2016 recommendations than the 2009 recommendations. The proportion of patients with a high brain natriuretic peptide level (>100 pg/ml) decreased significantly during surgery in the normal and indeterminate groups according to the 2009 recommendations; however, only the normal group showed an intraoperative decrease in the proportion according to the 2016 recommendations. Patients with diastolic dysfunction showed a poorer overall-survival rate than those with normal function according to both recommendations. However, there was a difference in the survival rate in the indeterminate group between the two recommendations. A significant difference in patient survival rate was observed between the dysfunction and indeterminate groups according to the 2009 recommendations; however, the difference was not significant in the 2016 recommendations.
Conclusions: The 2016 classification may be better able to identify patients with a risk for diastolic dysfunction. Particularly, patients in the 2016 indeterminate group seemed to require a cardiac diastolic functional evaluation more frequently during and after surgery than those in the 2009 indeterminate group.

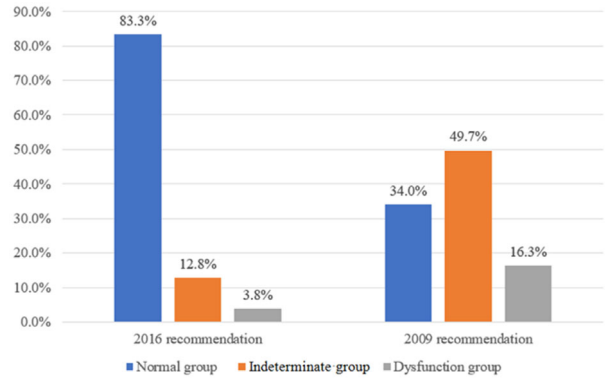


Figure 1. Prevalence of diastolic dysfunction according to each classification

LBP032 THE EFFECT OF MANNITOL ON KIDNEY FUNCTION AFTER KIDNEY TRANSPLANTATION: A SYSTEMATIC REVIEW AND META-ANALYSIS

Stijn van de Laar, Geerten Schouten, Jan IJzermans, Robert Minnee
Department of Surgery, Division of HPB & Transplant Surgery, Erasmus University Medical Center (Erasmus MC), Rotterdam, Netherlands.

Background: The effect of mannitol usage during kidney donation and kidney transplantation is still unclear. Therefore, we performed a systematic review and meta-analysis to investigate difference in graft function between kidney grafts treated with and without mannitol.
Methods: A literature search was performed in five databases on the 6th of March 2019 and included seven eligible studies out of 3112 references. Relevant outcomes for meta-analysis were graft survival, acute tubular necrosis, delayed graft function, renal failure and serum creatinine. The quality of evidence was assessed using Newcastle-Ottawa scale and Jadad score.
Results: Seven studies were identified, one study examining the effect of mannitol during kidney donation and six studies during kidney transplantation. Six studies were eligible for the meta-analysis. Graft survival between both groups showed a risk ratio of 0.65, 95% CI [0.37, 1.14]. The risk of acute tubular necrosis, delayed graft function and renal failure was RR = 1.22, 95% CI [0.84, 1.77], RR = 1.39, 95% CI [0.85, 2.28], RR = 2.34, 95% CI [0.94, 5.85] respectively.
Conclusion: This systematic review and meta-analysis does not provide evidence to use mannitol during kidney donation and kidney transplantation in order to significantly improve graft function.

LBP033 EVALUATING THE ROLE OF SOLUBLE MEDIATORS ON B CELL HOMEOSTASIS AND THE DEVELOPMENT OF EARLY EBV-ASSOCIATED LYMPHOPROLIFERATIVE DISORDERS IN KIDNEY TRANSPLANT PATIENTS

Sharon Bajda[1], Arturo Blazquez-Navarro[2], Toralf Roch[3], Björn Samans[4], Patrizia Wehler[2], Sven Olek[4], Nina Babel[5]
[1]Marien Hospital Herne, Ruhr Universität Bochum; [2]Berlin-Brandenburg Center for Regenerative Therapies (BCRT): Berlin-Brandenburger Centrum für Regenerative Therapien; [3]Berlin-Brandenburg Center for Regenerative Therapies (BCRT): Berlin-Brandenburger Centrum für Regenerative Therapie; [4]Ivana Türbachova Laboratory for Epigenetics, Epiontis GmbH, Precision for Medicine Group; [5]Universitätsklinikum der Ruhr-Universität Bochum

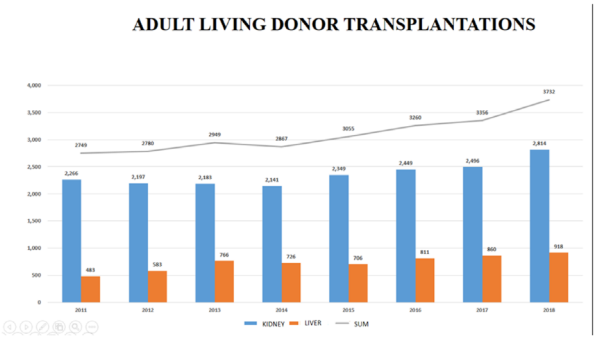
Background: Post-transplant lymphoproliferative disorder (PTLD) is a life threatening complication associated with Epstein-Barr Virus (EBV) (re)activation. Inflammation and immunosuppression are crucial factors facilitating EBV reactivation, which can lead to B cell immortalization and lymphoma development. The aim of this study was to assess the tri-directional interplay between EBV infection, soluble serum mediators associated with EBV reactivation or inflammation, and B cell homeostasis.
Material and Methods: 3715 blood samples of 540 kidney transplant recipients collected within multicenter study at 8 time points were monitored for EBV load during the 1. post-transplant year. In patients with EBV reactivation, interleukin (IL)-4, IL-5, IL-6, IL-10, IL-21, TNFα, BAFF, and APRIL were analysed before, at the peak and after the EBV clearance and compared to a sub-cohort of patients without EBV reactivation as a control. In addition, the number of circulating B cells was determined employing epigenetic cell profiles at the three time points.
Results: EBV reactivation was detected in 109 out of 540 analysed patients, and 50% of patients with EBV reactivation showed elevated EBV load over the cut off (1000 copies/ml). In one patients EBV reactivation led to PTLD. The level of B cell activating factor (BAFF) – responsible for B cell maturation, survival, and function – was significantly higher in patients with EBV reactivation compared to the control group ($p = 0.007$) independently from the level of EBV load. No additional inflammatory or regulatory soluble mediators analysed in the study were associated with EBV reactivation. We also did not find differences in total B cell counts between EBV + and control groups. Moreover, neither EBV reactivation nor elevated BAFF level led to the B cell expansion.
Conclusion: In summary, elevated BAFF level was identified upon EBV reactivation during the first year after transplantation. Further studies are required to explore the underlying mechanisms of EBV reactivation and early PTLD development in renal transplant patients.

LBP034 STATUS OF SOLID ORGAN TRANSPLANTATION INTURKEY

Sanem Cimen[1], Eyup Kahveci[2], Gamze Yildirim[3], Gultekin Hos[4], Sertac Cimen[5]

[1]Diskapi Research and Training Hospital- Health Sciences University; [2]International Transplant Network; [3]Turkish Transplant Foundation; [4]Sisli Etfal Research and Training Hospital; [5]Health Sciences University

Objective: The aim of this study was to review solid organ transplantation in Turkey. This review displays the weaknesses as well as strengths of national transplant politics. Emergence of the weaknesses can trigger potential endeavors which will improve the overall solid organ transplant activity and outcomes.
Materials and Methods: The current (December 2018) solid organ transplant patient waitlists made by the organ transplant division of Turkish Ministry of Health, list of solid organ transplant centers and electronic databases including the 2002–2018 data regarding live and cadaveric solid organ transplantation updated annually by the same division were analyzed retrospectively.
Results: Our review showed that 26063 patients were in the waitlist for a solid organ transplantation in Turkey as of December 2018. Most of these patients (n = 22462; 86.2%) were waitlisted for kidney transplant while 2153 (%0.8) and 1084 (%0.4) of the entire group were expecting a liver and heart transplant, respectively. Only 2 patients were waitlisted for a small bowel transplant which was the least demanded organ for transplantation in Turkey. Analysis of the transplant centers (n = 82) revealed that most of the solid organ transplant activities were performed by university hospitals (n = 31; 38%). Hospitals governed by the Ministry of Health had 23 transplant centers in total (28%). University Hospitals owned by foundations (n = 11) represented the smallest group (13%). Review of transplant activities year by year demonstrated that numbers of both live and cadaveric organ transplants increased yearly: 361 live kidney transplants in 2002 vs 3008 in 2018; 189 cadaveric kidney transplants in 2002 vs 858 in 2018; 77 cadaveric and 82 live liver transplants in 2002 vs 1150 live and 438 cadaveric liver transplants in 2018 and 20 heart transplants in 2002 vs 91 in 2018. Despite the fact that both live and cadaveric organ transplant numbers increased by time, the increase in live transplants were dramatic (8-fold increase in live kidney transplant.



LBP035 POSTTRANSPLANT TUBERCULOSIS PREDICTION USING ARTIFICIAL NEURAL NETWORK

Anna Starostina[1], Elena Parabina[2], Ulyana Maslikova[3], Igor Tsygankov[4], Boris Yaremin[5]

[1]Reaviz Medical University; [2]Samara State Medical University; [3]Russian National Research Center for Hematology; [4]Togliatty TB Dispensary; [5]Sklifosovsky Emergency Medicine Institute

Posttranplant tuberculosis (PTTB) is a life-threatening and difficult complication. It is not rare in Eastern Europe and in Russia (about 3–4% of all posttransplant patients). Despite the large number of diagnostic approaches, the diagnosis of post-transplant tuberculosis is often late. The aim of the work is to find prediction strategy for PTTB. All numerical data analyzed contained in the 610 patients' electronic health records (anthropometric data; medical history; and clinical, laboratory, and instrumental data). Data analysis was performed using the cluster, discriminatory, and multifactor analysis system and by constructing a self-organizing Kohonen neural network on Veterok supercomputer of Samara State Medical University. PTTB was identified in 24 patients (3.9% of 610 investigated patients). Only half of the TB-infected patients were identified using radiologic methods. The percentage of TB cases detected postmortem was very high. For the most part, these were cases whose management had been neglected due to improper process or prolonged diagnostic timelines. No significant correlation was found when comparing immunosuppressive therapy regimens and the frequency of TB after transplant. Because of the heterogeneity of the data and the lack of specific pathognomonic symptoms, it was not possible to create a model for identifying post -transplant TB as a probability calculator. However, it was found that the most effective means of predicting TB after transplant is the use of an artificial neuronal network (ANN). The ANN interface is integrated into the automated information system "Transplantation" and comprises a clinical decision support system. It continuously scans electronic medical records and gives a warning in cases in which there is an increased risk of complications. We can find few factors that predict a high probability of posttransplant TB diagnosis but these factors are valuable only in integrated context. It is a perspectivve approach is to use integrated diagnostic approach through the use of clinical decision-support systems based on ANN

LBP036 IMMUNOLOGICAL EFFECTS OF INTRAVENOUS IMMUNOLGOBULINS ON T-CELLS

Vasiliki Besa[1], Ming Sun[2], Sebastian Dolff[3], Christian Taube[1], Clemens Aigner[4], Markus Kamler[5], Benjamin Wilde[6], Oliver Witzke[3]

[1]Department of Pulmonary Medicine, University Hospital Essen – Ruhrlandklinik, West German Lung Transplantation Center; [2]Department of Nephrology, University Hospital Essen, University Duisburg-Essen; [3]Department of Infectious Diseases, University Hospital Essen, University Duisburg-Essen; [4]5 Department of Thoracic Surgery, University Hospital Essen – Ruhrlandklinik, West German Lung Transplantation Center; [5]Department of Thoracic and Cardiovascular Surgery, West German Heart Center, University Hospital Essen, University Duisburg-Esse; [6]University Hospital Essen

Background: Immunoglobulins (IVIG) are nowadays widely used to treat humoral rejection in patients after solid organ transplantation. However, the exact mechanisms of IVIG treatment are unclear. It was the aim of this study to characterize the immunological effects of IVIG treatment.
Methods: Nine patients with humoral rejection after lung transplantation were enrolled. All patients received IgM-enriched IVIG over up to four consecutive days at a cumulative dosage of 60–80 g. Eight patients underwent plasmapheresis prior to IVIG administration. Blood was drawn before IVIG administration. Six patients were sampled again after IVIG administration. The mean time between first and last blood sampling was three months. PBMC were isolated from whole blood and T-cells were analyzed by flow cytometry.
Results: Regulatory T-cells (CD4+ CD127lowCD25+) increased slightly after IVIG treatment (5.23 ± 1.8% vs. 6.52 ± 3.9%, p = 0.3); the same tendency was observed for activated T-cells (CD3+ HLA-DR+). In contrast, CD8 effector T-cells (CD8+ IFNg+, 50.66 ± 20.00% vs. 39.02 ± 16.83%, p = 0.3) tended to decrease after IVIG treatment. Interestingly, CD8 effector T-cells producing IL-10 (CD8+ IFNg+IL-10 +) were found in 66% of the patients after IVIG treatment. IL-10 producing CD8 T-cells were not found in patients before IVIG administration.
Conclusion: IgM enriched IVIG treatment may induce the development of IL-10 producing cytotoxic T-cells.

LBP037 ABLATION OF INTERFERON REGULATORY FACTOR 4 IN T CELLS INDUCES "MEMORY" OF TRANSPLANT TOLERANCE THAT IS IRREVERSIBLE BY IMMUNE CHECKPOINT BLOCKADE

Hedong Zhang[1], Jie Wu[2], Wenhao Chen[3]

[1]The second Xiangya Hospital; [2]Wuhan Union Hospital; [3]Houston Methodist Hospital

Background: Achieving transplant tolerance remains the ultimate goal in the field of organ transplantation. We demonstrated previously that ablation of the transcription factor interferon regulatory factor 4 (IRF4) in T cells induced heart transplant acceptance by driving allogeneic $CD4^+$ T cell dysfunction while imune checkpoint blockade can reinvigorate Irf4-deficient T cells and leads to heart allograft rejection.
Method: In order to determine the establishment of alloantigen-specific torlerance, $Irf4^{fl/fl}$Cd4-Cre recipients from C57BL/6 background were first transplanted with BALB/c hearts and then transplanted with BALB/c and C3H skin allografts 30 days later.
Result: Heart-transplanted mice with T cell-specific IRF4 deletion were tolerant to donor-specific antigens and accepted the subsequently transplanted donor-type but not third-party skin allografts. Moreover, despite the rejection of the primary heart grafts in T cell- specific Irf4 knockout mice under immune checkpoint blockade, the establishment of donor-specific tolerance in these mice was unhindered. By tracking alloantigen-specific $CD4^+$ T cells in vivo, we revealed that checkpoint blockade restored the expression levels of the majority of wild-type T cell-expressed genes in Irf4-deficient T cells on day 6 post heart grafting, indicating the initial reinvigoration of Irf4-deficient T cells. Nevertheless, checkpoint blockade did not restore cell frequency, effector memory cell generation, and IFN-γ/TNF-α production of $Irf4^{-/-}$ alloreactive T cells at day 30 post-heart grafting.

Conclusion: Targeting IRF4 represents a potential therapeutic strategy for driving intrinsic T cell dysfunction and achieving alloantigen-specific transplant tolerance.

LBP038 THE ROLE OF POSITRON EMISSION TOMOGRAPHY (PET) IN DETECTING MICROVASCULAR TUMOR INVASION (MVI) BEFORE LIVER TRANSPLANTATION IN PATIENTS WITH HEPATOCELLULAR CARCINOMA (HCC)

Ebru Asmaz, Ebru Asmaz, Ali Özer, Remzi Emiroğlu
Acibadem Health Group

Background: MVI, is the most important factor in determining the risk of recurrence after liver transplantation in patients with HCC. However, it is difficult to determine the presence of MVI by radiological methods or biopsy in the pre-transplant period. In this study, the role of 18F-FDG uptake in PET in determining MVI before liver transplantation was investigated.
Methods/Materials: One hundred two patients who underwent liver transplantation for HCC between August 2012 and January 2018, with follow up period > 1 year were evaluated retrospectively. The relations between preoperative demographic data, compliance with Milan criteria, preoperative alfa feto protein (AFP) values, PET uptake characteristics, postoperative histopathologic features (MVI, tumor number, tumor diameter, etc.) and recurrence were examined. Also, the relation between 18F-FDG uptake of the tumor and MVI was examined.
Results: Baseline characteristics are presented in Table 1. Recurrence was detected in 16 patients (15.6%) at a minimum 1 year follow-up. There were 4 recurrences in patients within Milan, 12 recurrences in patients beyond Milan (6.5% vs 30%, $p < 0.05$). Presence of MVI and high AFP values (>400 ng/ml) were found to be effective factors in the development of recurrence ($p < 0.05$). MVI was not detected in 5 PET negative patients, whereas MVI was detected in 13 PET negative patients (13/18, 72.2%). MVI was not detected in 37 PET-positive patients, while 47 PET-positive patients had MVI (47/84, 55.9%). The relationship between positive HCC uptake and PET and MVI was not statistically significant ($p = 0.2$). However, when AFP was below 30 ng/ml (cut-off value determined by ROC curve analysis) and PET positive, it was statistically significant in detecting the presence of MVI (sensitivity: 38.9%, specificity: 84.6%, positive predictive value: 78.4%, $p < 0.05$).
Conclusion: Although PET alone is not sufficient to detect the presence of MVI, it may provide a significant prognostic prediction when evaluated with AFP together.

	n (%)	*n* (%)	Total (N)
Gender	Male 92 (90.2)	Female 10 (9.8)	102
Milan Criteria	Within 62 (60.7)	Beyond 40 (39.3)	102

LBP039 ORGAN DONATION INFORMATION ON THE INTERNET: QUALITY AND READABILITY IN ENGLISH

Mehmet Akif Yazar
University of Health Sciences, Konya Training and Research Hospital

Background: Many internet-based websites do not appear to be function as sources that the public will learn reliable information about organ donation (OD). We visited the websites related to OD and analyzed the qulity of their content and the readability of the texts in English.
Methods/Materials: OD websites were described using the search term "organ donor" or "organ donation" on Google. A relevant websites list was compiled consisting of the 100 top-ranking ".gov" websites, the top 100 ".edu" websites and the 100 top-ranking ".org" websites concerning their domain suffixes. We generated a scoring system to identify the quality of information about OD. Flesch-Kincaid Grade Formulae, FOG index, Flesch Reading Ease Test and a Fry graph tests were used to assess the readability grade.
Results: Of the 300 websites, 50 websites were eligible for evaluating. Only three (27.3%) of the relevant eleven ".gov" websites were of high quality. Seven (43.8%) of 16 ".edu" websites and only nine (39.1%) of 23 ".org" websites were deemed as being high quality.

None of them had fairly easy, easy or very easy level in terms of readability. The median readability score was 11.5 (10.25–13.50) grade level. Quality scores and readability grades were not different among the website sources containing ".edu", ".gov" and ".org" ($p = 0.795$, $p = 0.218$, respectively).
Conclusion: In the present study, the most important finding was that the content of websites related to the OD far exceeds current readability grade recommendations, and they do not have a satisfactory quality as well.

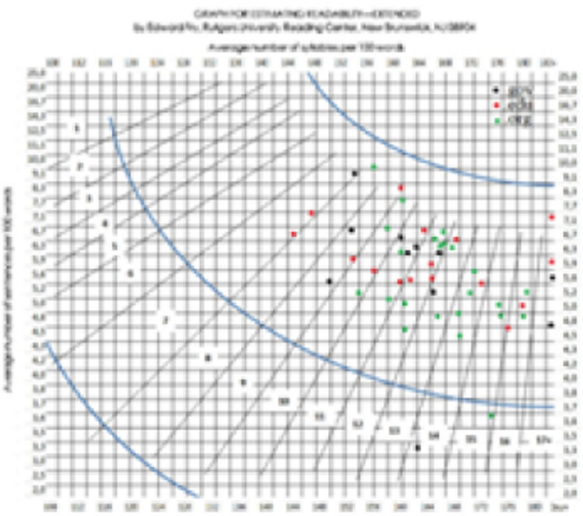


Table 1. The quality data of all website sources

	Criteria	Goverment Sites (n=11)	Education Sites (n=16)	Organization Sites (n=23)
Definitions	Organ donation	10, (76.9%)	14, (87.5%)	19, (82.6%)
	Tissue donation	7, (53.8%)	10, (62.5%)	18, (78.3%)
	Organ donor card	6, (46.2%)	8, (50.0%)	15, (65.2%)
	Brain death	5, (38.5%)	6, (37.5%)	12, (52.2%)
	Cadaveric donor	5, (38.5%)	6, (37.5%)	11, (47.8%)
	Living donor	4, (30.8%)	8, (50.0%)	20, (87.0%)
	Transplantation	3, (23.1%)	11, (68.5%)	15, (65.2%)
	FAQs	7, (53.8%)	8, (50.0%)	11, (47.8%)
Call for Donation	Donate an organ	8, (61.5%)	13, (81.3%)	21, (91.3%)
	How can I donate	8, (61.5%)	13, (81.3%)	19, (82.6%)
Audio-visual Materials	Video	7, (53.8%)	12, (75.0%)	14, (60.9%)
	Images or pictures	7, (53.8%)	12, (75.0%)	15, (65.2%)
	Story relevant to donor or recipient	6, (46.2%)	9, (56.3%)	12, (52.2%)

LBP040 THE IMPACT OF COLD ISCHAEMIA TIME ON OUTCOMES OF LIVING DONOR KIDNEY TRANSPLANTATION: A SYSTEMATIC REVIEW AND META-ANALYSIS

Stijn van de Laar, Jeffrey Lafranca, Vassilios Papalois, Frank Dor
Imperial College Renal and Transplant Centre, Hammersmith Hospital, Imperial College Healthcare NHS Trust, London

Background: Studies have investigated the effect of a longer cold ischaemia time (CIT) on the outcome of living donor kidney transplantation (LDKT). There is no unambiguous consensus as to whether it is safe to expose a living donor kidney to a longer CIT. Therefore, we performed a systematic review and meta-analysis to provide a comprehensive overview of the available literature to date and to provide more evidence around the effects of different cold ischaemia times on delayed graft function, graft survival, patient survival and the incidence of rejection after LDKT.
Methods: Searches were performed in Embase, Medline OvidSP, Cochrane CENTRAL, Web of Science and Google Scholar up to the 1st of March 2019. For this systematic review, all aspects of the Cochrane Handbook for Interventional Systematic Reviews were followed and it was written based on the PRISMA-statement. Articles comparing different CIT in LDKT and articles that included delayed graft function, graft survival, patient survival and acute rejection were considered for inclusion.
Results: Twelve-hundred articles were identified, of which two prospective cohort studies and five retrospective cohort studies were included. These studies resulted in a total number of 164.179 patients. Meta-analysis using random effects models showed significantly lower incidence of delayed graft function (OR = 1.65 with 95% CI, 1.25 to 2.19), and significantly higher 1- and 5-year graft survival (respectively, OR = 0.79 with 95% CI, 0.62 to 0.99 and OR = 0.85 with 95% CI, 0.76 to 0.96), all three favouring the CIT of less than four hours. There was no significant difference in acute rejection and patient survival.
Conclusion: Based on our results, a shorter CIT (<4 h) is associated with a significant lower incidence of delayed graft function and higher graft survival compared to a longer CIT (>4 h). We emphasize that, especially given the increasing number of kidney paired exchange transplants, and even international sharing, strategies should be developed to minimise the CIT in LDKT.

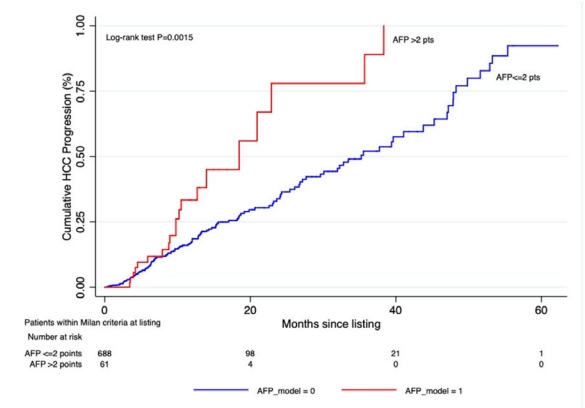
LBP041 EVALUATION OF THE AFP SCORE IN HEPATOCELLULAR CARCINOMA PROGRESSION DURING WAITING LIST AND RECURRENCE AFTER LIVER TRANSPLANTATION

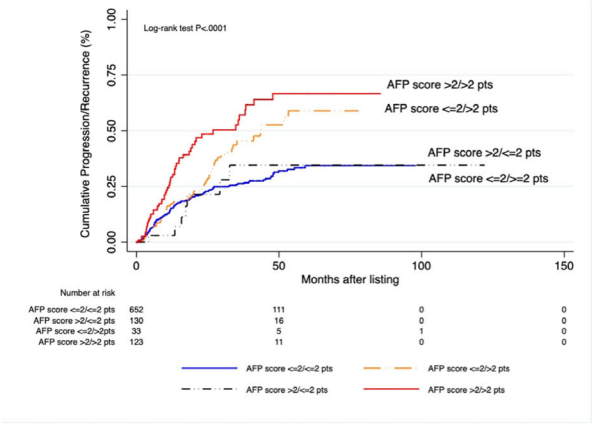
Federico Pinero[1], Christophe Duvoux[2], Ilka Boin[3], Aline Chagas[4], Emilio Quinonez[5], Sebastian Marciano[6], Mario Vilatoba[7], Adriana Varon[8], Lucas McCormack[9], Sergio Hoyos Duque[10], Agnaldo Soares Lima[11], Josemaria Menendez[12], Martin Padilha[13], Jaime Poniachick[14], Rodrigo Zapata[15], Martin Maraschio[16], Ricardo Chong Menendez[17], Linda Muñoz[18], Rodrigo Figueroa[19], Martin Fauda[1], Maria Fernanda Chaim-Correia[20], Claudia Maccali[4], Rodrigo Vergara Sandoval[5], Carla Bermudez[6], Luisa Santos[8], Margarita Anders[9], Isabel Arenas[10], Solange Gerona[21], Victor Henriquez[22], Alexandra Ginesta[15], Adrian Gadano[6], Juan Mattera[5], Elaine Ataide[20], Flair Carrillo[4], Marcelo Silva[1]

[1]Hospital Universitario Austral; [2]Hospital Henri Mondor; [3]State University of Campinas; [4]HC FMUSP; [5]Hospital El Cruce; [6]Hospital Italiano de Buenos Aires; [7]Instituto de Ciencias Medicas Salvador Ubiran; [8]Fundacion Cardio Infantil; [9]Hospital Aleman de Buenos Aires; [10]Hospital Tobon Uribe; [11]Santa Casa Belo Horizonte; [12]Hospital de Clinicas Montevideo; [13]Hospital Guillermo Almenara; [14]Hospital de la Universidad de Chile; [15]Clinica Alemana de Santiago; [16]Hospital Provado de Cordoba; [17]Hospital Carlos Andrade Marin; [18]Hospital Universitario Dr Jose E Gonzalez; [19]Sanatorio Allende - Cordoba; [20]Unit of Liver Transplantation HC - Unicamp; [21]Hospital de Clinicas Montevideo; [22]Hospital de la Universidade de Chile

The French AFP selection model has been shown to be superior in the prediction of recurrence of hepatocellular carcinoma (HCC) after liver transplantation (LT) when compared to the Milan criteria. Our objective was to evaluate the AFP score in the prediction of tumor progression during the waiting list and HCC recurrence after LT.

Methods: This multicenter and multinational cohort study conducted in Latin America included adult patients listed for LT with HCC between the years 2011–2018. Development of HCC tumor progression by RECIST 1.1 (PD) and/or post LT recurrence was evaluated as a combined primary event. A multivariable competing risk regression analysis was performed (competitive event = death or withdrawal from other causes), with Sub-Hazard Ratios (SHR) and respective 95% confidence intervals (CI 95%) calculations.





Results: Of 994 patients with HCC listed for liver transplantation, 81.9% were within Milan criteria (n = 814). Among patients within Milan, 91.6% and 8.4% had an AFP score ≤ 2 and > 2 points, respectively. While in those beyond Milan at enrollment (n = 180), 50.3% and 47.9% had an AFP score of ≤ 2 and > 2 points, respectively. Locoregional treatment on the waiting list was carried out in 54.8% of the total cohort. After last radiological re-evaluation during waiting list in which the change on the AFP score was compared, the risk of developing the combined primary event was 21.8% for those patients with an AFP score ≤ 2 points at LISTING/≤2 points at LAST evaluation, similar to those with AFP score > 2 points LISTING/≤2 points LAST (21.2%) adjusted SHR 0.65 (CI 0.32–1.34; p = 0.25), and lower than those with an AFP score ≤ 2 points LISTING/>2 points LAST (38.5%) adjusted SHR 1.54 (CI 1.13–2.08; p = 0.006) and with an AFP score >points LISTING/>2 points LAST (42.3%) adjusted SHR 1.77 (CI 1.21–2.59, p = 0.003)

Conclusion: The AFP score has been shown to be effective in categorizing the risk of post-transplant recurrence, as well as the risk of tumor progression on the waiting list.

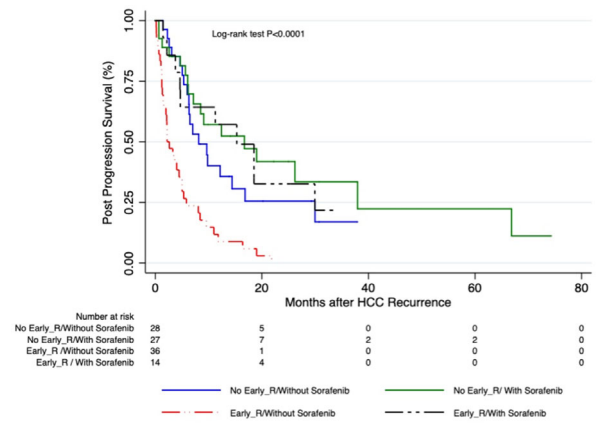
LBP042 ANALYSIS OF PROGNOSTIC AND PREDICTIVE FACTORS OF POST RECURRENCE SURVIVAL AFTER LIVER TRANSPLANTATION FOR HEPATOCELLULAR CARCINOMA: A MULTICENTER COHORT STUDY FROM LATIN AMERICA

Federico Pinero[1], Ilka Boin[2], Aline Chagas[3], Emilio Quinonez[4], Sebastian Marciano[5], Mario Vilatoba[6], Adriana Varon[7], Margarita Anders[8], Sergio Hoyos Duque[9], Agnaldo Soares Lima[10], Josemaria Menendez[11], Martin Padilla[12], Jaime Poniachick[13], Rodrigo Zapata[14], Martin Maraschio[15], Ricardo Chong Menendez[16], Linda Munoz[17], Diego Arufe[18], Rodrigo Figueroa[19], Alejandro Soza[20], Martin Fauda[21], Simone Reges Perales[22], Claudia Maccali[3], Alejandro Soza[23], Rodrigo Vergara Sandoval[4], Carla Bermudez[5], Luisa Santos[24], Isabel Arenas[9], Solange Gerona[11], Lucas MacCormack[8], Juan Mattera[4], Adrian Gadano[5], Jose Huygens Garcia[25], Flair Carrilo[3], Marcelo Silva[21]

[1]HospitI Universitario Austral; [2]State University of Campinas; [3]HC FMUSP; [4]Hospital El Cruce; [5]Hospital Italiano de Buenos Aires; [6]Instituto de Ciencias Medicas Salvador Ubiran; [7]Fundacion Cardio Infantil; [8]Hospital Aleman de Buenos Aires; [9]Hospital Tobon Uribe; [10]Santa Casa Belo Horizonte; [11]Hospital de Clinicas de Montevideo; [12]Hospital Guillermo Almenara; [13]Hospital de la Universidad de Chile; [14]Clinica Alemana de Santiago; [15]Hospital Privado de Cordoba; [16]Hospital Carlos Andrade Martin; [17]Hospital Universitario de Monterrey; [18]Sanatorio Sagrado Corazon; [19]Sanatorio Allende Cordoba; [20]Hospital Clinico Universidad Catolica de Chile; [21]Hospital Universitario Austral; [22]Unit of Liver Transplantatio HC - Unicamp; [23]Hospital Clinico Universidad Catolica de Chile; [24]Fundacion CardioInfantil; [25]Hospital Federal Universitario do Ceara

After liver transplantation, HCC have had new systemic treatment options. We aimed to assess prognostic and predictive variables of post recurrence survival in a Latin American cohort study.

Methods: Adult patients who received a first LT for HCC between years 2005–2018. Surveillance for HCC recurrence was done with triphasic imaging scans with/without alpha-fetoprotein levels every 3–6 months after transplantation. Post progression survival (or post recurrence survival) was considered as the main end-point and was analyzed from the date of recurrence diagnosis until death or last follow-up. Time to recurrence was calculated since date of transplantation to recurrence diagnosis and "early recurrence" was considered when presented during the first 12 months after transplant. Associated exposure variables with post progression survival were evaluated by a



multivariable Cox regression analysis, with Hazard Ratios (HR) and 95% confidence intervals calculated (95% CI).
Results: From a total of 1085 transplanted patients with HCC, 105 presented recurrence, with a cumulative incidence of 9.7% (CI 7.9–11.6%) during a median post transplant follow-up of 26.5 months (range 7.8–48.9 months). Median time to recurrence was 13.0 months (range 6.0–26.0 months), 47.6% ($n = 50$) presented with early recurrence. Regarding the type of tumor recurrence at diagnosis, 44.7% presented with liver involvement and 76.2% with extrahepatic metastasis (lungs $n = 36$, bones $n = 33$, other $n = 29$). Overall, treatment after recurrence was performed in 55.2% of the patients ($n = 58/105$). Independent prognostic variables at HCC recurrence diagnosis were evaluated and the only tumor factor associated with worst post progression survival was early recurrence with an adjusted HR of 1.92 (CI 1.22; 3.03). Sorafenibe and locoregional therapies were asspciate.
Conclusion: In this Latin American cohort, the only prognostic factor associated with post progression survival was early recurrence presentation. However, the effect of first line systemic treatment was independent from this worst time-point presentation.

LBP043 LIVER TRANSPLANTATION WITH NEOADJUVANT CHEMORADIATION FOR TREATMENT OF UNRESECTABLE HILAR CHOLANGIOCARCINOMA. AN EUROPEAN SERIES

Cristina Dopazo[1], Laura Llado[2], Amelia Hessheimer[3], Constantino Fondevila[4], Teresa Macarulla[5], Begoña Navalporto[6], Emilio Ramos[2], Joan Fabregat[2], Berta Laquente[7], Miquel Navasa[4], Itxarone Bilbao[1], Ramon Charco[1]
[1]Department of HPB Surgery and Transplants, Hospital Universitario Vall d Hebron, Universidad Autónoma de Barcelona, Barcelona; [2]Liver Transplant Unit, Department of Surgery, IDIBELL, Hospital Universitari de Bellvitge; [3]Department of General & Digestive Surgery, Institut de Malalties Digestives i Metabòliques (IMDiM), Hospital Clínic, CIBERehd; [4]Department of General & Digestive Surgery, Institut de Malalties Digestives i Metabòliques (IMDiM), Hospital Clínic, CIBERehd, I; [5]Department of Oncology, Hospital Universitario Vall d Hebron, Barcelona; [6]Department of Radiotherapy, Hospital Universitario Vall d Hebron, Barcelona; [7]Department of Oncology, Hospital Universitario Bellvitge, Barcelona

Background: Some results were published regarding liver transplantation (LT) for well-selected patients with unresectable hilar cholangiocarcinoma (hCCA). In 2007, we developed a multicenter (Hospital Vall'Hebron, Hospital Bellvitge, Hospital Clinic; Barcelona, Spain) protocol combining neoadjuvant chemoradiotherapy and LT for those patients with unresectable hCCA ≤ 3 cm.
Aim: To analyse the effectiveness of the neoadjuvant chemoradiotherapy and LT for those patients enrolled in the protocol including an intention-to-treat analysis.
Methods: Observational prospective multicenter study which includes patients ≤ 68 years-old diagnosed of unresectable, solitary tumors ≤ 3 cm in radial diameter, without evidence of lymph node metastases. The protocol was based on a strategy of neoadjuvant therapy with high-dose radiation (45 Gy in total) plus intravenous fluorouracil (5-FU) given as a daily bolus for the first 3 days of radiation follow by oral capecitabine until transplantation.The patient was included in waiting list for LT after operative staging if no evidence of disseminated disease was found.
Results: Between 2007 and 2018, 13 patients were enrolled in the transplant protocol. Three patients dropped out before LT: two cases due to disease progression and one death because of recurrent cholangitis. Two cases were excluded at the moment of LT after on-site finding of tumoral progression. Finally, 61% (8/13) of the patients were transplanted. The average time spent on the waiting list was 133 days (*r*: 5–202). Intent-to-treat survival was 61% and 49% at 1 and 5 years after therapy. Post-transplantation recurrence-free survival rates were 75% and 75% at one and 5 years respectively, with two recurrences observed at 2 months and 6 years post-transplant.
Conclusión: The applicability of the neoadjuvant chemoradiotherapy and LT protocol was 61% in our series with a high rate of post-transplantation recurrence-free survival after 5 years and should be considered as an alternative to resection for patients with localized node-negative hCCA.

LBP044 HISTOPATHOLOGIC ASSESSMENT OF UNUSED DONOR LUNGS: WHEN TO DECLINE OR NOT?

Arno Vanstapel[1], Birgit Weynand[2], Eric Verbeken[2], Robin Vos[2], Bart Vanaudenaerde[1], Arne Neyrinck[2], Laurens Ceulemans[2], Anna Frick[2], Dirk van Raemdonck[2], Geert Verleden[2], Stijn Verleden[1]
[1]KU Leuven; [2]UH Leuven

Donor organ shortage, in combination with a 70% decline rate of offered donor lungs, results in significant waiting list mortality. Assessing donor lungs for transplant suitability is currently based on donor's history, gas exchange, chest X-ray, bronchoscopy findings, and ultimately *in situ* visual inspection and palpation; but remains subjective. We performed a histopathologic assessment of retrieved but unused donor lungs.

We assessed 62 donor lungs declined for transplantation (2010–2019). Lungs were air-inflated, frozen, scanned with computed tomography, systematically sampled on 4 different locations, and assessed microscopically by two lung pathologists.

Twenty-two lungs (35%) were declined for non-allograft related reasons (single/lobar lung transplant, $n = 8$; logistics, $n = 6$; non-pulmonary malignancy, $n = 4$; other, $n = 4$). Three of these (14%) lungs displayed severe histologic abnormalities (emphysema, $n = 1$; pneumonia, $n = 2$), in addition to mild emphysema in 8 patients. Forty lungs (65%) were clinically declined for allograft-related reasons (pneumonia, $n = 14$; emphysema, $n = 9$; emboli, $n = 7$; contusion, $n = 4$; other, $n = 6$). In 15/40 (38%) allograft-related declined lungs, the clinical abnormality for decline could not be confirmed by histologic assessment (no histologic abnormalities, $n = 13$; moderate emphysema, $n = 1$; minor focus of bronchopneumonia, $n = 1$). In 25/40 (63%) allograft-related declined lungs, histologic assessment confirmed the clinical abnormality for decline (pneumonia, $n = 10$; emphysema, $n = 8$; contusion, $n = 2$; pulmonary vascular disease, $n = 1$; sarcoidosis, $n = 1$; fibrosis, $n = 1$; amyloidosis, $n = 1$, asthma, $n = 1$). However, in 9/25 (36%) lungs, histologic abnormalities were only considered focal and mild (mild emphysema, $n = 5$; minor focus of bronchopneumonia, $n = 4$).

Histopathologic assessment of unused donor lungs revealed discrepancy between the macroscopic reason for decline and histologic findings. Improved strategies with prior chest CT imaging combined with on-site assessment of potential donor lungs by an experienced transplant surgeon might augment current yield.

LBP045 DOES DONOR LIVER EXTRACTION TIME AFFECT EARLY ALLOGRAFT FUNCTION IN DECEASED ADULT LIVER TRANSPLANT RECIPIENTS?

Mohamed Ghazaly[1], Veena Surendrakumar[2], Rohit Gaurav[2], Navneet Tiwari[2], Pulkit Sethi[2], Christopher J. E. Watson[2]
[1]Faculty of medicine, Tanta University Egypt; [2]Transplant Unit, Addenbrookes Hospital, Cambridge, United Kingdom

Background: Recent work has identified the time taken to remove a donor liver during organ retrieval (the extraction time) as a previously unrecognized variable affecting transplant outcome. We evaluated the effect of extraction time on early graft function in our own practice in a busy liver centre.
Patients and Methods: 218 recipients of liver grafts procured by different teams both locally and nationally and transplanted at our Transplant Unit, Addenbrookes Hospital, Cambridge University between October 2014 and October 2017 were evaluated. Early graft function was assessed by the model for early allograft function (MEAF) score in both a univariate and multivariate analysis including other variables known to affect outcome such as cold ischaemia time (CIT), warm ischaemia time (WIT), operative time, and terminal donor sodium concentration.
Results: In the univariate analysis, extraction time, cold ischemia time, and warm ischemia time had a significant independent effect[CW4] on MEAF score ($p = 0.039$, 0.007, 0.044). Prolonged donor extraction time, as confirmed in multivariate analysis, was still associated with a significant increase in the MEAF score (coefficient, 0.241; 95% confidence interval, 0.052 – 0.459; $p = 0.042$).
Conclusion: Donor liver extraction time has an independent effect on early graft function in deceased donor liver transplantation. Awareness to shorten donor extraction time during liver procurement, or efforts to ensure more rapid cooling of the liver, could decrease the incidence of early allograft dysfunction and improve graft survival.

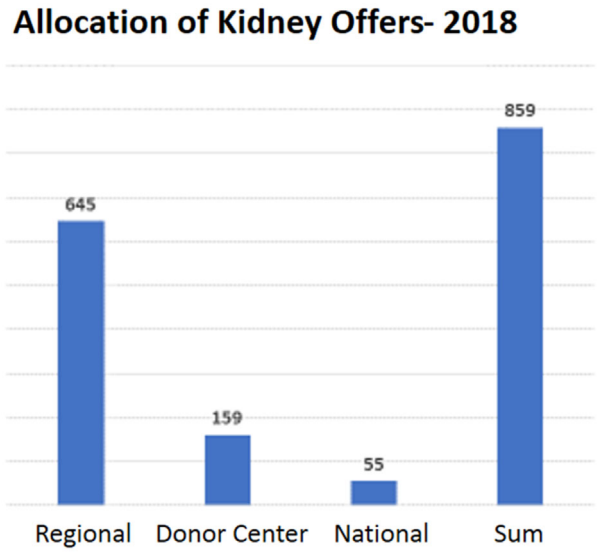
LBP046 CHALLENGES IN DECEASED DONOR KIDNEY ALLOCATION IN TURKEY- REVIEW OF 2018

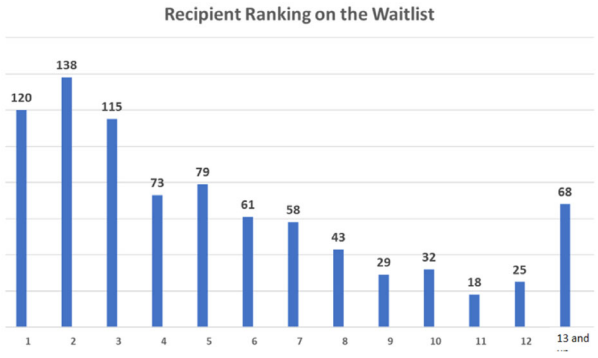
Eyup Kahveci[1], Gamze Yildirim[1], Sertac Cimen[2], Sanem Cimen[2]
[1]Turkish Transplant Foundation; [2]Health Sciences Universtiy, Diskapi Research and Training Hospital

Objective: The aim of this study is to illustrate the deceased organ allocation practice in Turkey and assess it in terms of equity and utility principles.
Method: Annual deceased donor kidney allocation data provided by the Turkish Ministry of Health was retrospectively analyzed.
Result: A total of 859 deceased donor kidneys were offered in 2018. Among these, 75% were allocated via regional coordinating system, 18.5% were allocated to the donor hospital through the prioritization protocol. Only 6.4% were offered through the national coordinating system.

In total 3962 potential recipient candidates were evaluated for these kidneys. Of these 76.9% were on the regional coordination centers'waitlists, 18.9% were at the donor centers'waitlists. Only 4.1% recipient candidates were on waitlists of other regions.

Initially, the first five recipient candidates that show up on top of the list were called in to the transplant center. The first candidate on the list received the kidney in 13.8% of the offers. The second candidate on the list received a





transplant in 16% of the offers. The initial group of five candidates received a kidney transplantation in 61.1% of the offers, whereas 38.1% of the kidneys were transplanted to a second or third set of transplant waitlist candidates. Surprisingly, the most common reasons for declining an offer were recipient related, main reason being medical unfit.
Conclusion: Only 6.4% of grafts were allocated through national allocation which might be due to a full HLA match, a pediatric recipient taking priority, an emergent indication or refusal of kidney from all regional transplant centers. This low ratio shows regional coordination centers are effective in allocating kidneys in a quick and equitable manner.

On the other hand, transplant centers are recommended to succeed in transplanting the graft to the first set of candidates that were called in for the offer. Centers should update their waitlists and maintain recipient candidate contact to improve utilization.

LBP047 THE IMPACT OF PROTON PUMP INHIBITORS (PPIS) ON MYCOPHENOLATE PHARMACOKINETICS IN KIDNEY TRANSPLANT RECIPIENTS

Mohamed Abd ElHalim[1], Ahmed S Kenawy[1], Osama Gheith[1], Mohamed Abd El Monem[1], Sara Alghanim[2], Heba Mahmoud[3], Amany Azouz[3], Raghda Sayed[3], Torki Al-Otaibi[1], Mohamed K Afifi[1]
[1]OTC kuwait; [2]Faculty of pharmacy, Kuwait; [3]Faculty of pharmacy, Beni swaif, Egypt

Background: Due to their different pharmacokinetic characteristics, the absorption of Mycophenolic acid (MPA) from Mycophenolate Mofetil (MMF) and enteric-coated Mycophenolate sodium (EC-MPS) may differ with the concomitant use of (PPIs), as MMF is formulated to be absorbed from the stomach while EC-MPS is designed for intestinal absorption.
Objective: To assess the impact of PPI (Omeprazole) on the pharmacokinetic parameters (MPA-AUC, Czero) of both MMF and EC-MPS.
Methods: Pre-dose MPA sample was collected from the participants during their outpatient visit, then, the participants received their omeprazole dose (20 mg) along with either MMF or EC-MPS on empty stomach. Two more blood samples were collected at 1.5 and 3.5 hrs post dose. MPA levels at 1.5 hr (C1.5) and 3.5 hrs (C3.5) were used in the model equation AUC (0–12) = 16.5 + 4.9 × C1.5 + 6.7 × C3.5 to predict MPA-AUC.
Results: Fifty patients have participated in each group (MMF and EC-MPS). The AUC (0–12) and Czero were 64.34 (±12.58) and 2.13 (±1.06) for MMF group and were 75.58 (±31.61) and 1.877 (±1) for EC-MPS group. No significant difference was detected between the two groups ($p > 0.05$). Regarding target AUC (0–12), 46% and 36% of MMF and EC-MPS patients were within the normal range (30 to 60 mg.hr/l), more than 50% of the patients in both groups had an AUC (0–12) higher than 60 mg.hr/l, no significant difference was found ($p = 0.15$).
Conclusion: The co-administration of Omeprazole with MMF and EC-MPS did not significantly affect the absorption of both products, suggesting that taking PPIs along with MPA medications do not alter the pharmacokinetic parameters. In the same time; the higher percentage of patients with elevated MPA levels highlighted the importance of periodical MPA level check-up to prevent any side effect associated with the use of MPA immunosuppressants.

LBP048 PNEUMOCOCCAL AND TETANUS VACCINATION IN TACROLIMUS TREATED KIDNEY TRANSPLANT RECIPIENTS WITH AND WITHOUT MYCOPHENOLATE MOFETIL: A RANDOMIZED-CONTROLLED TRIAL

Annelies de Weerd, Marieken J Verschragen, Judith A van Gestel, Wim A Dik, Michiel Betjes
Erasmus Medical Center

Background: The Dutch medical council recommends the anti-pneumococcal vaccine PPV23 for all people of 60 years and older. Tacrolimus/mycophenolate mofetil (TAC/MMF) is the current standard for immunosuppression after (kidney) transplantation. The impact of these drugs on pneumococcal and tetanus vaccination is unknown. We have performed a randomized-controlled trial in immunologically low-risk kidney transplant recipients comparing TAC/MMF with TAC monotherapy. This study provides a model to study differential effects of these drugs on vaccination responses.
Patients: Kidney transplant recipients (eGFR > 30 ml/min; proteinuria < 50 g/mol; free of depleting therapy; free of steroids) were randomized 6 months after transplantation to standard TAC/MMF or intervention TAC-mono. 63 per cent of recipients were ≥ 60 years. Twelve months after transplantation patients were vaccinated with pneumovax23 (PPV 23) and tetanus toxoid 40 IU. Serology was sampled directly before and 3 weeks after vaccination. The multiplex immunoassay measured antibody levels against 16 different common pneumococcal serotypes. If 9 or more titers were > 1 ug/ml the vaccination response was defined as protective. For tetanus this is > 0.01 IU/ml. None of the recipients had received prior anti-pneumococcal vaccination.
Results: Only 3 out 57 patients had protective anti-pneumococcal antibodies before vaccination. 42% of combined TAC/MMF treated patient had protective antibodies after vaccination, versus 77% of patients treated with TAC only ($p = 0.01$). Age and renal function had no impact on antibody responses: in multivariate analysis, only the type of the immunosuppressive regimen correlated with protective antibody levels (Expb 1.18; $p = 0.012$). The anti-tetanus titer increased 2.1 times in TAC/MMF versus 10.7 in TACmono treated recipients after vaccination ($p < 0.0001$).
Conclusion: Treatment with TAC/MMF abates antibody responses after pneumococcal and tetanus vaccination. As for PPV23 vaccination, especially the addition of MMF seriously hampers protective responses.

LBP049 TACROLIMUS MONOTHERAPY IN IMMUNOLOGICALLY LOW-RISK KIDNEY TRANSPLANT RECIPIENTS: A RANDOMIZED-CONTROLLED TRIAL

Annelies de Weerd[1], Marieken J Verschragen[2], Judith A van Gestel[1], Michiel GH Betjes[1]
[1]Erasmus Medical Center; [2]Erasmus MC

Background: Attempts to wean immunosuppressive drugs in order to diminish infection and malignancy must be balanced to prevent rejection. Tacrolimus combined with mycophenolate mofetil is the cornerstone of current immunosuppressive regimens. We have performed a randomized-controlled trial to investigate the safety of discontinuing mycophenolate mofetil.
Patients: Patients with ≤ 3 HLA mismatches with their donor and peak panel-reactive antibodies (PRA) of ≤ 4% were asked for their consent at admission. Steroids were discontinued at month 5. After a run-in period of 6 months, patients with eGFR > 30 ml/min, proteinuria < 50 g/mol and free of depleting therapy and rejection after month 3, were randomized. Standard tacrolimus with mycophenolate mofetil (TAC/MMF) was compared with the intervention: reducing by 50% at month 6 and discontinuation of MMF at month 9 after transplantation (TACmono). Once-daily tacrolimus was targeted at 5–8 ug/l trough levels in both groups.
Results: 718 patients received a kidney transplant (living and deceased donor) between August 2014 and April 2018. 24% of them met inclusion criteria. At admission, 121 patients were included. After the 6 month run-in

period 79 recipients were randomized to TACmono ($n = 38$) or TAC/MMF ($n = 41$). Baseline characteristics were similar for TACmono versus TAC/MMF with a mean recipient age of 59.6 vs 59.0 years, mean donor age of 48.5 and 48.8 years, percentage male 76% vs 71% and pre-emptive transplantation in 37% vs 34% of recipients. No allograft losses or patient deaths have occurred in 15 months follow-up. 3 TACmono and 2 TAC/MMF recipients experienced biopsy-proven acute rejection. Rejection episodes were reversible with methylprednisolone and reinitiating MMF. Renal function was non-significantly better in TACmono recipients (57.7 vs 52.4 $p = 0.2$), with similar proteinuria (17 vs 15 g/mol creat, $p = 0.6$). TAC trough levels were similar (6.44 vs 6.3, $p = 0.9$).
Conclusion: Tacrolimus monotherapy in immunologically low-risk kidney transplant recipients is safe. We are currently analyzing donor-specific antibodies.

LBP050 THE MANAGEMENT OF AORTO-ILIAC VASCULAR DISEASE IN CANDIDATES FOR KIDNEY TRANSPLANTATION: A WORLDWIDE SURVEY AMONG TRANSPLANT SURGEONS

Elsaline Rijkse, H.J.A.N. Kimenai, J.N.M.IJzermans, R.C. Minnee
Erasmus Medical Center

Introduction: Aorto-iliac vascular disease (AIVD) is becoming more common among kidney transplant (KTx) candidates resulting in technical and ethical concerns due to accompanying cardiovascular disease. We performed a survey among KTx surgeons regarding the management of patients with AIVD.
Methods: A survey was constructed and spread among 939 KTx surgeons. The survey contained baseline questions and 2 vascular complex cases where respondents could decide their management based on patient details and a contrast-enhanced CT-scan video.
Results: 147 KTx surgeons replied. 71.4% worked in a hospital where < 10 KTx/year are performed after a pre-transplant vascular intervention. High-volume centers (≥200 transplants/year) were more likely to consider KTx after such interventions ($p < 0.001$). 96% agreed that an endovascular intervention would ideally take place prior to KTx. There was no consensus concerning the timing of an open vascular intervention; 67.8% answered preferably prior to KTx and 32.2% simultaneously. 37.8% of the respondents who answered 'preferably prior to KTx' pointed out that there are no guidelines about the length of time between an open vascular intervention and KTx. The most important concern when performing a KTx in patients with AIVD was technical problems (75.4%), followed by increased operative risk (17.5%) and ethical issues of transplanting a scarce kidney in a patient with lowered life expectancy (7.1%). According to our respondents, potential KTx recipients should have a median minimal life expectancy of 10 years for a living donor KTx (IQR 5–10), and 5 years (IQR: 5–8) for a deceased donor KTx. Respondents with vascular specialty training were more likely to consider an endovascular/open vascular treatment instead of rejecting the patient ($p = 0.037$).
Conclusion: Major differences exist in the approach towards KTx candidates with AIVD. Referral to a high-volume center might increase the chance of receiving a transplant for a patient with AIVD. A consensus meeting could be considered to assure similar standard of care.

LBP051 ROLE OF RITUXIMAB FOR ISOLATED DE NOVO DONOR SPECIFIC ANTI HLA ANTIBODIES IN RENAL TRANPLANT RECIPIENTS

Antonia Schäfer[1], Sylvie Ferrari-Lacraz[2], Jean Villard[2], Karine Hadaya[3]
[1]Transplant Immunology Unit, Geneva University Hospitals; [2]Transplant Immunology Unit, Service of Nephrology, Geneva University Hospitals; [3]Service of Nephrology and Service of Transplantation, Geneva University Hospitals

Background: Post-transplant *de novo* donor-specific anti-HLA antibodies (*dn* DSA) are associated with an increased incidence of antibody-mediated rejection (ABMR) and a decreased graft survival. Nowadays, no therapeutic consensus exists for isolated *dn*DSA. To prevent further renal damage, we administered Rituximab (RTX), an anti-CD20 antibody, as a monotherapy and followed: reduction/disappearance *dn*DSA, C1q binding of *dn*DSA, renal function, histopathological lesions and patients and grafts survivals, after RTX treatment.
Method: This is a single-centre observational study retrospectively analysing the clinical, biological and histopathological data of a cohort of 25 renal transplant recipients (RTR) who required one or more intravenous infusions of RTX following the detection of *dn*DSA. The exclusion criteria were pre-transplant DSA and subclinical or clinical ABMR. Anti-HLA antibody determination was performed in all patients on D0 and at 1, 3, 6, 9, 12 months after transplantation and thereafter on an annual basis. Sera were analysed by Luminex® (LABScreenTM MIX and/or Single Antigen)and by C1qScreenTM.MFI ≥ 1'000 was chosen to define positivity.
Results: A significant depletion of anti-HLA class II *dn*DSA was observed at 6 and 12 months after RTX administration. Anti-HLA class II *dn*DSA with an initial MFI > 10'000, *dn*DSA C1q+ and/or anti-HLA class I *dn*DSA showed resistance to RTX. At 24 and 36 months post-RTX, no significant reduction in *dn*DSA was observed anymore. At 4.5 years follow-up, renal function was stable with no histological progression and with 88% graft and 100% patient survivals.
Conclusion: To our knowledge, we report the first study analysing the effects of RTX monotherapy on the evolution of isolate *dn*DSA in RTR. RTX appears to be potentially an effective immunomodulatory agent in *dn*DSA suppression in the short delay and thus helps to delay the occurrence of acute and chronic ABMR. Resistance to treatment could be attributed to specific intrinsic pathogenicity of *dn*DSA. Multiple doses of RTX may have beneficial effect on long-term *dnDSA* reduction.

LBP052 IMPACT OF SUBCLINICAL REJECTION ON KIDNEY GRAFT FUNCTION

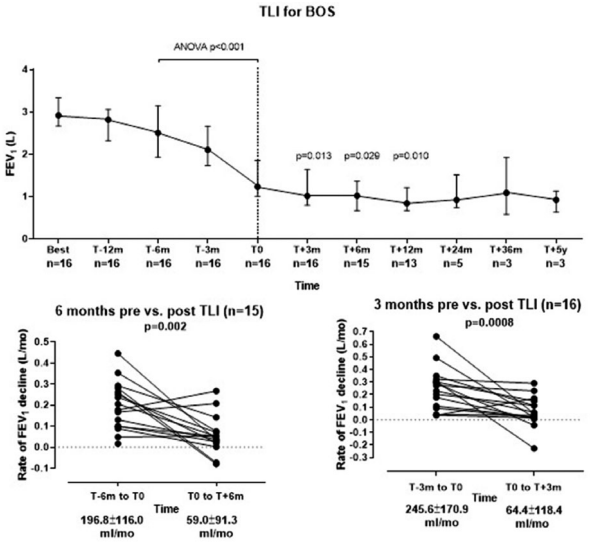
Cem Tugmen[1], Ismail Sert[1], Eyup Kebapci[1], Funda Tasli[2], Tugba Karendiz[2], Emran Kuzey Avci[1], Korhan Tuncer[2], Tulay Kilicaslan Ayna[1], Mehmet Tanrisev[1], Mustafa Olmez[1], Cezmi Karaca[3]
[1]Tepecik Education and Research Hospital; [2]Bozyaka Education and Research Hospital; [3]Kent Hospital

Background: In kidney transplant patients with borderline infiltration in which determine protocol biopsy had been demonstrated the relationship with chronic injury. The purpose of this study was to evaluate the effect of subclinical rejection (SCR) on sixth month protocol biopsy in long-term renal function in renal transplant patients with stable graft function.
Material and Methods: Transplant protocol biopsies are performed in 45 patients with stable renal function were included in this study at 6 month. Biopsy specimens were evaluated for SCR. Study groups were divided patients whether SCR or not. Renal functions were compared with pathologic evaluation. The effect of immunosuppressive regimens on renal function were evaluated in patient with SCR
Result: The median age of patients was 32 (min:18, max: 64). The median follow-up was 56 months (min:24, max:84). According to the results of the sixth months protocol biopsy; twenty (44.4%) out of 45 patients meet SCR criteria based on Banff 07 parameters. There was not a statistically significant difference in renal function with SCR.
Conclusion: The presence of SCR on the sixth month protocol biopsy in renal transplant patients with a stable graft function do not cause deterioration in the long term graft function.

LBP055 TOTAL LYMPHOID IRRADIATION IN PROGRESSIVE BRONCHIOLITIS OBLITERANS SYNDROME AFTER LUNG TRANSPLANTATION: A SINGLE-CENTRE EXPERIENCE

Janne Kaes[1], Maarten Lambrecht[2], Arno Vanstapel[2], Hanne Beeckmans[2], Gene PL Ambrocio[2], Bart M Vanaudenaerde[2], Stijn E Verleden[2], Eric K Verbeken[2], Arne P. Neyrinck[2], Dirk E. van Raemdonck[2], Geert M. Verleden[2], Robin Vos[2]
[1]KU Leuven; [2]UZ Leuven

Background: Limited results on the effects of salvage treatment with total lymphoid irradiation (TLI) in lung transplant (LTx) recipients suffering from progressive bronchiolitis obliterans syndrome (BOS) have been reported.

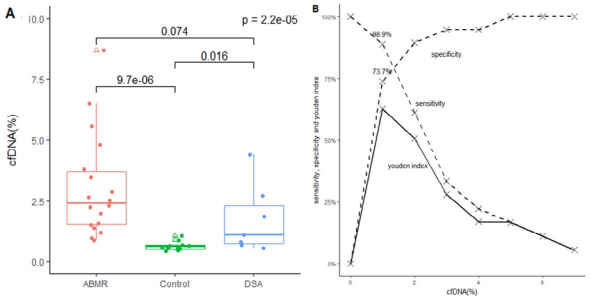


Aims: We performed a retrospective analysis of all LTx recipients who underwent TLI for progressive BOS in our centre between 1991 and 2017, focusing on long-term outcomes regarding overall survival and lung allograft function.
Results: Treatment with TLI ($n = 20$, mostly BOS stage 3) resulted in a significant attenuation of the FEV1-decline in the majority of patients, mainly in those with a rapid decline ($p = 0.0005$). This allowed bridging to redo-transplantation in 5 patients. However, 3 patients progressed from BOS to RAS following prior TLI. Long-term outcomes were acceptable, with overall survival being 44% at 2 years post-TLI and 38% after 17 years. Generally, TLI was well tolerated, with limited side-effects and no serious adverse events.
Conclusion: TLI may attenuate the decline in FEV1 of LTx recipients with rapid progressive BOS and can thus help to bridge selected patients to redo-transplantation.

LBP056 DIAGNOSTIC PERFORMANCE OF DONOR-DERIVED PLASMA CELL-FREE DNA FRACTION FOR ANTIBODY-MEDIATED REJECTION IN POST RENAL TRANSPLANT RECIPIENTS: A PROSPECTIVE OBSERVATIONAL STUDY

Huanxi Zhang[1], Longshan Liu[1], Jiali Wang[2], Chunting Zheng[3], Xirui Li[1], Qian Fu[1], Jun Li[1], Qun Su[1], Huiting Huang[1], Mingzhi Ye[3], Changxi Wang[1]
[1]Organ transplant center, the first affiliated hospital of Sun Yat-sen university; [2]Department of nephrology, the first affiliated hospital of Sun Yat-sen university; [3]BGI-Guangzhou Medical Laboratory, BGI-Shenzhen

Objectives: To evaluate the diagnostic performance of donor-derived plasma cell-free DNA (cfDNA) in discriminating antibody-mediated rejection or de novo donor-specific antibodies (DSA) without histological lesions in kidney allograft recipients.
Methods: In this prospective single center observational study, we enrolled consecutive kidney allograft recipients between November, 2016 and September, 2017 at the First Affiliated Hospital of Sun Yat-sen University. Kidney allograft recipients with antibody-mediated rejection (ABMR), de novo DSA but no histological lesions or negative DSA and stable renal function were included. The plasma cfDNA fraction was measured using a targeted, single nucleotide polymorphism (SNP)-based assay.
Results: Totally 37 consecutive patients received kidney allografts, including 19 recipients in the stable renal allograft function (non-ABMR) group and 18 recipients in the ABMR group. All patients in the ABMR group were DSA positive and 7 patients in the renal allograft function group were DSA positive but had no pathologically proven ABMR. The median donor-derived plasma cfDNA fraction was 2.4% (IQR 1.52%, 3.70%) in the ABMR group, and was significantly higher than that of the non-ABMR group (0.65%, IQR 0.57%, 0.97%; $p < 0.001$), but comparable with that of the DSA-positive patients in the non-ABMR group ($p = 0.074$). The AUC-ROC of cfDNA was 0.90 (95%CI, 0.79–0.98). When a cfDNA threshold of 1% was chosen, it had a sensitivity of 88.9% and a specificity of 73.7%. The PPV was 76.2% and the NPV was 87.5%.
Conclusions: Donor-derived plasma cfDNA fraction could discriminate ABMR and stable renal allograft function in post allograft transplant recipients. Donor-derived cfDNA fraction may aid early recognition of earlier stage antibody mediated injury.



LBP057 RENAL TRANSPLANT ANAESTHESIA: THE LEEDS WAY. AN UPDATED APPROACH TO THE PERIOPERATIVE CARE OF THE RENAL TRANSPLANT RECIPIENT

Paul Panesar, Andrew Ratcliffe, Hamish McClure, Jonathan Bilmen
Leeds Teaching Hospitals NHS Trust

Introduction: Anaesthesia for renal transplantation has traditionally involved the administration of intraoperative dopamine, furosemide and mannitol to improve graft function. There is a lack of evidence to support their use. In our centre we have changed practice and no longer routinely use dopamine and furosemide. We carried out a retrospective case note review to evaluate if there had been any change in patient outcomes.
Method: We conducted a retrospective case note analysis. 98 patients undergoing renal transplantation between August 2017 and June 2018 were identified. A comparison was carried out between patients receiving the traditional approach using intraoperative dopamine and furosemide and those receiving the updated treatment who did not receive dopamine and furosemide. We evaluated postoperative renal function of both groups by comparing preoperative eGFR (estimated glomerular filtration rate) to that at day 5 post transplant. The incidence of post-operative hyperkalaemia and need for dialysis between the 2 different groups was also analysed.
Results: Two tailed student t test analysing the differences in the day 5 post-operative eGFR and serum potassium levels between the two groups showed no significant differences between the traditional and updated techniques. Fishers exact test indicated no difference between the two patient groups in requirement for post-operative dialysis. These results suggests that the new technique is not inferior to our traditional approach. (Students t-test, 2 tail, df 94–96 for all analyses carried out, Fishers exact for dialysis $p = 0.39$)
Discussion: Our results add to the growing body of evidence to suggest there is no benefit from the use of perioperative dopamine and furosemide. Whilst we recognise the power of this study is low given the small numbers of patients reviewed, there is a signal of non-inferiority using the updated treatment protocol. The study acts as a pilot for a future larger scale investigation which is needed to conclusively determine the need for these agents in the perioperative setting.

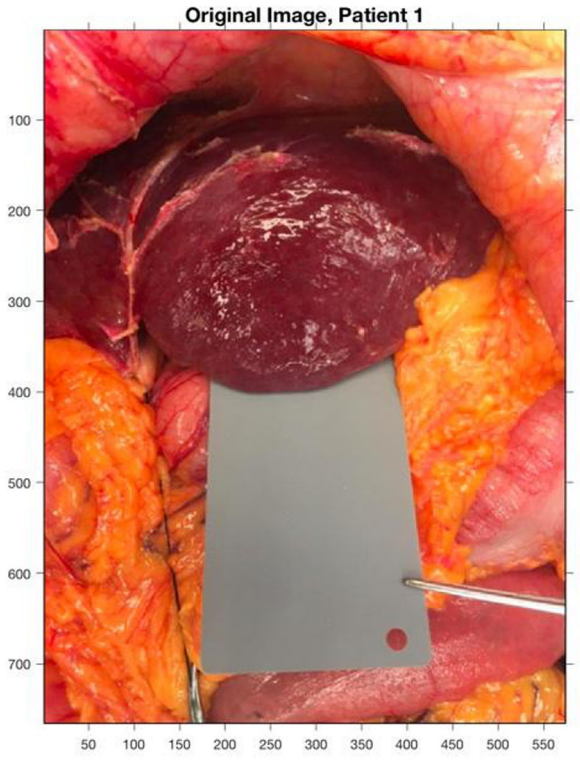
LBP058 LIVERCOLOR: AN ALGORITHM QUANTIFICATION OF LIVER GRAFT STEATOSIS USING MACHINE LEARNING AND COLOR IMAGE PROCESSING

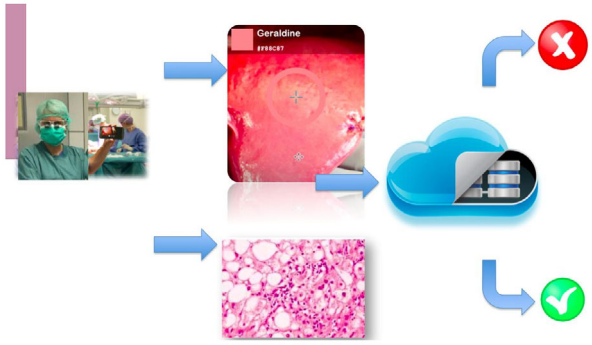
Concepción Gómez-Gavara[1], Mar Moya Giménez[2], Engineering student, Maria Teresa Salcedo[1], Gemma Piella[3], Javier Vázquez Corral[3], Rocio Martín[1], Berta Parés[1], Elizabeth Pando[1], Jose Andrés Molino[1], Cristina Dopazo[1], Mar Dalmau[1], Ernest Hidalgo[1], Mireia Caralt[1], Itxarone Bilbao[1], Ramon Charco[1]
[1]Vall d´Hebron University Hospital; [2]Universitat Pompeu Fabra; [3]Barcelona Centre for New Medical Technologies (BCN Medtech) Department of Information and Communication Technologies Universitat

Backgroung: One of the major reasons to decline liver grafts from the donor pool is macrosteatosis, which have been associated with a poor clinical outcome. Deceased liver donor acceptance is mostly based in visual inspection of the organ by the surgeon: macrosteatosic livers acquire a yellowness color. However, this criterion remains subjective and prone to errors.
Aim: To develop a machine learning system to automatically detect and quantify marcosteatosis in liver grafts to increase the pool of valid donors.
Methods: For each deceased donor, 5 pictures were taken from the liver, at a distance of 10 cm using a mobile phone with a 12-megapixel camera. The surgeon placed a sterilized flat grey checker card next to the liver to allow for color correction.

All the grafts underwent two separate tru-cut needle biopsies, one for the left lobe and the other for the right one. Steatosis was assessed based on the percentage of hepatocytes with macrovesicular steatosis as mild (< 30%) or moderate-severe (≥ 30%). Seventy-three images were finally analysed from 42 donors.

All images were color calibrated. Randomly selected liver patches from each liver were used to extract color and texture features: histograms on L*a*b* color space and Local Binary Pattern for texture. Different combinations of these features were then fed to a support vector machine classifier to predict the steatosis degree.
Results: The best learning model was obtained with the a* (i.e. red-green) chromatic channel as predictor, with an accuracy of 85.3% (98% of specificity and 69% of sensitivity).
Conclusions: Results suggest that a machine learning system using color information is a promising strategy to support the decision process for steatosis assessment for liver transplantation.





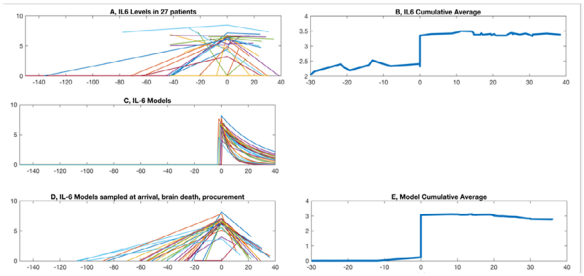
LBP059 CHRONOLOGICAL SERUM CHANGES OF NEUROIMMUNOLOGICAL MARKERS DURING BRAIN DEATH: A NOVEL MODELLING APPROACH TO BETTER UNDERSTAND TIME COURSE CHANGES AND IMPACT USING RARE SAMPLES

Kasia Bera[1], *Joel Tabak*[2], *M Letizia Lo Faro*[1], *Sergei Maslau*[1], *Rutger Ploeg*[1]
[1]*University of Oxford, Nuffield Department of Surgical Sciences;* [2]*University of Exeter*

Background: Brain death (BD) is believed to cause a progressive "cytokine storm" and thus proinflammatory environment before procurement. However, cytoprotective mechanisms have also been found and retrospective studies fail to demonstrate worse outcomes for abdominal organs after prolonged BD. To identify targets to suppress inflammation and improve outcomes, we need to better understand the dynamic changes after BD. Serum changes after BD have been studied in animals, but human data is scarce due to the nature of the donation process and rarity of sequential samples.

To test the progressive cytokine storm theory, we used samples from human BD donors combined with a novel modelling approach.

Methods: The Quality in Organ Donation UK biobank collects samples from admission to procurement in a pragmatic manner around clinical events. 27 donors with different duration of BD after intracranial haemorrhage (ICH) and without other source of inflammation were chosen. IL-6, TNF-a, C5a and NSE and GFAP (markers of cerebral injury) were measured using ELISA. Results from all patients were combined by cumulative average (Figure 1A,B for IL-6).



In parallel, we modelled 27 individual time courses to represent hypothetical changes after BD: peak (Figure 1C), constant level, step change or progressive rise. For each model, 3 random time points were chosen to mimic a sampling process (Figure 1D) and combined by cumulative average (Figure 1E). Modelled and measured cumulative averages were compared.

Results: This combined approach of modelling methods alongside measured protein levels allowed us to infer a time course using only 3 samples per donor. For all measured cytokines the best-fit models do not confirm a progressive rise.

Conclusion: We found no evidence of a progressive cytokine storm after BD due to ICH. We believe this provides not only the first analysis of chronological serum cytokine levels in human donors, but also offers a new approach to study changes over time where repeat sampling is not feasible or appropriate.

LBP061 BODY MASS INDEX AND LONG-TERM OUTCOME OF RENAL TRANSPLANT RECIPIENTS: SINGLE CENTER ANALYSIS OF 1000 TRANSPLANTS

Andrea Collini, Stefania Angela Piccioni, Simone Miccoli, Giuliana Ruggieri, Mario Carmellini
Azienda Ospedaliero-Universitaria Senese

Introduction: Patients listed for renal transplant are increasingly overweight, as well as the general population, and extensive meta-analysis studies have found a close correlation between body mass index (BMI) and the transplant outcome. Delayed graft function (DGF), acute rejection rate, perioperative mortality, new onset diabetes after transplantation (NODAT), hypertension, wound infection and incisional hernias are related to the pre-transplant body weight. Organ and patient survival is still a matter of debate.

Methods: We analyzed the outcome of 1000 renal transplants performed at our institution between year 2000 and 2019. The patients were divided into 4 groups according to the BMI at surgery: underweight with BMI $\geq$ 16.5 and $<$ 18.5, normal weight with BMI $\geq$ 18.5 and $<$ 25, overweight with BMI $\geq$ 25 and $<$ 30 and obese with BMI $\geq$ 30. We recorded the actuarial survival rate (Kaplan-Meyer) of graft and patient at 1, 3, 5 and 10 years post-transplantation and the incidence of DGF, acute rejections and complications. The post-transplantation BMI of overweight patients was also recorded for the evaluation of the response to lifestyle change indications.

Results: We identified 32 underweight, 517 normal weight, 335 overweight and 84 obese patients. The survival of patients at 3, 5 and 10 years was higher in overweight and obese groups than in the normal weight group. Only at one year we found a worse survival rate in the obese group. On the contrary the graft survival was worse at every interval in the obese (69% at 5 years, 41.3% at 10 years) as well as in the overweight group (72.9% at 5 years, 54.1% at 10 years) compared to the normal weight group (73.6% at 5 years and 55.3% at 10), after a transitory positive trend at 1 and 3 years. The complications rate was similar to the one found by other authors.

Conclusions: Our data show that a BMI above 30 is related to an increased risk of complications and delayed graft function. Graft survival rate is influenced by BMI at transplantation, unlike patient survival which seems to be better in overweight patients.

LBP062 QUALITY OF LIFE RELATED TO HEALTH AND SELF-ESTEEM IN ELDERLY PATIENTS WHO RECEIVED A HEPATIC ORTOTOPIC TRANSPLANTATION MORE THAN 10 YEARS AGO

Laura Martinez-Alarcon[1], Marta Jover-Aguilar[1], Guillermo Ramis[2], Beatriz Febrero[1], Felipe Alconchel-Gago[1], José Antonio Pons[1], César Carrrillo[1], Alberto Inocencio Hiciano Guillermo[1], Ricardo Robles[1], Pascual Parrilla[1], Pablo Ramírez[1]

[1]Hospital Clínico Universitario Virgen de la Arrixaca. IMIB-Arrixaca; [2]Universidad de Murcia. Facultad de Veterinaria

Background: Orthotopic Liver Transplantation (OLT) represents an improvement in the Quality of Life Related to Health (HRQOL) in short and medium term. However, there is little information about HRQOL in the long term after TOH and variables that influence it. Objective: to analyze HRQOL and level of self-esteem in a group of patients over 60 who received a OLT more than 10 years ago.
Methods: A transversal descriptive study was carried out in patients of the Clinical University Hospital Virgen de la Arrixaca. To evaluate HRQOL: Short Form-36 Health Survey questionnaire (SF-36), composed of: 8 individual dimensions (0–100) and two summary scores (physical and mental) (0–50). Measure level of self-esteem: Rosenberg scale (<25, 26–29 and > 30: low, medium and high self-esteem). Variables: age, sex and survival after OLT. Nonparametric analysis ($p < 0.05$) SPSS v.23.0.
Results: Analyzed 47 patients, 68% men ($n = 32$) and 32% women ($n = 15$); mean age 70.85 $\pm$ 0.98 years and mean survival years after OLT: 15.79 $\pm$ 0.78 years. Average level of self-esteem: 34.02 $\pm$ 0.51 points.

It was observed that men had higher score than women for all dimensions, with significant differences for function ($p = 0.038$) and physical role ($p = 0.007$); vitality ($p = 0.037$); social function ($p = 0.003$) and physical summary ($p = 0.024$). Regarding age, differences were obtained for function ($p = 0.012$) and physical role ($p = 0.044$). In addition, the age of the patients was negatively correlated with the dimensions of function ($p = 0.010$) and physical role ($p = 0.033$); vitality ($p = 0.030$) and physical summary ($p = 0.033$). Likewise, the survival after OLT was negatively correlated with general health ($p = 0.011$), physical summary ($p = 0.023$) and the level of self-esteem ($p = 0.043$). However, a positive and significant correlation was observed between the level of self-esteem and vitality ($p = 0.008$); social function ($p = 0.037$); mental health ($p = 0.003$) and mental summary ($p = 0.010$).
Conclusion: Patients over 60 who received a OLT more than 10 years ago presented adequate levels of HRQOL for the different dimensions, as wel

LBP064 DE NOVO INFLAMMATORY BOWEL DISEASE IN KIDNEY TRANSPLANT RECIPIENTS – REPORT OF THREE CASES

Katarina Obrencevic, Neven Vavic, Marijana Petrovic, Stanko Petrovic, Ivana Tufegdzic, Violeta Rabrenovic, Djoko Maksic, Jelena Tadic, Dejan Pilcevic

Military Medical Academy

Introduction: Inflammatory bowel disease (IBD) are not common after kidney transplantation. Development of IBD in the patient on immunosuppression is unexpected, because IBD is believed to be the result of inappropriate and ongoing activation of the mucosal immune system and immunosuppressive drugs are used in the treatment of IBD.
Case report: We describe de novo IBD in three patients 19, 11 and 7 years after kidney transplantation respectively. In all patients end-stage renal disease was due to chronic glomerulonephritis without histology verification. Family history was negative in all. They were male, age 40, 42 i 47 years respectively when diagnosis was made. Their immunosuppressive regimen included prednisone, mycophenolate mofetil and tacrolimus with a trough level between 5 and 7 ng/ml. They all developed constitutional symptoms with significant weight loss and fever, abdominal pain and cramps, diarrhoea which was in one case bloody. Infectious and other etiology was excluded. Colonoscopy showed ulcerative colitis in two patients and Crohn's disease in one. The patients with ulcerative colitis responded on maintenance therapy combined with 5-aminosalicylic acid, but one of them had common flare-ups with mild clinical picture. The patient with Crohn's disease was successfully treated with high-dose steroids.
Conclusions: We concluded that new onset of IBD can develop after kidney transplantation despite use of immunosuppressive therapy. It should be considered in all transplanted patients who develop gastrointestinal complaints. The future studies could answer why the immunosuppressive therapy is not effective for IBD in these group of patients.

LBP065 THE ANALYSIS OF APNEA TEST APPLICATION RATES OF REPORTED CASES OF BRAIN DEATH AND DONORS ACCORDING TO THE VARIABLES IN BURSA PROVINCE IN 2017

Müjgan Öztürk[1], Aslı Dübek[2], Yasemin Berkant[2], Türkan Yılmaz Ulusoy[2], Yavuz Selim Çınar[2], Atilla Satır[2]

[1]Health Sciences University Bursa High Specialized Training And Research Hospital; [2]Health Siences University Bursa High Specialized Training And Research Hospital

Objective: We aim to analyse the variables which can affect performing an apnea test for determining brain death.
Methods: In 2017, 241 brain death which were reported from 6 provinces of Bursa Organ Transplantation Coordination Center, were analysed retrospectively and the reasons for not applying apnea test at the diagnosis stage of brain death were analysed based on the variables.

Descriptive statistics of the data are indicated as frequency and percentage. Pearson chi-square test and Fisher-Freeman-Halton test were used to analyse categorical data. Significance level was $\alpha = 0.05$.Statistical analysis of the data was performed in the SPSS23.0 (IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp.) statistical package program.
Results: All 153 brain deaths reported in 2017 and 88 donor cases were included in the study. All cases were statistically analysed in terms of age, sex, length of hospital stay, forensic status, presence of additional disease and primary diagnosis which caused brain death. 39.4%(95) of the reported cases were female and 60.4% were male. The average age is 58.34.

In the overall assessment it was reported that, 44(18.25%) of 241 cases were diagnosed with brain death by two neurological examinations and apnea tests, while 57(23.65%) cases were diagnosed by neurological examination and CT angiography, 75(31.12%) cases were diagnosed by neurological examination and MR angiography, 1(0.41%) case was diagnosed with Spect, 30(12.45%) cases were diagnosed by neurological examination apnea test and CT angiography, 33(13.69%) cases were diagnosed by neurological examination, apnea test and Mr angiography, only 1(0.41%) case was diagnosed by neurological examination Apnea Test and EEG
Conclusion: Although there has been a gradual and significant increase in the number of brain death diagnosis in our country, there still are some difficulties and limitations in the diagnosis phase. In many countries around the world, apnea test, which is the common opinion on brain death diagnosis, is applied in low rates in our region.

LBP067 DELAYED VASCULAR COMPLICATIONS AFTER PANCREAS TRANSPLANTATION-A SINGLE CENTRE EXPERIENCE

Jeevan Prakash Gopal, Paul Herbert, Jeremy Crane, Frank JMF Dor, Vassilios Papalois, Anand Muthusamy

Imperial College Renal and Transplant Centre, Hammersmith Hospital, Imperial College Healthcare NHS Trust, London, UK

Introduction: Vascular complications after pancreas transplantation can be graft and life-threatening.
Methods: All pancreas transplants performed between December 2005 and June 2019 were reviewed. All pseudoaneurysms (PA), arterio-enteric fistulas (AEF), arterio-venous fistulas (AVF) were analysed retrospectively.
Results: Of the 158 pancreas transplants, 7 vascular complications in 6 patients occurred (Incidence-4.4%). Majority occurred within 6 months post-transplant [Range:46 days-7 years]. All 6 had extra-peritoneal implantation with enteric exocrine and systemic venous drainage. 2/6 received prior anti-fungal prophylaxis (Micafungin 100 mg). There were 5 PA, 1 AEF and 1 AVF. PA occurred in relation to the Y graft in all cases; AVF occurred in the stapled mesenteric root. The AEF was between the stump of previous pancreas Y graft and terminal ileum, and presented in the postoperative period after pancreas retransplantation. At the time of detection, 3 had functional grafts, 2 had failed grafts and 1 had pancreatectomy (PTX). 2/6 patients had a positive perfusion fluid culture (2-Staphylococcus species) and 1/6 had deep surgical site infection (SSI) with enterococci. Amongst 3 PA's involving the Y-graft stump, 1 was managed conservatively, two patients had PTX: 1 as an emergency and 1 after failed radiological embolisation(E). 1 PA involving the Y-Graft/ external iliac artery (EIA) needed PTX and reconstruction of EIA with graft. One with PA in both the Y-graft limbs and AVF had vascular exclusion with covered stent to EIA & E, followed by PTX. Patient with AEF had ligation of common iliac artery, resection of EIA and small bowel en-masse with a femoro-femoral cross-over graft.3/4 PTX specimens had Candida albicans in explant tissue culture, of which 1 had anti-fungal prophylaxis. 5/6 patients are alive and none of the grafts are functional.
Conclusion: Delayed vascular complications often occur in the setting of failed grafts and deep SSI. Occasionally it can happen in functional grafts. Management can be surgical (PTX) or radiological tailored to the need.

LBP068 SUCCESSFUL KIDNEY TRANSPLANTATION FROM A DECEASED DONOR TO A RECIPIENT WITH CHRONIC INTRADIALYTIC HYPOTENSION. (CLINICAL CASE REPORT)

Nikita Zhuravel[1], Aleksey Pinchuk[2], Aleksandr Kondrashkin[2], Aslan Balkarov[2]
[1]N.V.Sklifosovsky Research Institute of Emergency Medicine; [2]N.V. Sklifosovsky Research Institute for Emergency Medicine

Intradialytic hypotension (IDH) is a frequent complication in patients with chronic renal disease who are treated with hemodialysis (HD). Nowadays, there are few reports in the world literature about successful kidney transplantation (KT) with the blood pressure (BP) recovery to normal values in patients with chronic IDH.

Patient C., 51, female, was diagnosed with polycystic liver and kidney disease in 1988. In 2008, cysts of the right kidney were laparoscopically removed because of their suppuration. In June 2015, she was diagnosed with the end-stage renal disease (ESRD), in connection with which, renal replacement therapy was started using the HD. In November 2016, a video-laparoscopic bilateral nephrectomy was performed in order to rehabilitate the chronic focus of infection. After that, the average daily BP was 69/44 mmHg.

01.01.19, despite the high risk of graft loss in the early postoperative period, the patient underwent a deceased-donor KT. The time of cold ischemia of the transplant was 11 h, miss-match HLA AAB.

Correction of BP in the intraoperative period was carried out by dopamine and norepinephrine. During reperfusion BP was 105/50 mmHg. Immunosuppression was induced by administration of basiliximab and methylprednisolone, and diuresis was stimulated by furosemide.

In the postoperative period, against the background of the introduction of norepinephrine and dobutamine (canceled on the 4th day) BP was maintained at about 85/55 mmHg. Immunosuppressive therapy was prescribed - tacrolimus, mycophenolic acid, methylprednisolone. Daily diuresis remained at a level of less than 100 ml/day and HD sessions were performed untill the 34th day.

The patient's condition became satisfactory on day 70 with a BP of about 120/80 mmHg, diuresis about 1700 ml/day, creatinine 150 mmol/l and she was discharged.

Thus, refractory hypotension with a history of postponed bilateral nephrectomy, should not be considered as an absolute contraindication for KT. In our case, the KT did not only significantly improve the quality of life, but was also a lifesaving operation

LBP069 CLINICAL APPLICATION OF DIASTOLOGY IN THE 2016 ASE/EACVI RECOMMENDATIONS TO PATIENTS WHO UNDERGOING LIVING DONOR LIVER TRANSPLANTATION

Jaesik Park, Jiyoung Lee, Ami Kwon, Ho Joong Choi, Hyun Sik Chung, Sang Hyun Hong, Chul Soo Park, Jong Ho Choi, Min Suk Chae
Seoul St.Mary's Hospital

Background: The aim of this study was to compare the prevalence of diastolic dysfunction between the 2016 American Society of Echocardiography (ASE)/European Association of Cardiovascular Imaging and 2009 ASE/European Association of Echocardiography recommendations in patients undergoing living-donor liver transplantation (LDLT).
Patients and methods: A total of 312 adult patients who underwent LDLT at our hospital from January 2010 to December 2017 were retrospectively analyzed. Exclusion criteria were systolic dysfunction, arrhythmia, myocardial ischemia, and mitral or aortic valvular insufficiency.
Results: The study population was largely male (68.3%), and the median age was 54 (49–59) years. The median MELD score was 12 (6–22) points. The prevalence rates of diastolic dysfunction and indeterminate diastolic function were lower according to the 2016 recommendations than the 2009 recommendations. The level of concordance between the two recommendations was poor. The proportion of patients with a high brain natriuretic peptide level (> 100 pg/ml) decreased significantly during surgery in the normal and indeterminate groups according to the 2009 recommendations; however, only the normal group showed an intraoperative decrease in the proportion according to the 2016 recommendations. Patients with diastolic dysfunction showed a poorer overall-survival rate than those with normal function according to both recommendations. However, there was a difference in the survival rate in the indeterminate group between the two recommendations. A significant difference in patient survival rate was observed between the dysfunction and indeterminate groups according to the 2009 recommendations; however, the difference was not significant in the 2016 recommendations.
Conclusions: The 2016 classification may be better able to identify patients with a risk for diastolic dysfunction. Particularly, patients in the 2016 indeterminate group seemed to require a cardiac diastolic functional evaluation more frequently during and after surgery than those in the 2009 indeterminate group.

LBP071 ADHERENCE, SELF-EFFICACY AND ATTITUDE TOWARDS HEALTH LOCUS OF CONTROL AMONG HEART AND KIDNEY RECIPIENTS – MULTICENTER STUDY

Irena Milaniak
Andrzej Frycz Modrzewski Krakow University

The aim of the study: The measurement adherence and attitude towards health locus of control and self-efficacy among heart and kidney recipients
Methods: Adult kidney as well heart transplant patients from two centers were included to the study. Patient completed 6-item Morisky Medication Adherence Scale (MMAS-6), Multidimensional Health Locus of Control scale (MHLC) and General Self Efficacy Scale (GSES), Hospital Anxiety Depression Scale (HADS) in addiction to several socio-demographic and transplant related data.
Result: The preliminary study group consisted of 73 recipients (47 heart transplant recipients and 25 kidney recipients). The mean self-assessment of adherence was 8.6 pt. They reported moderate adherence and half of recipients reported good adherence to the immunosuppressive treatment. There was not difference between variables and kind of transplantation as well as center. The self-assessment was related to depressive symptoms ($r = -0.23$, $p < 0.05$) as well as (MMAS-6). The study group presented good attitude towards health locus of control and self-efficacy.
Conclusion: The study group was moderately adherent to treatment and depressive symptoms influenced on the adherence in this study population.

LBP072 PERFUSION-DECELLULARIZATION OF VASCULARIZED PIG STOMACHS

Louis Maistriaux[1], Lies Fievé[1], Shirley Vincent[1], Pierre Gianello[2], Benoit Lengelé[1], Jérome Duisit[1]
[1]UCLouvain, Laboratoire de Morphologie, Brussels; [2]UCLouvain, Laboratoire de chirurgie expérimentale et transplantation, Brussels

Background: Total-partial gastrectomy, congenital gastric malformations and other causes of permanent gastric size reduction may result in severe side effects and poor life quality. A bioengineered stomach transplant could thus restore a physiological transit and a digestive function, while being fully compatible. This work aim was to apply, in piglet stomachs, the "decellularization-recellularization" approach, as previously reported by our team in human and porcine composite tissues
Methods/Materials: Seven neonatal porcine stomachs were surgically harvested along with their vascular pedicle and decellularized by sequential perfusion of demineralized water, sodium dodecyl sulfate, Triton X-100, finalized by DNASe and PBS solutions.Cell clearance was evaluated by H&E and DAPI stainging and DNA quantification. Extracellular matrix preservation was assessed by Masson's Trichrome (MT), type I and type IV collagens, and laminin stainings, elastin and GAG quantification. The vascular network was evaluated with angio-CT. Finally, matrix samples were sterilized and cultured with a fibroblastic cell line and analyzed by H&E and Live/dead stainings.
Results: Stomachs were successfully decellularized, with a fast bleaching during the SDS perfusion while preserving their morphology. Nuclei were absent on H&E, MT and DAPI staining; DNA reduction was significant ($p < 0.01$). MT showed a well-preserved microscopic architecture of the mucosa, submucosa, muscularis and serosa layers. Type I, type IV collagens, and laminin were positively stained in both native and decellularized stomachs. Matrix proteins quantification revealed an increase for the collagen but a decrease for elastin and GAG. The angio-CT showed a well preserved and accessible vascular bed. Seeded fibroblasts were viable after 7 and 14 days, as shown by the Live/dead and the H&E stainings.
Conclusion: We demonstrated the ability to produce porcine stomach extracellular matrix with a preserved vascularization. This could offer broad new perspectives in organ tissue engineering at this anatomical level.

LBP073 ATTITUDE OF THE ELDERLY IN THE SOUTHEAST OF SPAIN CONCERNING LIVING DONATION

Beatriz Febrero[1], Javier Almela[2], Imaculada Ros[2], Maria Belén Pérez-Sánchez[3], Laura Martínez-Alarcón[1], José Manuel Rodríguez[1], Antonio Ríos[1], Pascual Parrilla[1], Pablo Ramírez[1]
[1]Hospital Clínico Universitario Virgen de la Arrixaca; [2]University of Murcia; [3]University of Elche

Background: To reduce the considerable organ deficit, living donation is being promoted. The aging of the population has changed some of the approaches to the organ donation and transplant (ODT) process, such as considering elderly people as potential donors. The objective of this study was to analyze the attitudes toward living donation (LD) of the elderly from the Southeast of Spain.
Method: A study was carried out with a representative sample of individuals > 65 years of age stratified by sex and geographical location of the Southeast of Spain ($n = 420$). A questionnaire was distributed to them with

questions about attitude toward living donation and other psicosocial variables. The self-administered questionnaire was completed anonymously. Statistics: SPSS database (version 21.0). Descriptive analysis, t-Student test and Chi-square test.
Results: The questionnaire completion rate was 84% (n = 351). Regarding living kidney donation (LKD), 88% (n = 310) of people favored it, although only 3% in unrelated cases. For living liver donation (LLD), 89% (n = 311) were in favor of related donation, but also only 3% were in favor if it was unrelated. The favorable attitude towards LKD and LLD are associated with having a favorable attitude to the organs of a relative (p = 0.031 and p = 0.045, respectively), having received information about ODT through television (p = 0.016; p = 0.045) and friends (p = 0.017 and p = 0.03), accepting the autopsy after death (p = 0.001 and p = 0.002), and have no interest in the scars (p = 0.015; p = 0.044). In the multivariate analysis persist as significant variables: having received information about ODT on television (Odds Ratio (OR) 2), through friends (OR 10.3), and accepting the autopsy (OR 2).
Conclusions: Related living donation is well accepted among the elderly on the Southeast of Spain. However, there is not acceptance of unrelated living donation.

LBP074 PRINCIPLES OF "ENHANCED RECOVERY AFTER SURGERY" REDUCES LENGTH OF STAY AND SEVERE COMPLICATIONS AFTER ORTHOTOPIC LIVER TRANSPLANTATION

Andreas Arendtsen Rostved, Nicolai Aagaard Schultz, Kristine Elberg Dengsøe, Carina Lund Sørensen, Lone Malling Hansen, Allan Rasmussen, Jens Hillingsø
Rigshospitalet University of Copenhagen

Enhanced recovery after surgery (ERAS) has been shown to reduce morbidity and length of hospital stay without compromising patient safety and increasing readmissions. The principles of ERAS have been applied to still more advanced procedures. In this study we report the results of implementing ERAS in liver transplant (LTx) recipients.
Material: A retrospective study of 98 consecutive patients undergoing LTx after ERAS principles during 2015 and 2016 comparing 81 patients from two previous years 2011 and 2012 was undertaken. Re- and pediatric transplant patients were excluded. Primary endpoint was length of stay and secondary complications by the Dindo-Clavien classification. Ordinal logistic regressions were done to assess complications. Multiple linear regression was used to analyze the impact of ERAS on length of stay after adjusting for predefined covariates.
Results: Patients in the ERAS group had lower admission time (22 days, 95% CI: 20–25 vs 30, 95% CI: 25–35, p = 0.005) after adjusting for age, Eurotransplant Donor Risk Index, and pre-LTx MELD. There was no difference in graft survival at one year (ERAS 90%, 95% CI 83–95% vs 95%, 95% CI: 87–98; p = 0.3). ERAS patients had fewer severe complications (coeff. -3.7, 95% CI: -1.2 to -0.1), but the same number of complications overall (coeff. -0.3, 95% CI: -0.8 to 0.2).
Conclusion: ERAS principles were safe, reduced length of hospital stay and severe complications in orthotopic liver transplantation. The principles of enhanced recovery after surgery must be applied to all surgical procedures.

LBP075 ETHICAL, LEGAL AND PSYCHOSOCIAL ASPECTS OF GLOBAL KIDNEY EXCHANGE: OPPORTUNITY OR EXPLOITATION?

Frederike Ambagtsheer[1], Franco Citterio[2], Bernadette Haase[3], Frank Dor[4], Thierry Berney[5], Emma Massey[6]
[1]Erasmus MC; [2]Università Cattolica del Sacro Cuore; [3]Dutch Transplant Foundation; [4]Imperial College; [5]University of Geneva School of Medicine; [6]Erasmus MC, University Medical Center Rotterdam

In this presentation we consider the ethical, legal and psychosocial aspects of 'Global Kidney Exchange' (GKE) proposed by Rees et al, now being carried out in a number of countries. This is the only living donor exchange programme in the world that takes financial benefits of kidney transplantation as compared to dialysis into consideration. Many organizations have raised concerns about this programme including the Council of Europe and the TTS. They state, amongst others, that GKE violates the non-payment principle and may coerce or exploit donors in low and middle income countries. We review the considerations and arguments both for and against. We argue that many of the concerns raised are broadly applicable to living donation and although they can be applied to GKE, these objections are not specific to GKE. An example includes whether or not satisfactory follow-up care can be guaranteed for donors and recipients. Donor assessment, informed consent and long-term follow-up are pertinent issues, however, not necessarily insurmountable hurdles. Recently developed tools could be further adapted for donor screening specifically in the context of GKE. Another concern raised is the potential for organ trade and exploitation. We argue that GKE may have the potential to reduce disparities in access to transplantation, and thus may contribute to the prevention of organ trafficking, rather than being a constituent of it. However, a concern remains GKE's ability to cope with states where corruption is high and where a black market in organs exists. Further exploration of and dialogue on the ethical, legal and psychological barriers, conditions and potential solutions is needed. Additionally, publication of case studies and evaluations of patients and donors who have undergone transplantation/donation through the GKE programme are needed to add insights and further refine this model.

LBP076 CASE REPORT: SERIOUS ADVERSE REACTION OF PANCREAS ADENOCARCINOMA TRANSMISSION IN CADAVERIC KIDNEY RECIPIENT - PERSPECTIVE OF A TRANSPLANT COORDINATING INSTITUTION

Ana Marija Strucl, Danica Avsec
Slovenia-Transplant, Institute of the Republic of Slovenia for Transplantation of Organs and Tissues

We present a case report of a serious adverse reaction of pancreas adenocarcinoma tumour transmission in a cadaveric kidney recipient from the perspective of a transplant coordinating institution.

With careful donor selection risk of neoplastic diseases transmission in organ donor recipients remains small but nevertheless important with potentially serious consequences for recipient. In this case donor tumour was diagnosed after donor autopsy and reported to recipient centre with final autopsy results 1 month after implantation of the kidney. After being made aware of tumour risk transmission the kidney recipient opted not to have transplant nephrectomy performed immediately. Signs of adenocarcinoma in transplant kidney were found on imaging 15 months later and recipient then opted to have transplant nephrectomy performed. Follow-up tests revealed no further metastasis and the recipient was again registered on kidney transplant waitlist. Subsequently legal proceedings were initiated by the recipient against the transplant coordinating institution and transplant centre concerning serious adverse reaction preventability. We review biovigilance and surveillance procedures involved in evaluation of this particular serious adverse reaction and discuss ethical and legal aspects of subsequent proceedings in regard to safety and quality of organ transplantation.

LBP077 ACUTE KIDNEY INJURY IN PATIENTS WITH ISCHAEMIC CHOLANGIOPATHY POST LIVER TRANSPLANTATION: THE ISCHEMIA RIPERFUSION INJURY AS A COMMON PATHOGENETIC MECHANISM

Francesca Tinti[1], Llaria Umbro[1], Romina Mancinelli[1], Antonio Franchitto[1], Paolo Onori[1], Eugenio Gaudio[1], Paolo Muiesan[2], Stefan G. Hübscher[2], Anna Paola Mitterhofer[1]
[1]Sapienza University of Rome; [2]University Hospitals Birmingham NHS Foundation Trust

Background: The damage following ischaemia-reperfusion injury (IRI) after transplant seems to play a role on the pathogenesis of local (ischaemic cholangiopathy-IC) and remote organ (acute kidney injury-AKI) complications after liver transplantation (LT). Aim of the study was to evaluate this relationship.
Methods: Sixty-two consecutive LT patients with common bile duct sample retrieved after liver graft reperfusion, before biliary anastomosis (2014–2015) were enrolled. The occurrence of post-tx IC was recorded and related to post-tx bile duct injury. The occurrence of AKI (KDIGO 2012 GL) in the first-week post-tx was also recorded. Histologic examination and immunohistochemistry of the common bile duct were conducted to evaluate bile duct injury (Biliary epithelial cell loss, Mural stroma necrosis, Inflammation, Peribiliary vascular plexus damage, Arteriolonecrosis, Thrombosis, Periluminal, and deep peribiliary glands damage), apoptosis, and proliferation of cholangiocytes in peribiliary glands.
Results: Five patients (8.1%) developed IC (4 DCD, 1 DBD). The 4 DCD patients showed severe post-tx histological damage defined as combined damage of mural stroma (necrosis > 50%), perivascular plexus and peribiliary glands (p = 0.018), longer agonal phase (25 vs 16 min, p = 0.048), asystolic phase (34 vs 27 min, p = 0.039) and dWIT (59, vs 41 min, p = 0.015), higher post-tx peak AST (328 vs 55 min, p = 0.042).

All the 5 IC patients, with median pre-tx creatinine 0.9 mg/dL, developed post-tx AKI (2 pts Stage 1, 1 pt Stage 2 and 2 pts Stage 3). No differences in apoptosis and proliferation were detected.
Conclusion: The occurrence of IC is characterized by more severe damage related to the IRI and is more frequent in DCD patients. The development of AKI, despite normal pre-tx renal function in all these patients supports the hypothesis of a common pathogenetic mechanism mediated by IRI, that acts both at the local and remote organ level.

The evaluation of VEGF and HIFs (under completion) will further clarify the underlying mechanisms.

The study was supported by ESOT Grant.

LBP078 COULD INFLUENCE MASS MEDIA AND SOCIAL MEDIA IN THE ATTITUDE TOWARD ORGAN DONATION AND TRASPLANTATION IN ELDERLY?

Javier Almela[1], Beatriz Febrero[2], Imaculada Ros[1], Antonio Pérez-Manzano[1], Felipe Alconchel[2], Laura Martínez-Alarcón[2], José Manuel Rodríguez[2], Antonio Ríos[2], Pascual Parrilla[2], Pablo Ramírez[2]
[1]University of Murcia; [2]Hospital Clínico Universitario Virgen de la Arrixaca

Background: The aging of the population has changed some of the approaches to the organ donation and transplant (ODT) process, such as considering elderly people as potential donors and candidates to trasplant. Objective: to analyze the elderly people information about ODT and the influence in their attitude about ODT.
Method: A study was carried out with a representative sample of individuals > 65 years of age stratified by sex and geographical location of the Southeast of Spain ($n = 420$). A questionnaire was distributed to them with questions about attitude and information about ODT. Statistics: SPSS database (version 21.0). Descriptive analysis, t-Student test and Chi-square test.
Results: The questionnaire completion rate was 84% ($n = 351$). The elderly people received information about ODT from several sources, the most frequent being mass media: television (82%), movies (35%), radio (30%), press (26%). Social/family means were also important, such as conversations with family members (26%) and friends (17%). Information through social media only 4% ($n = 14$). Elderly people who reported the exchange of information about ODT through conversations with family members and friends were related to a positive attitude: family (76% versus 45%, $p < 0.001$), friends (77% vs 48%, $p = 0.01$). Also those who received information through the press (62% vs 49%; $p = 0.034$).
Conclusions: Elderly receive information about ODT mainly through mass media. However, the socio-family environment is the one that most influences their attitude towards organ donation.

LBP079 KNOWLEDGE OF THE BRAIN DEATH CONCEPT IN ELDERLY

Beatriz Febrero[1], Javier Almela[2], Imaculada Ros[2], Maria Belén Pérez-Sánchez[3], Laura Martínez-Alarcón[1], Felipe Alconchel[1], José Manuel Rodríguez[1], Antonio Ríos[1], Pascual Parrilla[1], Pablo Ramírez[1]
[1]Hospital Clínico Universitario Virgen de la Arrixaca; [2]University of Murcia; [3]University of Elche

Background: The concept of brain death (BD) is not very well known in the population, and its unknown nature is one of the main factors that could lead to an attitude against organ donation. Nowadays, the elderly are a key sector of the population in organ donation. For this reason it is important to find out what they know about this concept. The aim of this study was to analyze the knowledge of the concept of BD among individuals > 65 years of age in southeast Spain and to determine the influence of other aspects relationated to organ donation.
Method: A study was carried out with a representative sample of individuals > 65 years of age stratified by sex and geographical location of the Southeast of Spain ($n = 420$). A questionnaire was distributed to them with questions about information of BD concept and other aspects about ODT. Statistics: SPSS database (version 21.0). Descriptive analysis, t-Student test and Chi-square test.
Results: The questionnaire completion rate was 84% ($n = 351$). Thirty-six percent ($n = 127$) of respondents knew the BD concept and they considered it to be the death of an individual. The knowledge of the concept of BD is not associated with other variables related with ODT ($p > .05$).
Conclusions: BD concept is not well understood among elderly as the death of an individual. It would be necessary to carry out informative campaigns about ODT in this population to sensitize about this topic.

LBP080 FIRST EXPERIENCE WITH A NEW STORAGE DEVICE FOR COLD HEART PRESERVATION

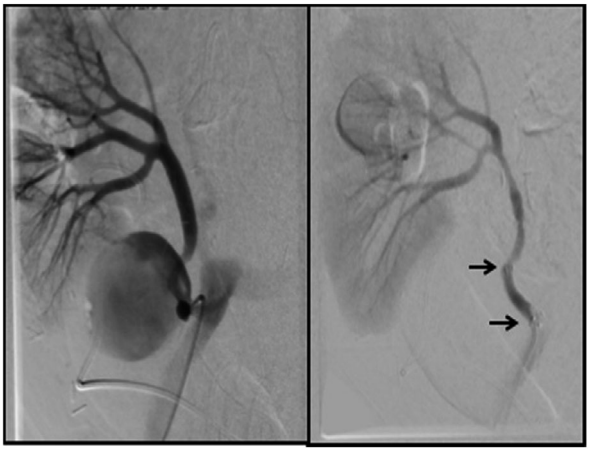
Andreas Zuckermann, Johannes Gökler, Phillip Kaiser, Enise Ceran, Nina Neuber, Günther Laufer, Arezu Aliabadi-Zuckermann
Medical University of Vienna

Background: The standard technology for heart preservation for transplantation is cold static storange on ice. No temperature control is performed routinley and therefore lower or higher temperatures can occur leading to injury of the graft. The Paragonix SherpaPak™ Cardiac Transportation System (CTS) (Paragonix Technologies, MA, USA) has been approved in Europe and the USA for clinical use. This single-use disposable device is designed for cold preservation of donor hearts. We report our first clinical experience with the SherpaPak™
Methods: Since November 2018 SherpaPak™ has been used in 6 non consecutive cases in our insitutition. Decision to use the device was done in procurements with either high risk donors, long ischemic times or both. Donor risk was calculated with both the Eurotransplant donor heart risk score and the donor heart risk index (both JHLT 2012). Recipient risk was calculated via the IMPACT score (Ann Thor Surg 2011).
Results: Median recipient age was 64.5 years. All patients were male and 50% had previous sternotomies (2 VAD patients). Median impact score was 9.5 (17% expected 1 year mortality). All donors were male with a median age of 45.5 years. Median LVEF was 55%. Median norepinephrine support was 0.11mcg/kg/min. Median ET donor risk score was 18 (40% risk of non-acceptance) and median Donor risk score was 7 (18% expected 1-year mortality). Median ischemic time was 290 min. Donor hearts were preserved at a median of 5.5C temperature. 4 Patients were successfully weaned from bypass at the first attempt with low inotropic support. 2 Patients developed primary graft dysfunction ISHLT Grade 2 and were weaned from bypass via ECMO. Bot heart recovered within 72 h and ECMO could be explanted. All patients could be extubated within 7 days fost transplant and are alive at a median of 5 months post transplant with normal graft function.
Conclusion: The Paragonix SherpaPak™ provides consistend temperature during transportation of grafts and could be successfully used with long ischemic times and high risk donor hearts.

LBP082 SUCCESSFUL ENDOVASCULAR TREATMENT OF A TRANSPLANT RENAL ARTERY PSEUDOANEURYSM: A CASE REPORT

Roberta Brambilla[1], Olatubosun Owoseni[2], Sarah Heap[2], Robert Morgan[2], Michael Gonsalves[2], Abbas Ghazanfar[2]
[1]St George's University Hospitals NHS Foundation Trust; [2]St George's University Hospital

Background history: A 55-year-old gentleman with end-stage renal failure secondary to membranous nephropathy underwent a deceased donor kidney transplant into the right iliac fossa after 3 years of hemodialysis. The donor was 14 years younger and had good renal function. Although his virology screen was negative, he had a known history of iv drug abuse. The transplanted kidney had 2 renal arteries on 1 patch. Surgery was uncomplicated and the patient was discharged on the fourth postoperative day with gradual improvement of his renal function.
Case report: Three weeks after transplantation the patient suffered from aggravating pain into the right iliac fossa and right groin associated with spikes in temperature. Blood tests revealed high inflammatory markers and an ultrasound scan showed a suspicion of renal artery pseudo-aneurysm. An urgent CT angiogram confirmed the presence of a large (35 mm) pseudoaneurysm arising from the main transplanted renal artery, its origin a few mm distal to the arterial anastomosis. The patient underwent an angiogram via a femoral percutaneous approach and the pseudoaneurysm was successfully excluded with a covered stent into the main transplanted renal artery (Figure 1). His symptoms improved dramatically straight after the procedure and his inflammatory markers declined. Blood cultures were negative. The level of β d-glucan antigen was measured and appeared positive (120 pg/ml). The patient was therefore treated with oral fluconazole and treatment dose of co-trimoxazole for 6 weeks. Follow up at 1 month with USS showed good perfusion of the kidney with complete exclusion of the pseudoaneurysm.
Discussion: Pseudoaneurysm formation after kidney transplantation is a rare but potentially very serious complication that almost always leads to graft loss. Furthermore, it is most frequently described as anastomotic. We report a quite unusual presentation of a pseudoaneurysm that was successfully excluded with endovascular technique.



LBP083 CONTINUOUS ONLINE MICRODIALYSIS AS A NOVEL TOOL FOR CONTINUOUS CREATININE MEASUREMENT AND PARENCHYMA ASSESSMENT DURING NORMOTHERMIC MACHINE PERFUSION IN A TRANSLATIONAL EX VIVO PORCINE KIDNEY MODEL

Sotirios Charalampidis[1], Sally Gowers[2], Michelle Rogers[2], Jeevan Gopal[1], Nick Housby[2], Robert Learney[2], Martyn Boutelle[2], Vassilios Papalois[1]
[1]Imperial College Renal and Transplant Centre, Hammersmith Hospital, Imperial College Healthcare NHS Trust, London; [2]Department of Bioengineering, Imperial College London, London, United Kingdom

Background: In order to maximize the organ usage from marginal donors without jeopardising transplant outcomes new methods of ex vivo organ viability assessment are on the frontier of transplantation. We report the preliminary results of a novel system based on a continuous online microdialysis analyzer allowing continuous serum and urine creatinine measurement for viability assessment of kidney transplants.
Methods: Twelve porcine kidneys where blindly divided in two groups and subjected to 24 h of static cold storage (SCS) followed by either passive increase to ambient temperature as an ischemic challenge or direct normothermic machine perfusion (NMP) by autologous whole blood and assessed with the use of the continuous online microdialysis analyzer for online monitoring of serum and urine creatinine concetrations every 60secs for a period of two hours. During that period bolus creatinine doses were administrated periodically in order to assess the ability of the continuous online microdialysis analyzer to detect difference in creatinine clearance between those two group of kidneys during the normothermic machine perfusion.
Results: On commencement of monitoring, the rise in serum and urine creatinine concetration were successfully detected within 15 mins of bolus creatinine administration in the normothermic machine perfusion circulation. Subsequently and with the use of the continuous online microdialysis analyzer we were able to obtain baseline measurements as well as continuously online monitor the gradual decrease in serum creatinine concentration as well as the increase in creatinine urine clearance following every bolum creatinine administration to the circulation.
Conclusions: This preliminary study provides the first data of a novel system for continues online measurement of serum and urine creatinine concetration during normothermic machine perfusion and validates the technique of continuous online microdialysis as a tool for organ viability assessment during preservation.

LBP084 EXPERIENCES OF BURSA PROVINCE REGARDING THE DISTRIBUTION AND ORGANISATION ON MARGINAL DONORS

Türkan Yılmaz Ulusoy, Aslı Dübek, Atilla Satır, Yavuz Selim Çınar, Yasemin Berkant, Müjgan Öztürk
Health Siences University Bursa High Specialized Training And Research Hospital

Objective: Both in our country and the world, the gradual increase in the organ awaiting patients and the need for organ transplantation has motivated clinicians to search for ways to enlarge the donor pool. This situation leads to the use of organs procured from the marginal cases. This study aims to analyse organ utilisation conditions and distribution features of the marginal donors.
Methods: All of 133 donors who were reported to have organ and tissue transplantation in Bursa Province in 2018 were analysed retrospectively and were taken into the scope of research.
Results: Between 2016 and 2018, 779 brain deaths and 338 donors were reported from the provinces of Bursa. While the mean family donation was 43.3%, three year average pmp was 20.6. In these three years 458 kidneys, 236 livers, 28 hearts and 18 lungs from the organ donors were used in the region and the nation. While the 40 of the reported donors couldn't be used due to medical reasons, 12 of them had cardiac arrest in the distribution stage.

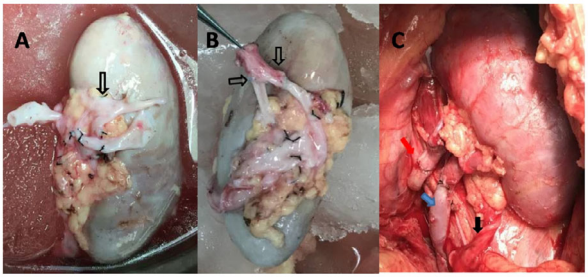
When the findings obtained are evaluated, the time between the organisation of the teams with notification time of the donors identified as Optimal or Ideal, followed by their transfer to the donor source hospital, the start of the operation and cross-clamping was determined as 8.6 h on average. Although 20% of the marginal donors couldn't be used due to medical reasons without subtraction, the average was 9.6 h.
Conclusion:

- We anticipate that, in the brain death determination process faster action in marginal donors, shortening waiting times by performing additional tests if necessary, would reduce donor losses during the distribution stage.
- We think that, to have all the examinations made that may be necessary during the detection stage regarding the donors with a high probability of being marginal donors, and renewing the training of the coordinators in this regard would be beneficial.
- Considering that extended donor criteria contribute greatly to the organ pool today, it is necessary to evaluate potential brain death cases without any discrimination.

LBP085 COMBINATION OF LAPAROSCOPIC NEPHRECTOMY AND AUTOLOGOUS ECTOPIC KIDNEY TRANSPLANTATION FOR SUCCESSFUL TREATMENT OF MALIGNANT HYPERTENSION CAUSED BY FIBROMUSCULAR DYSPLASIA: A CASE REPORT

Jun Li, Xiaojun Su, Chuxiao Chen, Jun Liao, Ronghai Deng, Chenglin Wu, Longshan Liu, Changxi Wang
The First Affiliated Hospital of Sun Yat-sen University

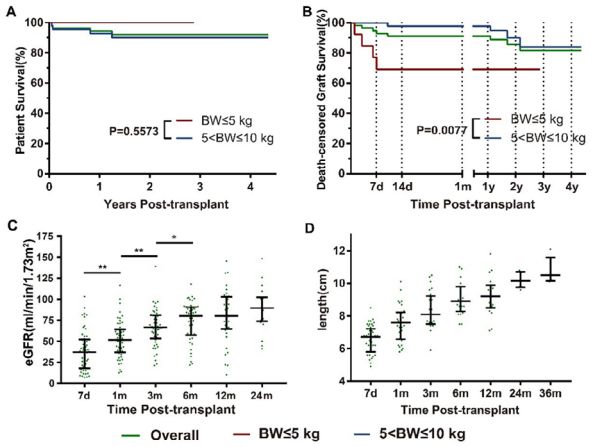
Background: Fibromuscular dysplasia (FMD) is a rare arterial wall disease that frequently leads to stenosis or aneurysm in renal artery, which may result in malignant hypertension. However, no effective treatment except increasing doses of antihypertensive drugs to control high blood pressure in FMD patients. A novel strategy should be developed to treat FMD-induced malignant hypertension.
Methods: Retrospective analysis of a case of combination of laparoscopic nephrectomy and autologous ectopic kidney transplantation for the treatment of malignant hypertension caused by FMD, follow-up and evaluation of postoperative outcomes.
Results: The patient is a 24 year-old male with malignant hypertension caused by FMD for 1 year. The estimated glomerular filtration rate (eGFR) was severely reduced. Computer tomography (CT) showed left renal artery and accessory renal artery stenosis, left renal internal artery aneurysm and surrounded collateral circulation. This patient underwent laparoscopic nephrectomy in order to minimize injuries and the left renal parenchyma was confirmed normal with intraoperative frozen section examination. *Ex vivo* repair of renal arteries with arterial reconstruction using internal iliac artery was performed. Thereafter, we performed autologous renal transplantation in left iliac fossa. After operation, the patients gradually tapered down and withdrawed antihypertensive drugs within 7 days, and the blood pressure was stable at 110–120/70–80 mmHg. The CT scan showed no abnormalities in the left renal arteries and veins, and eGFR gradually returned to normal. After 4 months of follow-up, the patient's blood pressure and renal function were stable.
Conclusion: This case shows a novel strategy of treating FMD-induced malignant hypertension with less injuries and good curative effect.
Figure 1. A) Resected kidney in a cold bath with the left artery aneurysm visible (arrow). B) Anastomosis after reconstruction (arrow). C) Kidney autotransplantation into the left iliac fossa with reconstructed renal artery (red arrow), renal vein (blue arrow)



LBP087 TRANSPLANTATION OF SINGLE SMALL PEDIATRIC DONOR KIDNEYS TO CHILDREN WITH POOR ACCESS TO TRANSPLANTATION: A TWO-YEAR OUTCOME ANALYSIS

Xiaojun Su[1], Wenjun Shang[2], Longshan Liu[1], Yonghua Feng[2], Huanxi Zhang[1], Jun Li[1], Qian Fu[1], Chenglin Wu[1], Ronghai Deng[1], Xinlu Pang[2], Guiwen Feng[2], Changxi Wang[1]
[1]The First Affiliated Hospital of Sun Yat-sen University; [2]The First Affiliated Hospital of Zhengzhou University

Background: Dialysis treatment is less than satisfactory for uremic children in China, and many of them died of infection or heart failure during dialysis. However, access to kidney transplantation by uremic children is very much limited due to lack of proper donors. Thankfully, the number of pediatric donors significantly increased since implementation of the new national deceased organ donation program. We sought to explore small pediatric kidney donors as a strategy to provide transplant opportunities for uremic children.
Methods: A total of 56 cases of single pediatric kidney transplantation (SPKT) were performed using donors weighing 3 kg to 10 kg and were retrospectively analyzed here. Estimated glomerular filtration rate (eGFR) calculated by Schwartz formula was used for renal function assessment and graft growth was measured by ultrasound examination. Kaplan-Meier method was used to determine patient and death-censored graft survival.
Results: Of 56 SPKTs included, 13 were from donor weight ≤5 Kg and 43 were from 5–10 Kg. The median body weight (BW) of donors and recipients were 7.8 Kg and 22 Kg, respectively. We observed that the graft length was



increased from 6.7 cm at day 7 to 10.5 cm at 36 months post-transplant. Estimated glomerular filtration rate was also increased till 24 months post-transplant. The 1-year and 2-year death-censored graft survival in the group where the BW was between 5 and 10 kg was 97.7% and 90.0%, respectively. But the graft survival was significantly decreased when donor BW was ≤5 kg ($p<0.01$), mainly because of higher rate of thrombosis ($p = 0.035$). Delayed graft function and urethral complications were more common in the group where the BW was ≤5 kg (Figure 1).

Conclusions: Our study suggests that SPKTs from donors weighing 5 -10 Kg to pediatric recipients is a feasible option for children with poor access to transplantation to shorten their waiting-list time and improve their quality of life.

Figure 1. Outcomes in pediatric kidney transplantation from pediatric donors (BW≤10 kg).

LBP088 SLEEP HABITS IN PATIENTS WITH HEPATIC CIRRHOSIS IN THE WAITING LIST FOR TRANSPLANTATION

Marta Jover-Aguilar[1], Laura Martinez-Alarcon[1], Antonio Martínez-Nicolás[2], Maria Ángeles Rol[2], Beatriz Febrero[1], Felipe Alconchel-Gago[1], Guillermo Ramis[3], Juan Antonio Madrid[2], Pedro Cascales[1], Francisco Sanchez-Bueno[1], Pascual Parrilla[1], Pablo Ramírez[1]

[1]Hospital Clínico Universitario Virgen de la Arrixaca. IMIB-Arrixaca; [2]Laboratorio de Cronobiología, Universidad de Murcia. Campus Mare Nostrum. IUIE. IMIB-Arrixaca; [3]Universidad de Murcia. Facultad de Veterinaria

Background: Around 50–65% of patients with liver cirrhosis report sleep disorders related to difficulties falling asleep, numerous awakenings and sleepiness during the day. Objective: to analyze the sleep habits of patients with liver cirrhosis, depending on the severity of their disease, who are on the waiting list for Orthotipic Liver Transplantation (OLT).

Methods: Transversal descriptive study. Including 16 patients with liver cirrhosis on the waiting list for OLT, at the University Hospital Virgen de la Arrixaca in Murcia (Spain), classified according to the Child-Pugh scale. Sleep quality was assessed using Pittsburgh Sleep Quality Questionnaire (PSQI). The chronotype was evaluated using the Munich Chronotype questionnaire with 6 questions. Parametric analysis using the student's test ($p<0.05$) SPSSv.23.0.

Results: The mean score for the PSQI was 9.06 ± 1.23 points; 75% of patients had sleep disturbances. The subjective quality of sleep in the severe patients tended to be lower compared with the mild ones (2.17 ± 0.44 vs. 1.00 ± 0.71; $p = 0.14$). In addition, duration in severe patients (2.00 ± 0.28 vs. 0.80 ± 0.22; $p = 0.01$) and sleep efficiency (2.17 ± 0.52 vs. 0.60 ± 0.45; $p = 0.04$) were lower. No significant differences for other items. Finally, the total score of test showed a tendency to higher scores in the severe patients respect to the mild ones (12.33 ± 2.05 vs. 6.40 ± 2.41; $p = 0.06$). For the MCTQ questionnaire, severe patients tend to initiate (01:19 ± 00:59 *vs.* 00:01 ± 00:44; $p = 0.29$) and end (08:28 ± 1:20 *vs.* 07:39 ± 00:49; $p = 0.60$) sleep later compared to mild ones, therefore, they present a delay in the sleep center (04:54 ± 00:55 *vs.* 04:22 ± 00:43; $p = 0.68$). The duration of the same tends to be lower in the severe patients (07:08 ± 00:33 *vs.* 07:38 ± 00:28; $p = 0.48$) but without significant differences in variables.

Conclusion: Severe cirrhotic patients on the waiting list show worse sleep quality, which can have a negative impact in their quality of life. However, it does not appear that the severity of the disease is related to their chronotype.

LBP091 FIRST CASE OF SIMULTANEOUS LIVING RELATED PARATHYROID AND KIDNEY TRANSPLANT IN A CHILD

Natalie Vallant[1], Manish Sinha[2], Peter Gogalniceanu[1], Moira Cheung[2], Catherine Boffa[3], Melita Irving[2], Paul Carroll[2], Jonathan Hubbard[1], Refik Gokmen[1], Nick Ware[2], Nizam Mamode[1], Nicos Kessaris[1]

[1]Guy's and St. Thomas NHS Foundation Trust; [2]Evelina Children's Hospital; [3]Portsmouth Hospitals NHS Trust

Introduction: Inherited hypoparathyroidism can lead to life threatening episodes of hypocalcaemia as well as to end stage renal failure at a young age. Parathyroid allotransplantation remains the only curative treatment, and in patients already receiving immunosuppression for renal transplantation, there is little additional risk involved. A handful of similar cases were reported previously but none in the paediatric population.

Methods: An 11 year-old girl who suffered from hypoparathyroidism and from end stage renal failure as a consequence to an autosomal dominant mutation in the calcium sensing receptor with Bartter type V (exon 7 c.2528C>A), was on heamodialysis via a right tunnelled line as well as on continuous PTH infusion via a subcutaneous pump. She simultaneously received a kidney and the right upper pole parathyroid gland from her 43 year old father. The kidney was implanted into the right iliac fossa via a rectus sparing incision. This was followed by implantation of the parathyroid gland, after dividing it into multiple 1.5mm pieces, into the exposed rectus muscle. The cold ischemia times were 5h and 7h, respectively.

Results: The kidney graft showed primary function with a Creatinine of 55 umol/l on postoperative day 3. Similarly, calcium infusions were stopped on the same day due to hypercalcaemia. Her intrinsic PTH at the time was 3 ng/l and the rate of synthetic PTH infusion via the pump was reduced on day 6 post transplantation. On day 8, after a further decrease of the PTH infusion, she remained normocalcaemic and had an intrinsic PTH level of 21ng/l and 28ng/l on day 8 and 9 respectively.

Discussion: Our case report suggests that obtaining a kidney and a parathyroid gland simultaneously is safe and feasible and has the potential to cure primary hypoparathyroidism and renal failure. In the setting of transplantation, no additional risk in terms of immunosuppression is given, and obtaining both organs from the same donor reduces the exposure to different HLA antigens and the resulting PTH secretion can protect the kidney from nephrocalcinosis.

LBP092 A MANAGEMENT OF URETERAL OBSTRUCTION AFTER LICHTENSTEIN TENSION-FREE HERNIA REPAIR IN A KIDNEY TRANSPLANT RECIPIENT

Emran Kuzey Avci, Ahmet Ergin Capar, Cem Tugmen, Ismail Sert

Tepecik Education and Research Hospital

The number of renal transplantation is increasing in recent years. Recent literature data shows that abdominal operations performed on renal transplant patients have higher morbidity and mortality. Inguinal hernias are seen in some kidney transplant recipients and they frequently require surgical treatment.

A 49-year-old man, who underwent renal transplantation 19 years ago, was admitted with frequent right groin pain and swelling. The patient underwent Lichtenstein tension-free hernia repair. Anuria has observed after the operation. It was thought that it is due to spinal anesthesia. Foley catheter was inserted, irrigated and waited for urine output. In the absence of urine output, renal ultrasound (US) was performed. It demonstrated massive hydronephrosis and serum creatinine level elevated (4.6 mg/dl). It was thought that the ureter may have been obstructed due to the first operation and all sutures and polypropylene mesh removed by local anesthesia. Urine output was not still exist, percutaneous nephrostomy catheter was inserted to normalize renal function. The patient was re-operated by genral anesthesia at 45 h after the first operation. It was observed that the ureter was ligated during high ligation. Ureter was released and no additional intervention was performed. The patient was discharged 6 days later with basal creatinine level and percutaneus nephrostomy catheter. The patient was hospitalized twice for severe urinary tract infection and urosepsis within 3 months and received appropriate treatment. Also balloon dilatation was attempted to expand the narrow ureter segment and also double j catheter was inserted.The patient is uneventful for 9 months.

In conclusion, inguinal hernia repair is seen as a safe surgical procedure but the risk of emerging urological complications is higher in patients with renal transplantation than normal patients. Using the imaging methods prior to operation to identify the anatomy of kidney and ureter may be useful. And delicate dissection of the extraperitoneal area during the operation will reduce surgical complications.

LBP094 DECEASED DONOR MANAGEMENT AND ITS ROLE IN ORGAN REGENERATION: BUT WHAT MATTERS WHEN IT COMES TO OUTCOMES? – A SYSTEMATIC REVIEW OF DONOR MANAGEMENT TRIALS

Kasia Bera[1], M Rex English[2], Akshay Shah[3], Rutger Ploeg[1]
[1]University of Oxford, Nuffield Department of Surgical Sciences; [2]Oxford Medical School; [3]Radcliffe Department of Medicine, University of Oxford

Background: The number of patients awaiting a solid organ transplant continues to exceed the number of available deceased donor organs. The period of donor management (DM) has the potential to prevent or mitigate potential organ damage before procurement, but is currently understudied.

Interventions in the deceased donor carry ethicolegal implications as any systemic treatment affects all procured organs. Any differential effects on individual organs must be reported. An overall assessment of the physiological sequelae of donor interventions in intensive care along with resource implications is also crucial.

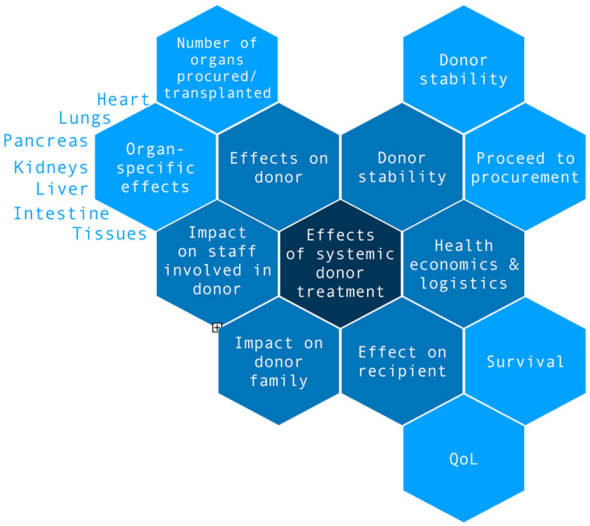
The aim of the study is to systematically review and compare published outcome measures across randomised controlled trials (RCT) of systemic DM interventions.

Methods: The study was nested in the systematic review of DM effects on long-term renal transplant outcomes (PROSPERO: CRD42018109487). Online databases, registries and conference proceedings were search for published RCT or presented research.

Results: After screening, 260 published studies were further analysed. There was variation in the definition of DM research and DM period. Most studies either studied factors relating to donor stability and/or overall number of organs procured/transplanted, or reported single organ related outcomes. Detailed data extraction from identified studies is ongoing and will provide a comprehensive picture of reported outcomes after systematic treatment. This will be compared to a theoretically defined grid of outcome themes (Figure 1).

Conclusion: Our preliminary results show that published studies have failed to select outcomes that comprehensively assess the benefits and risks of systematic treatments during DM.

This study will be the first to provide a comprehensive comparison of all previously reported DM research outcomes. This will enable future discussions regarding the development of a core outcome set for interventions during DM, allow comparison of studies, and augment the ongoing ethicolegal debate.



LBP095 CHYLOUS ASCITES AFTER LAPAROSCOPIC LIVING DONOR NEPHRECTOMY. CASE REPORT AND REVIEW OF THE LITERATURE

Valentina Bianchi, Milena Pia Cerviere, Gionata Spagnoletti, Maria Paola Salerno, Alessandro Cina, Franco Citterio, Jacopo Romagnoli
Fondazione Policlinico Universitario A.Gemelli, IRCCS, Roma, Italy

Introduction: Chylous ascites is a rare complication after laparoscopic donor nephrectomy (LDN). The management of these patients is controversial and has been changing in the last years.

Material and Methods: We report the first case of chylous ascites at our institution and review the literature for the possible treatments (conservative vs surgical).

Results: A 51 year old female living kidney donor, with a negative past medical history underwent a left hand-assisted laparoscopic nephrectomy with an uneventful post-operative course. She was discharged home on post-operative day (POD) IV on perfect conditions. On POD IX she was readmitted with fever and abdominal pain. Abdominal CT showed a big fluid collection in the nephrectomy site. A percutaneous drain was inserted and due to high output she underwent a re-exploration the next day. Treatment consisted of clipping of the open limphatic ducts, fibrin sealant application and abdominal drain positioning. Postoperatively, the patient was treated with a nil by mouth regimen, octreotide and progressive low-fat diet. She was discharged on POD 14 in satisfactory conditions. The incidence of chylous ascites in our centre is curently 1/98 (1.02%).

Conclusion: Chylous ascites is an uncommon complication after LDN. There are no guidelines available for its management. Conservative treatment can be the first line option, but surgical approach must be considered in case of high volume and/or refractary ascites in order to avoid malnutrition, immunodeficiency and donor psychological discomfort.

LBP096 ASSESSMENT OF MICRO-ANGIOPATHIES AMONG RENAL TRANSPLANT RECIPIENTS WITH POST-TRANSPLANT DIABETES MELLITUS: KUWAIT EXPERIENCE

Nashwa Farouk Othman[1], Osama Gheith[2], Torki Al-Otaibi[3], Tarek Mahmoud[3], Tarek Mahmoud[4], Heba Abduo[5], Fatma Mahmoud[5], Medhat A Halim[6], Ayman Maher[2], Faisal Al-Refaei[7], Narayanan Nampoory[6]
[1]Department of education, Dasman daibetes institute of kuwait, Community department Faculty of nursing Mansoura, Egypt; [2]Nephrology department MUNC, Mansoura, Egypt; Hamed Alessa Organ transplant center of kuwait; [3]Nephrology department, Hamed Alessa Organ transplant center of kuwait; [4]OTC kuwait; [5]DDI; [6]Nephrology department, Hamed Alessa Organ transplant center of kuwait; [7]Dasman daibetes institute

Introduction: Diabetic microangiopathies can complicate type 1 and 2 and other secondary forms of diabetes mellitus, including posttransplant diabetes mellitus.

Aim of the study: We aimed to assess the prevalence of microangiopathies among renal transplant with post-transplant diabetes.

Patients and methods: In this cross-sectional study, 210 renal transplants with PTDM were referred from Hamed Al-Essa Organ Transplant Center of Kuwait to Dasman Diabetes Institute for diabetes education. All patients were assessed regarding diabetic microangiopathies by urine analysis, for proteinuria; by electromyography and nerve conduction (EMG/NC), for neuropathy; and by fundus imaging for retinopathy. Patients' data were collected through patient identification form, results of fundus imaging and EMG/NC studies.

Results: Of 356 (25.6%) kidney transplants with PTDM, 210 cases were enrolled in this study. Most of patients were Kuwaiti (60%), men (61.9%), and with secondary school education level (44.6%). The minority was smokers (11.9%) and the original kidney disease was glomerulonephritis in 37.6% of cases. Most of patients (71.9%) were hemodialyzed pre-transplant. Cases with variable degrees of proteinuria represented 46.6% (possible diabetic nephropathy) with male predominance (67%). Patients with diabetic neuropathy proven by EMG/NC represented 37% of all cases without significant difference between Kuwaiti or non-Kuwaiti patients but with significant male predominance (63% in males vs.37% in females). Carpal tunnel syndrome was reported among 2.7% of the studied patients. Fundus imaging was found normal in the majority of patients and only 10% of cases showed retinopathy especially in Kuwaiti males (8.8% showed combined angiopathies).

Conclusion: Diabetic microangiopathies are not uncommon among renal transplant recipients with PTDM especially Kuwaiti males possibly due to long standing partially uncontrolled diabetes. Therefore, structured diabetes education is recommended for such group of patients regarding their lifestyle and blood sugar monitori

LBP097 COMPLICATIONS OF OUR NEWLY ESTABLISHED LIVER TRANSPLANTATION CENTER

Oguzhan Ozsay[1], Ufuk Karabacak[2], Gokhan Selcuk Ozbalci[1], Kagan Karabulut[1], Ismail Alper Tarim[1], Murat Derebey[1]

[1]Ondokuz Mayis University General Surgery Deparment; [2]Carsamba State Hospital

Background: Liver transplantation is the current treatment for end-stage liver failure. In this study, we aimed to share our early complications in our newly established liver transplant center.
Methods/Materials: The results and demographic data of patients who underwent liver transplantation were evaluated within 5 months following the establishment of our liver transplant center (1 Jan.-30 May 2019). The donors were selected from patients who had brain death in our center or in the surrounding centers. During harvestings, 4000 cc of University of Wisconsin solution was used. Mycophenolate mofetil, tacrolimus, everolimus and methylprednisolone were used as immunosuppressive treatment.
Results: The mean age of 11 patients(7 males/4 females) who underwent cadaveric liver transplantation was 53(31–63) years. Five patients had hepatitis B virus induced cirrhosis(HBV-C), five patients had cryptogenic cirrhosis (CC) and one had Budd-Chiari syndrome(BCS). Mean data of the patients were as follows; model end stage liver disease (MELD) score 17.8(15–24), body mass index (BMI) 27.7(20–35), cold ischemia time 9hr 25 min(5hr55min-14hr15min), hospitalization time 14.1 days(9–20), peroperative blood transfusion 9.3(2–15) units. Early postoperative radiological imaging (ultrasonography, magnetic resonance imaging, computed tomography) revealed no vascular pathology and biliary obstruction. Four patients had aspartate aminotransferase (AST), gamma-glutamyl transferase (GGT), alkaline phosphatase (ALP) elevation and nonobstructive hyperbilirubinemia. There was no mortality except for one patient who died on the 9th postoperative day(POD) due to primary graft nonfunction. One patient had stent *placement* with endoscopic retrograde cholangio-pancreatography due to bile duct stenosis. No acute rejection was observed in any patient.
Conclusion: As a new center, our mortality and morbidity rates after cadaveric liver transplantation are acceptable. According to our observation; AST, GGT, ALP elevation and nonobstructive hyperbilirubinemia were more common in elderly donor grafts.

Patient Number	1	2	3	4	5	6	7	8	9	10	11
Age	51	63	53	53	63	63	54	52	31	43	57
Gender	M	F	M	M	M	M	F	M	F	F	M
MELD Score	17	18	15	18	17	15	16	19	21	16	24
BMI	26.5	27.9	29.6	26.7	24.8	31.1	35.1	27.5	20.1	31	24.6
Cold Ischemia Time	8hr21min	8hr15min	5hr55min	13hr10min	8hr7min	12hr6min	8hr39min	7hr11min	10hr42min	7hr4min	14hr15min
Etiology	HBV-C	HBV-C	HBV-C	CC	HBV-C	CC	BCS	CC	CC	CC	HBV-C
Intraoperative Blood Transfusion	10U	12U	2U	15U	2U	14U	9U	13U	15U	2U	9U
Mortality/Complication	-	-	-	-	-	Bile Duct Obstruction (9th POD)	Primer Nonfunction (9th POD, exitus)	-	-	-	-
Donor Age	19	51	64	43	25	45	65	63	63	59	60
Hospitalization Time	15	14	17	12	11	13	9	20	20	18	13
AST (3th POD) (U/L)	52	121	196	289	60	205	10899	230	230	629	301
ALP (5-7th POD) (U/L)	44	212	88	264	85	174	219	178	178	59	201
GGT (5-7th POD) (U/L)	80	742	445	959	434	791	336	682	682	129	1019
T. Bil (7-12th POD) (mg/dL)	0.57	0.75	7.55	2.85	0.47	1.34	12.3	1.69	1.69	12	4.2

LBP098 LEVELS OF SERUM GLUCOSE CONCENTRATION AS A PREDICTIVE FACTOR FOR EARLY POSTOPERATIVE INFECTION AFTER PEDIATRIC LIVER TRANSPLANTATION

Yordanka Uzunova[1], Andrey Goncharov[1], Krasimira Prodanova[2], Lubomir Spassov[1]

[1]Sofia University "St. Kliment Ohdriski"; [2]Technical University of Sofia

Background: Infectious complications are a leading reason for morbidity and mortality in all the periods after liver transplantation (LT). Predisposing factors for them are: compromised general condition before the operation, multiple portals of entry for inoculation of microorganisms, immunosuppression, cold ischemia time, warm ischemia time and anhepatic phase, graft dysfunction, prolonged ICU stay, bowel perforation, retransplantation. The aim of our study is to find prognostic factors for appearance of infectious complications soon after LT.
Materials and methods: This research includes 35 patients up to 18 years of age, that underwent liver transplantation. We analyzed on the 5th and 10th postoperative day (POD) after LT, in association with development or lack of infectious complications in the early postoperative period (EPOP). The assessment was made using logistic regression model.
Results: Data from the 5th POD shows strong correlation: lower levels of blood sugar are interconnected with higher frequency of bacterial infections. We have found definitive statistical significance ($p = 0.02$). This built up model is reliable in 77% of all cases.
Conclusion: Based on our results, measuring glucose levels in the EPOP adds up beneficial information for identifying patients with increased risk of infections.

LBP099 KIDNEY RE-TRANSPLANT: SINGLE CENTER EXPERIENCE FROM MENA REGION

Osama Gheith, Ayman Maher Nageb, Medhat Abdulhalim, Suzann Rida, Tarek Said, Prasad Nair, Torki Alotaibi

OTC kuwait

Objectives and aim: Despite improving graft outcome over years, patients with kidney graft loss have a chance of re-transplantation which often provides the best chance for survival and good health. However, graft survival rates following re-transplantation have improved substantially in recent years. Moreover, it has been reported that the long-term survival of second transplants may be similar to that of primary transplants. Reports of re-transplantation outcomes are scarce especially in the middle east region so, we had to present our experience with second renal transplantation in Kuwait.
Patients and methods: Data of kidney re-transplant recipients - who are followed up in Hamed Al-Essa organ transplant center of Kuwait- performed at our hospital between 1980 and 2018 were retrospectively analyzed. Between the 3038 kidney transplants (KT), 198 were kidney re-transplants (6.51%). The number of KTs from living donors was 150; from deceased donors, 48 and 3rd transplants represented 15 cases. We compared 2 groups of patients according to their donor, those with living donor represented group 1 and those with deceased donor represented group 2.
Results: We observed that episodes of acute antibody mediated rejection (8 cases, 16.6% in group 2 vs. 9 cases, 18.7% in group 1respectively) and T-cell mediated rejection (15 cases, 10% in group 2 vs. 14 cases, 9.33 % in group 1 respectively) were more frequent among patients in group 2 but this did not rank to significance. Concerning 2nd graft outcome, we observed that the percentage of patients with failed grafts was significantly higher in group 2 ($p = 0.023$) while the two groups were comparable regarding patient outcome.
Conclusion: Both cadaveric and living donor renal allotransplant carry the same risk for graft rejection either AMR or ACR. Meanwhile the recipients received their kidneys from deceased donors had experienced less graft survivals, the patients' outcome were comparable.

LBP100 IMPORTANT GENE POLYMORPHISMS OF TACROLIMUS METABOLIZING ENZYMES AND P-EFFLUX PUMP IN SERBIAN KIDNEY TRANSPLANT PATIENTS

Neven Vavic, Nemanja Rancic, Viktorija Dragojevic-Simic, Bojana Cikota-Aleksic, Zvonko Magic

Military Medical Academy

Background: Tacrolimus is used for the prevention of allograft rejection in renal transplantation**.** Polymorphisms of genes encoding P-glycoprotein efflux pump (ABCB1) and most important enzymes for tacrolimus metabolism (CYP3A5, CYP3A4) have significant influence on blood concentrations of this drug and degree of tacrolimus bioavailability.
Aim: To examine the distribution of CYP3A5, CYP3A4 and ABCB1 gene polymorphism in kidney transplant patients in Serbia.
Materials and methods: This prospective cross-sectional study involved 110 patients subjected to renal transplantation in the Solid Organ Transplantation Center (Military Medical Academy). CYP3A5 A6986G (rs776746), CYP3A4 A392G (rs2740574) or *CYP3A4*22* (rs35599367 C>T in intron 6) and ABCB1 C3435T (rs1045642) genotypes were determined by TaqMan® assays.
Results: Most of our patients had diminished CYP3A5 enzymatic activity (85.5%). On the other hand, most of them had functional CYP3A4 enzyme and ABCB1 transporter (92.7% and 74.5%, respectively).
Conclusion: The most of our kidney transplant patients had non-functional CYP3A5 enzyme, functional CYP 3A4 enzyme and functional ABCB1 transporter. Further studies are in progress in order to show the influence of these gene polymorphisms, as well as other patients' characteristics on tacrolimus blood concentrations in Serbian kidney transplant recipients.

LBP101 DIFFERENT LEVELS OF ATTITUDE FOR OPT-OUT CONSENT TOWARDS ORGAN DONATION IN QATAR

Rajvir Singh[1], Varughese Betsy[2], Ayman El Menyar[2], Yousuf Al Masalmani[2], Hassan Al Thani[2]
[1]HMC; [2]HMC, Doha, Qatar

Improvement in medical science has increased opportunities to save lives and forced the demand of organ donors and compelling many countries to switchover to opt-out consent for organ donation. Opt-out consent is used in several European countries and has increased organ registration rate eight times more than opt-in system. Objectives of the study were to see role of attitude for opt-out consent towards organ donation in Qatar. A household survey was conducted using a validated questionnaire between October and November 2016. Mean levels of indices such as attitude, behavioral beliefs, and intention domains to organ donation were found more in opt out participants. Multivariate analysis showed that attitude was highly associated to opt out system whereas; knowledge, behavioral beliefs and intention were associated with opt-in system for organ donation in Qatar. Regression model was able to discriminate (AUC: 84%, 95% C.I.:81% to 87%) for opt-out consent. Future posibilities for opt-out consent were 95%, 96% and 97% at 50%, 60% and 70% attitude levels. Internal validation was performed using bootstrap method with 200 re-samples to make traditional regression model to realistic model for the population.

LBP102 THE USE OF AN INTRAPERITONEAL LAPAROSCOPIC CLEANING DEVICE TO ENHANCE OPERATIVE VISIBILITY DURING LAPAROSCOPIC DONOR NEPHRECTOMY

Jonathan Ellis, Melanie Field, Ahmed Hamsho, Nicholas Inston, Steve Mellor, Andrew Ready
Queen Elizabeth Hospital Birmingham

Background: The safety of laparoscopic donor nephrectomy (LDN) is dependent on intra-operative visibility. Even so, visibility is often impaired by contamination of the laparoscope lens, requiring scope removal for cleaning. This can occur repeatedly, interrupting the progress of dissection, and potentially compromising safety. In response to this problem, we present a series of LDNs performed using the OpClear® laparoscopic cleaning system.

Attaching to the laparoscope, the OpClear shields the lens from contamination via intelligent CO2 flow. It also delivers on-demand lens washes (via foot pedal) to remove blood or other tissue particles, maintaining continuous vision without scope removal.
Methods/Materials: Between August 2017 and June 2019, 84 patients, underwent hand-assisted laparoscopic donor nephrectomy (HALDN) using the OpClear. Inclusion was by chronological presentation. Intra-operative OpClear usage was recorded by the device hard-drive. Each wash episode represented a point otherwise requiring scope removal. Additional outcomes were recorded prospectively.
Results: 84 patients (Male to Female ratio = 44:40; Mean age 48yrs (24–74); Mean BMI 27.3 (18.9–34.8); Left-sided nephrectomy = 81) underwent HALDN, by 5 surgeons, including 1 trainee. The mean duration of operation was 108 mins (range 47–199) while the mean number of recorded OpClear scope washes per case was 14.78 (range = 1–78). All cases were completed successfully, and there were no open conversions or OpClear-related adverse events.
Conclusion: In this series of HALDNs, the OpClear system provided effective intra-abdominal lens clearing, avoiding some 15 scope removals per case, along with the disruption to operative progress. In all cases, excellent visibility was maintained, notably during critical stages, e.g. vascular divisions. The OpClear system proved safe with no effect observed from the additional insufflation produced. The system is well-accepted by theatre staff, provides excellent support for surgical training and is now a standard in our HALDN protocol.

LBP103 FACTORS INFLUENCING FAMILY CONSENT FOR ORGAN DONATION IN QATAR

Rajvir Singh[1], Varughese Betsy[2], Yousuf Al Maslamani[2], Ayman El-Menyar[2], Hassan Al Thani[2]
[1]HMC; [2]HMC, Doha, Qatar

Consent rate and organ donors are co-linear to each other. Study assesses influence of socio-demographic and behavioral factors towards family consent rate for organ donation in household population, Qatar. 1044 subjects of age 18 years and above were enrolled between October and November, 2016. A validated questionnaire was used to collect data through face to face interview by trained interviewers. 532 (51%) subjects, average age 38.9 $\pm$ 10.5 years, were agreed to family consent for organ donation. 479/532 (90%) of the subjects were higher secondary and above educated. The consent was more in those who heard about organ donation (87.8%) and donated any organ blood/tissue (32%) than those who do not heard (83%) and not donated any blood/tissue (26%), $p <= 0.05$ (for both). Knowledge (0.48 $\pm$ 0.14 vs 0.44 $\pm$ 0.16, $p = 0.001$), attitude (0.93 $\pm$ 0.60 vs 0.47 $\pm$ 0.65, $p = 0.001$), behavioral belief (0.49 $\pm$ 0.46 vs 0.35 $\pm$ 0.47, $p = 0.001$) and intention to organ donation (0.40 $\pm$ 0.31 vs 0.18 $\pm$ 0.28, $p = 0.001$) indices were more in those who agreed to family consent. Multivariate logistic regression analysis showed that attitude (aOR: 1.73, 95% C.I.: 1.28–2.34, $p = 0.001$) and intention to organ donation (aRO: 7.50, 95% C.I.: 4.04–13.92, $p = 0.001$) were associated to improve the consent whereas; control belief was negatively associated. Model was able to discriminate (C: 0.74, 95% C.I.: 0.71–0.77, $p = 0.001$) between agreed for family consent and those who did not. Factors knowledge, attitude and intention to organ donation were found associated to family consent to increase organ donors in the study.

LBP104 USE OF IMLIFIDASE (IDES) IN RENAL TRANSPLANTATION FOR HIGH STRENGTH DONOR SPECIFIC ANTIBODY/POSITIVE CROSSMATCH: UK'S 1ST CASE

John Black, Tahir Doughman, Anna Rizzello, Mohamed Morsy, Peter Topham, Os Iyasere, Shafi Malik, Paul Dunn, Maria Martinez, Amy Page, Atul Bagul
Leicester General Hospital, University Hospitals of Leicester

Introduction: IdeS is an endopeptidase derived from *Streptococcus pyogenes* which has high specificity for human IgG, resulting in its rapid cleavage. High level DSA with a positive cross-match is a contra-indication to transplantation resulting in hyper-acute rejection.
Methods: Single centre experience with a highly sensitised (CRF 100%, match score 0; total MFI>160,000; 10 DSA against potential donors 11 HLA) potential renal transplant recipient (age 29). Recipient had failing PD (sCr 1600), and no clear vascular access options because of complete central vein stenosis. Potential live donor 34, M normal renal function. Recipient received IdeS 2 doses within 48 h of transplant.
Discussion: Pre-op cross-matches were positive. After the second IdeS dose CDC cross-matches were negative and DSA reduced significantly to below cut off (total combined Class I MFI = 6183 and Class II MFI = 1653). Patient underwent transplant in LIF over a permcath, which was placed 1 week prior, with plasty to the Left CIV and IVC, to facilitate planned plasma exchange (PEX). A clot in EIV vein around the permcath had to be dealt with at time of transplant. Patient developed immediate primary function with reduction of sCr from 495 to 321. Day 2 post op, urine output tailed off; the kidney remained perfused on USS. The DSA rebounded and patient developed a TMA. Patient was immediately commenced on standard therapies for AMR (IVIG, PEX, Rituximab). As DSA titres continued to rise, Eculizumab therapy was commenced on day 5. Patient underwent Splenectomy day 10 as DSA continued to rise. Follow up involved daily USS. On day 14 USS showed poor perfusion and biopsy confirmed AMR. Patient underwent transplant Nephrectomy on day 15.
Conclusion: IdeS generated a potential window to facilitate a transplant avoiding hyperacute rejection. Management of rebounding DSA was a major obstacle and current management protocols were inadequate. As ongoing AMR treatment continues to evolve, this may form a standard to assist in desensitisation to allow a lifesaving transplants of super-sensitised patients.

LBP105 FIRST CASE REPORT OF KARTAGENERS SYNDROME TO UNDERGO SUCCESSFUL BILATERAL LUNG TRANSPLANTATION FROM INDIA

Vijil K Rahulan, Suresh Sagadevan, Apar Jindal, Pavan Yadav, Sandeep Attawar, Govini Balasubramani, Prabhat Dutta
Gleneagles Global Health city

Case history: 32 years old married female k/c/o Kartageners syndrome, presented with severe respiratory distress. She was evaluated by a multidisciplinary team and recommended lung transplantation.
Investigation: HRCT revealed bilateral cystic bronchiectasis, dextrocardia and pan sinusitis. Spirometry was suggestive of mixed pattern. Six minute walk distance was only 90m with desaturation upto 54%. 2D Echo showed situs inverses, dextrocardia, Grade II TR with severe Pulmonary Hypertension (PASP = 115 mmHg), dilated RA/RV with bilateral SVC. Right Heart study revealed PA mean of 36 mmHg with, capillary wedge pressure of 24 mmHg.
Treatment: She underwent an ABO and size matched bilateral sequential lung transplant after adequate physical, nutritional and mental rehabilitation. Situs inversus totalis presented with multiple anesthetic and surgical challenges during the transplant. In view of smaller right thoracic cavity size due to cardiac apex being on the right side, right lower lobectomy was done to accommodate donor lung. She was shifted to ICU, extubated on Day 2 and subsequently discharged to ward on Day 5. Triple immimmunosuppression was initiated with mycophenolate, steroid and tacrolimus under cover of appropriate anti-infective prophylaxis. She was discharged from the hospital and is under regular follow up.
Discussion: Lung transplant for kartageners syndrome is treatment of choice for patients with end stage bronchiectasis and respiratory failure. It presents with immense surgical challenges and requires modification of technique in view of situs inversus and inverse antero-posterior relationship of the bronchi

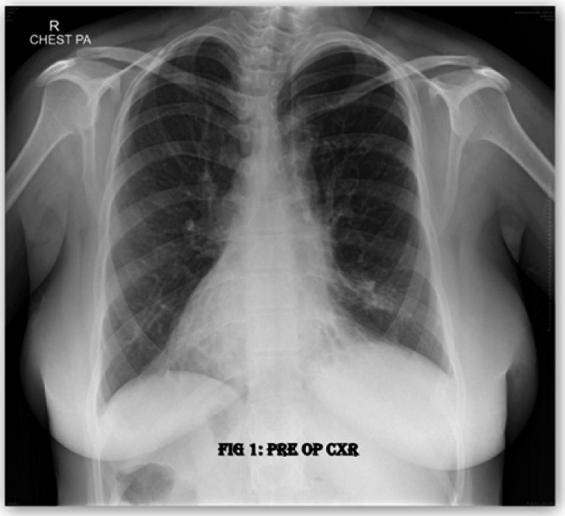


FIG 1: PRE OP CXR

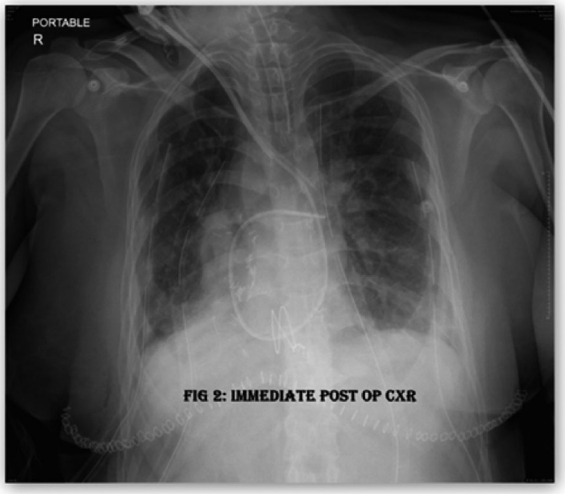


FIG 2: IMMEDIATE POST OP CXR

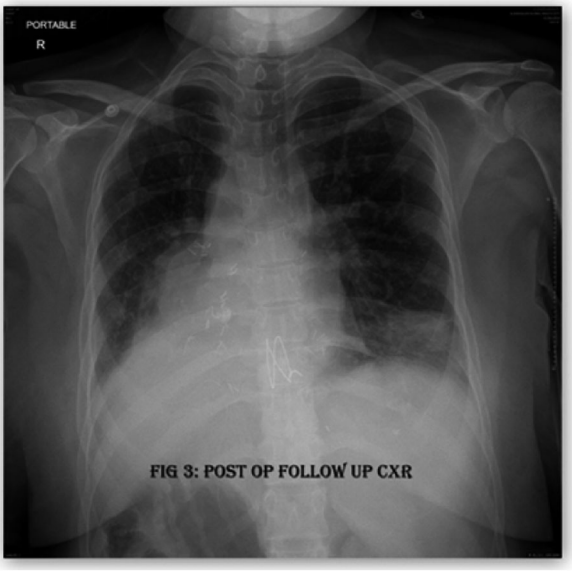


FIG 3: POST OP FOLLOW UP CXR

and pulmonary vessels at the hilum. Customization and expertise in doing lobar lung reduction and implantation is required in such case.
Conclusion: Bilateral lung transplant is a viable option for patients suffering from Kartagener's syndrome and respiratory failure. As per literature search this is the first case report of Kartageners syndrome to undergo lung transplantation from India.

LBP106 INITIAL EXPERIENCE OF ORGAN PROCUREMENT FROM POSSIBLE DONORS AFTER BRAIN DEATH IN THE UNITED ARAB EMIRATES AND CHALLENGES AHEAD

Iman Alshamsi[1], Ananthanayagi Purush[1], Mohamed Al Seiari[1], Muhammad Badar Zaman[1], Siddiq Anwar[2], Hussain Alawadhi[3], Michele Kigozi[4], Fayez Alshamsi[5], Ali Al Obaidli[6]
[1]Sheikh Khalifa Medical City; [2]SEHA Dialysis Services; [3]Mafraq Hospital; [4]Mediclinic; [5]UAE University; [6]SEHA

Background: Donation after brain death (DBD) program started in 2017 after UAE Federal Law enactment on organ donation in 2016. Deceased organ donation is based on an opt-in policy and require explicit consent of the next of kin. We hereby summarise the organ donation activity in the UAE from its start in 2017 to April 2019.
Methods: Possible donors after brain death (psDBD) are those whose neurological condition is suspected to fulfil brain death criteria, while potential donors are those who are suspected to fulfil brain death criteria. psDBD who satisfy legal criteria for brain death are considered Eligible DBDs (EDBDs) while patients in whom consent is obtained from NOK and from whom an organ is retrieved for the purpose of transplantation are Actual DBD (ADBD).
Results: A total of 107 psDBDs were identified from July 2017 until April 2019. Demographics of psDBD are illustrated in Figure 1. 90/107 of psDBD (84%) were adults with an average age of 42.9 SD +/- 14.3 years. 81% of them were males. 18 (16.8%) were Emiratis, 15 (14%) were non Emirati Arabs, while 73 (68.2%) were non Arabs. Among all psDBD (69.1%). 27 out of 107 psDBD were unsuitable for donation mainly due to malignancy, infection, or that they did not meet criteria for brain death. The main potentially modifiable factor to increase procurement in potential donors is family consent as 38 out of the 80 (47.5%) potential DBD were not acceptable for donation due to NOK refusal. Other factors include late referral, visitor transferred to home country, lack of EEG machine, CT perfusion, or neurologist.
Conclusion: This abstract highlights the scale of challenges the program to grow in the country. It also highlights the very unique demographic of the country were 90% resident population which is expatriate and hence the need for new solutions to help tackle the unique challenge.

PDBD	107
Adults' average age(in years) +/- Standard Deviation	42.9 +/- 14.3
Possible Paediatric Donors	17
Male	87
Nationality	
Emirati	18
Non Emirati Arab	15
Non Arabs	73
Missing Data	1
Cause of Death	
Intracerebral hemorrhage / Subarachnoid hemorrhage	44
Traumatic Brain Injury	30
Hypoxic Brain Injury	17
Others	16

Table 1: Demographics and Causes of death in possible donors reported to the organ procurement organization (OPO)

LBP107 MOBILE ECMO TEAMS ORGANIZATION FOR CONTROLLED DONATION AFTER CIRCULATORY DEATH

Maria Adele Figini[1], David Paredes-Zapata[2], Eva Oliver Juan[3], Davide Chiumello[1]
[1]ASST Santi Paolo e Carlo Milano; [2]Hospital Clinic, University of Barcelona; [3]Hospital de Bellvitge, Barcelona

Background: The shortage of available organ donors is a significant problem worldwide and efforts have been carried out to face the mismatch between demand and supply. Amongst them, organ donation after controlled circulatory death (cDCD) is one emerging strategy. Thanks to the latest advances in organ preservation, DCD is rapidly increasing even in Italy where current legislation conditions longer ischemia times. The following analysis is aimed to provide an operative tool to hospitals with potential in organ donation, but without ECMO facilities requested to carry out cDCD alone.
Materials and methods: Mobile ECMO teams are multidisciplinary, specialized, transportable teams that provide expertise and materials for nRP

institution in hospitals with organ procurement facilities but without ECMO. The organization model follows the hub & spoke standard, already operative in Northern Italian Regions. The Italian National Transplant Center provides coordination, lacking structural facilities as well as allocation criteria, additional costs are sustained by the hospital responsible for procurement and reimbursed by Regional Healthcare System.
Results: In March 2019 took place in San Paolo Hospital, Milan, the first successful Italian abdominal organ transplantation following cDCD in a secondary care hospital without ECMO facilities, being nRP provided by a hub hospital located at 37 Km of distance. One kidney and liver were successfully transplanted after 55 min fWIT, 4 h nRP and subsequent hypothermic Machine Perfusion. A first eligible donor in August 2018 did not convert to actual donor because of longer fWIT and surgical issues.
Conclusion: Prompt identification of cDCD potential donors, estimated in 3–4/year in hospitals without ECMO, utilization of multidisciplinary mobile ECMO teams for organ donation, nRP institution for kidney and liver procurement and collaboration between hub and spoke hospitals has proven to be feasible and replicable. The extensive organization of these mobile ECMO teams can lead to a significant expansion of the organ donor pool

LBP109 FINDING PLACE OF AZATIOPRIN IN MODERN IMMUNOSUPRESSIVE STRATEGY

Elena Parabina[1], Alexey Mironov[1], Boris Kharitonov[1], Alexander Kolsanov[1], Boris Yaremin[2]
[1]Samara State Medical University; [2]Sklifosovsky Emergency Medicine Institute

The aim of the work is to reduce the frequency of acute rejections by correctly selecting patients for azathioprine therapy. The main group included 78 patients after kidney transplantation without high immunological risk factors. The control group consisted of similar patients comparable in sex, age and time spent on dialysis (55 people). In the post-transplantation period, patients of both groups received tacrolimus (prolonged form) as the main immunosuppressive drug, with a target serum concentration of C0 9–11 ng/ml. In the control group, patients received mycophenolic acid in a dose of 1440 mg/day, in the main group - azathioprine in a dose of 100 mg/day. The function of the kidney transplant, glomerular filtration rate (CKD-EPI), the presence of undesirable adverse reactions in patients, the quality of life on the KDQOL-36 scale for 18 months after transplantation were evaluated. Of the all patients, loss of the graft was noted in one patient who received immunotherapy with mycophenolic acid preparations, for a reason not related to immunosuppression (acute venous thrombosis). In the main and control groups, acute rejection developed in 2 and 2 patients with similar severity. In both groups, rejection was stopped using steroid therapy, without consequence. Leukopenia against the background of the use of mycophenolic acid has not developed in a single patient, against the background of the use of azatoprine occurred in two patients. Cytomegalovirus viremia was noted in the main group in one patient, in the control group in four. This circumstance required additional therapy with valganciclovir preparations. The total cost of treatment in the main group was 40% lower than in the control group. The integral indicator of quality of life in the main group is thus 8% higher than in the control group. Thus, the use of azathioprine instead of mycophenates in a certain category of patients may be accompanied by fewer complications, lower costs while maintaining acceptable effectiveness

LBP110 PREDICTORS OF POST KIDNEY TRANSPLANT INFECTION AMONG ADULT FILIPINO PATIENTS IN A TERTIARY HOSPITAL IN DAVAO CITY: A 7- YEAR RETROSPECTIVE STUDY

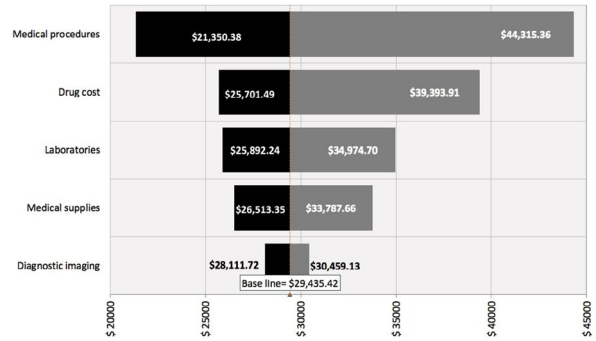
Rizza Antenor, Maria Theresa Bad-ang, Adrian Ronald Espino, Larissa Lara Torno
Southern Philippines Medical Center

Background: Kidney transplantation provides to be the best available treatment for advanced chronic kidney disease (CKD). Patients who underwent kidney transplantation are at high risk of nosocomial infections occurring immediately or after surgery. Several risk factors contribute to the development of nosocomial infections, however, there are only a handful of literature available. This study aims to identify the predictors of post kidney transplant nosocomial infections in order to prevent its complications and furthermore provide a general census of these data in the local setting.
Methods: This is a single center, hospital based, retrospective descriptive study design on the (a) incidence of post kidney transplant infections and (b) determine the demographic, clinical profile and post operative factors that can predict the occurrence of infection.
Results: Baseline characteristics among the 55 patients who underwent kidney transplantation such as age, sex and etiology of renal failure were statistically not significant (p value >0.05). The presence of hypertension as a secondary cause of CKD, abnormal body mass index and the prolonged length of hospital stay were noted to significantly increase the risk of developing nosocomial infections.
Conclusion: The most common nosocomial infections identified in the study were respiratory infections, urinary tract infections and surgical site infections (25%, 22% and 4% respectively). The identification of these predictors may help set and improve current policies in preventing the occurrence of nosocomial infections.

LBP111 COST OF HEPATIC TRANSPLANT IN COLOMBIA

Luis Guillermo Toro Rendón[1], Claudia Patricia Franco Arenas[1], Uriel Palacios-Barahona[2]
[1]Hospital San Vicente Fundación Rionegro; [2]Universidad CES. Centro de Evaluación de Tecnologías en Salud (CETES)

Of all the types of transplants performed in the United States, the liver is the second most frequent, it is estimated that in 2016 7,481 were performed in this country, 10% more than in 2015. According to the Latin America Transplantation Registry Report 2015–2016, 2,907 liver transplants were performed in Latin America in 2016. In Colombia in the 2013–2017 period 1,147 liver transplants were performed. This study aims to determine what is the total cost of transplantation per patient, disaggregated according to costs of supplies, laboratory, medicines, procedures and images.The costs of the pre-transplant, or the maintenance of the donor are not included.
Methods: The costs of the transplant were estimated using micro costing technique. The prices of the medicines were taken from the Drug Price Information System (SISMED) of the year 2018 of Colombia, for the calculation of the costs of the procedures, diagnostic images, medical supplies and laboratory, the price reported in the manual was taken SOAT tariff updated to 2018. All costs are expressed in thousands of US dollars (USD). A probabilistic cost analysis was performed using a *Lognormal* distribution. Montecarlo simulations of one thousand iterations were performed for each one for the components of the cost of the transplant. In the descriptive analysis we used summary measures, the processing and analysis of the data was done through Excel and @Risk.
Results: An average cost of $29,435.42 (SD: $8,802.87) was observed, the minimum cost was $10,548.16 and maximum of $87,877.45. The probabilistic cost distribution showed that with a probability of 90% the cost of the transplant was between $17,897 and $44,711. The factors that most affected the cost of the transplant were the medical procedures and the cost of the drugs (figure).
Conclusions: The average cost of liver transplantation was $29,435.42 (SD: $8,802.87), the factors that most affect costs are surgical or medical procedures, clinical laboratories and cost of medications.Tornado diagram of the costs of liver transplantation



LBP112 TO TRANSPLANT OR NOT TO TRANSPLANT: A KIDNEY WITH A GIANT CYST. CASE REPORT AND REVIEW OF THE LITERATURE

Valentina Bianchi, Maria Paola Salerno, Gionata Spagnoletti, Franco Citterio, Jacopo Romagnoli
Fondazione Policlinico Universitario A.Gemelli, IRCCS, Roma, Italy

Background: Simple renal cysts are very common in the general population (about 10.5 %) and especially in older people. They are usually small and kidneys with these lesions can be used for transplantation in selected cases. However, the presence of a "giant" cyst occuping a considerable part of the organ is a challenging situation for the transplant surgeon.
Material and methods: We report the case of a DBD donor kidney with a huge cyst and review of the literature.
Results: On the 8th of Novemeber 2013 we were offered a DBD kidney with a giant cyst (diameter 8.5 cm) on the inferior pole. The cyst was deroofed and frozen section performed with a diagnosis of simple cyst. There was no evidence of neoplasia and/or connection with the calyces. The cyst edges were cauterized with diathermy. The kidney was allocated to a 52 year old female

patient with a BMI of 24. The post-operative course was uneventful, the graft rapidly recovered its function with no need for dialysis. The recipient was discharged home on POD X with a creatinine of 1.5 mg/dl. Renal function has been good and stable for the following 9 years (last creatinine 0.8 mg/dl) and currently the patient is in very good conditions.
Conclusions: Kidneys with giant cysts can be used for transplant in selected cases, increasing the transplantable kidney pool and limiting the organ shortage. Donor and recipient's BMI must be considered in the allocation.

LBP113 LONG LASTING FEVER, PANCITOPENIA AND PERICARDIAL EFFUSION IN A RENAL TRANSPLANT PACIENT. A CASE REPORT

Francisco Amaral, Maria Dolores Navarro, Maria Luisa Agüera, Elisa Vidal, Alberto Rodríguez-Benot, Sagrario Soriano
HU Reina Sofía

Background: Differential diagnosis of fever is an important problem in transplant patients. Its origin is diverse but infections are the most frequent cause. Renal transplant recipients have an increased risk of developing tuberculosis with an atypical and extrapulmonary presentation.
Clinical case: We present a 45-year-old man of Spanish origin, with end-stage renal disease due to polyciystic kidney disease who received a kidney transplant. In the first month after transplantation the patient developed a T cell-mediated rejection (Banff IIB) treated with MP + Thymoglobulin with good response. 11 months after transplantation, the patient was admitted because of fever of more than 15 days of duration and pancytopenia, with no response to multiple cycles of antibiotics. Multiple cultures were repeatedly negative. Bone marrow biopsy presented hypocellularity with no evidence of parasites. In Body-CT only minimal pericardial effusion stood out. Study was completed with a negative Mantoux test and a bronchoscopy was performed with negative cultures for bacterial, fungal, and parasitic pathogens. Bacilloscopies in urine and sputum were also negative. Levofloxacin was initiated and the patient remained afebrile and was discharged. One month after discharge fever persisted and the patient developed coughing. A High-contrast chest CT showed severe pericardial effusion with a bilateral diffuse micronodular pattern. Pericardiocentesis was performed and a positive Mycobacterium Tuberculosis PCR was obtained, thus establishing the diagnosis of Miliary Tuberculosis with Tuberculous Pericarditis. Treatment was started with Rifampicin, Isoniazid, Pyrazinamide and Ethambutol and the patient remained afebrile.
Conclusion: Tuberculosis in organ transplant recipients occurs in most cases as a reactivation of a latent infection, often presenting disseminated and located in unsuspected sites favoured by the use of immunosuppressive agents. This can complicate the diagnosis and delay treatment, thus requiring a high index of suspicion especially in patients from endemic countries.

LBP114 EARLY ORGAN FAILURE IN 3° RENAL ALLOGRAFT FOLLOWING ACUTE DIARRHEA, A CASE REPORT

Francisco Amaral, Maria Luisa Agüera, Maria Dolores Navarro, Alvaro Torres, Alberto Rodríguez-Benot, Sagrario Soriano
HU Reina Sofía

Background: Primary hyperoxaluria (PH) is a hereditary disorder of the metabolism of glyoxylate, which causes oxalate accumulation causing nephrolithiasis, nephrocalcinosis and end-stage renal disease (ESRD) with systemic involvement. It is often diagnosed during pediatric age whilst other less aggressive cases do not develop ESRD or do so at later ages, with the diagnosis going unnoticed for years.
Clinical case: We present the case of a 50-year-old woman of Spanish origin with a history of polyarthralgia and ESRD of unknown origin who received a total of 2 renal grafts with a survival of 4 and 9 years respectively. None of the grafts were lost due to immunological causes. Lithotripsy was performed in the second graft due to recurrent lithiasis.

The patient was admitted for reception of a third graft. A non-complement fixing HLA-A1 donor specific antibody at low MFI (<1500) was present at transplantation. Induction with rATG was received with discharge at 10 days with a serum creatinine of 3.5 mg/dL.

1 month later the patient was admitted due renal failure and diarrhea. Graft biopsy showed *antibody-mediated rejection* as well as Von Kossa positive crystalluria. Plasmapheresis, IVIg and daily haemodialysis were initiated in the event of suspected hyperoxaluria despite the fact that serum and urine oxalate levels were in range.

Genetic study later confirmed a pathogenic variant in the AGXT gene associated with primary hyperoxaluria and the patient returned to dialysis 2 months after transplantation.

In our case, suspicion arose due to renal dysfunction concurring with volume depletion and metabolic acidosis that favored the precipitation of oxalate crystals on a graft with immunological damage and donor nephropathy.
Conclusions: Primary hyperoxaluria is a rare and heterogeneous disease. In patients with ESRD of unknown origin, repeated graft failure and compatible renal biopsies genetic disorders must be suspected and screened for. Treatment of choice in these patients is combined liver-kidney transplant because of the high rate of recurrence in kidney transplant alone.

LBP115 SHORT AND LONG TERM OUTCOMES OF PEDIATRIC LIVER TRANSPLANTATION (LT) IN A SINGLE INSTITUTION

Olivier Boillot, Catherine Boucaud, Christine Rivet, Alain Lachaux, Jerome Dumortier
Edouard Herriot Hospital

We present the results of a pediatric liver transplant series combined with an adult program over a 27 year period.
Patients and methods: From 1991 to 2010, 160 LT were performed in 151 pediatric recipients with a mean age of 5 ± 4.9 years and a mean weight of 18 ± 14 kg using 54 whole grafts and 106 partial grafts (55 split, 43 living donor and 9 reduced-size grafts) after a mean waiting time of 106 ± 190 days and a mean follow-up of 14.2 ± 7.7 years (range : 0–27.6).
Results: There were 3 main indication groups for LT, cholestatic diseases ($n = 117$), liver failure ($n = 23$) and metabolic diseases ($n = 18$) including 14 combined liver-kidney transplantations. Recipient's age and weight were significantly lower in those receiving a partial graft. Post-operative main surgical complications included 4 PNF, 2 hepatic artery thromboses, 17 portal vein thromboses, 36 biliary stenoses, leading surgical revision in 83 patients and 9 patients were retransplanted. Medical complications accounted for 10 PTLD, acute and chronic rejections in 80 and 16 patients respectively and 11 secondary kidney transplantations. Mean eGFR and staging of fibrosis (METAVIR score) on protocol liver biopsies were 109, 100, 97 and 0.82, 1.43, 1.48 at 1, 10, and 20 years after LT respectively. Comparing whole and partial liver transplantations, there were significantly more surgical complications in the later group. In univariate analysis, portal vein thrombosis was associated with poorer graft survival and biliary stenosis with increased graft fibrosis. Overall patient and graft survival was 84.7% and 79.3% respectively. Whole and partial graft overall survival was 86.7% and 75.7% respectively ($p = 0.07$), moreover overall partiel graft survival dramatically improved in the second half of the series at 94.5% .
Conclusions: Learning curve and combining both pediatric and adult LT led to improve expertise and results.

LBP116 FIRST LAPAROSCOPIC DONOR HEPATECTOMY CASES OF TURKEY

Cihan Karataş, Aydın Alper, Nesimi Mecit, Münci Kalayoğlu, Turan Kanmaz
Koç University

Minimally invasive techniques have evolved over the past two decades. The recent interest in minimally invasive approach to liver surgery has raised applying these techniques to living donor hepatectomy. Herein, we report the first cases of laparoscopic and hand-assisted living donor hepatectomies in Turkey. We describe the technical aspects of the procedure and discuss the rationale for considering this option. We have performed seven pure laparoscopic left lateral sectionectomies, two right lobectomies, one left lobectomy, and two hand-assisted left lateral sectionectomies. There is only one case of conversion to open surgery because of middle hepatic vein injury. Overall complications were minimal. We propose that the procedure did not increase the operative risks; instead, it decreased potential morbidity. We caution that this procedure should only be considered for selected donors and that only surgical teams familiar with both living donor hepatectomy and laparoscopic liver surgery should perform this operation.

LBP117 MONITORING OF ORGAN DONATION POTENTIAL FROM DECEASED DONORS IN HOSPITALS OF CENTRAL POLAND USING A WEB-NETTED TOOL WWW.KOORDYNATOR.NET

Teresa Danek[1], Jarosław Czerwiński[2], Anna Łęczycka[1], Dorota Zielińska[3], Monika Trujnara[4], Robert Trześniewski[5], Janusz Krawczyk[6], Artur Kamiński[7]
[1]Polish Transplant Coordinating Center Poltransplant, Warsaw, Poland; [2]Polish Transplant Coordinating Center Poltransplant, Poland; & Department of Emergency Medicine, Medical University of Warsaw; [3]Clinic of Gastroenterological and Transplantology Surgery, Central Clinical Hospital of the Ministry of the Interior, Warsaw; [4]Department of Anestezjology and Intensive Therapy, Miedzyleski Specialist Hospital, Warsaw, Poland; [5]Department of Anestezjology and Intensive Therapy, Mazowiecki Specialist Hospital, Radom, Poland; [6]Department of Anestezjology and Intensive Therapy, Specialist West Hospital St. John Paul II, Grodzisk Mazowiecki, Poland; [7]Polish Transplant Coordinating Center Poltransplant, Warsaw, Poland; & National Tissue and Cell Banking Center, Warsaw, Poland

In 2010 Poltransplant raised a country-wide network of hospital organ donation coordinators. One of goals of this program is to report all deaths in ICUs in hospitals. Reports are sent to Poltransplant online using teleinformatic tool www.koordynator.net

The aim of the study was to assess potential of donation in hospitals located in Central Poland (Masovia) in 2018 basing on analysis of reports and to compare these results with donation indicators elaborated in European Commission project DOPKI (Improving the Knowledge and Practices in Organ Donation).

More or less regular 136 monthly reports were received from 14 hospitals. The following donation indicators were calculated in hospital and ICU scale:

- number of beds: hospital-7081; ICU-184;
- number of admissions: hospital–427157; ICU–4095;
- total number of deaths: hospital–7000; ICU–1463;
- deaths with selected ICD-10 frequently leading to death on neurological criteria: hospital–1340; ICU–419;
- ICU brain death diagnosis–61 (4% of ICU deaths);
- organ procurement–27 (44% of brain dead patients).

In Masovia potential of donation indicators showed in comparison with DOPKI:

- distinctly lower (61/184;33%) brain deaths/ICU beds (DOPKI = 109%) with almost similar indicator brain death/ICU admissions (Masovia = 1.4%, DOPKI = 1.8%); it seems to be the effect of lower ICU patients turn-over in Masovia;
- distinctly lower (61/1463; 4%) brain deaths/ICU deaths (DOPKI = 15%) and distinctly lower (61/419;14%) brain deaths/ICU deaths with selected codes (DOPKI = 67%); it is probably the effect of lower identification of brain dead persons but also may be the result of changing the role of ICUs as departments crucial for deceased donation (ICUs are constantly accepting new responsibilities, eg. conducting continuous veno-venous hemodialysis and treating infections that engages staff and leads to inefficiency of the ICUs, resulting in less availability for deceased donors. The number of patients in critical condition in ICUs is decreasing, including patients with severe brain damage.
- similar (27/61;44%) organ procurement/ICU brain deaths DOPKI = 42%.