

implemented for liver allocation. The purpose of this study is to describe the experience of the liver transplant in patients with biliary atresia in the MELD/PELD era, at the "Hospital de Pediatría Dr. Juan P. Garrahan", the largest pediatric public hospital from Buenos Aires, Argentina.

METHOD: The present is a retrospective, descriptive and observational study. We review the charts of 81 patients with biliary atresia that underwent one or more liver transplantation between August 2005 to December 2012. Demographic data, the MELD/PELD score at transplantation, number of patients with exception PELD points, type of graft used, type of immunosuppression, surgical complication, incidence of rejection and lymphoproliferative disease, graft and patients survival and causes of death are described.

RESULTS: Median age 11 months and the median weight was 7.3 Kg. Mean MELD/PELD score was 20.5 and 19 patients were transplanted with exception PELD points. A living related liver transplantation (LRLTx) was performed in 40 cases, segment II-III grafts from SPLIT and reduced cadaveric donors in 16 and 14 respectively and whole livers in 11. Cyclosporine was used in 45 patients and Tacrolimus in 36. Thrombosis of the portal vein was seen in 10 patients and of the artery in 5 cases. Biliary fistula was developed in 11 cases and biliary stenosis in 10 patients. Abdominal bleeding underwent 9 patients and 7 intestinal perforations. Rejection was presented in 43 cases and 11 had PTLD. Patient and graft survival at 1 and 5 years was 82,7/81,4% and 80,2/77,7% respectively. Main causes of death were sepsis and FMO.

CONCLUSION: Our pediatric liver transplant program in a public hospital shows results comparable to other series. Shortage of donors leads to use of LRLTx in almost 50% of the cases.

Abstract# 234

RISK FACTORS FOR DEVELOPING PTLD IN CHILDREN

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PURPOSE: Post-transplant lymphoproliferative disease (PTLD) is a major complication in children after liver transplantation. Predicting the risk for developing PTLD in an individual patient remains challenging. Our aim was to identify risk factors for PTLD. **METHOD:** A retrospective study was performed in children receiving liver transplant in the Beatrix Children's Hospital, University Medical Center Groningen, The Netherlands, from 1999 until 2011. EBV load was measured regularly by quantitative PCR in whole blood. In case of an elevated EBV PCR immune suppression was reduced. Possible risk factors for the PTLD were analysed.

RESULTS: 162 children were included. Follow up ranged from 1 to 13 years (mean: 5 years). 16 out of 162 children were diagnosed with PTLD (9.9%). Five out of 16 PTLD patients died during follow up (31.3%). Several factors were related to PTLD: primary disease before OLT (biliary atresia in 13/16 with PTLD vs 66/146 without PTLD [P:0.021]), primary EBV-infection (EBV-IgM positive in 3/13 with PTLD and 7/128 without PTLD [P:0.046]), maximum EBV-load post OLT (PTLD in 7/11 patients with >1.000.000 copies/ml vs PTLD in 9/136 patients with <1.000.000 copies/ml [P:0.00]), re-OLT (6/16 PTLD post ≥1 re-OLT vs 28/146 without PTLD post ≥1 re-OLT [P:0.046]) and rejection (diagnosed in 8/16 with PTLD vs 29/146 without PTLD [P:0.006]).

CONCLUSION: In children post liver transplantation an EBV load in the upper detection range is associated with a very high change of PTLD. Pre-emptive treatment with rituximab should be considered in this patient group.

Abstract# 235

DOES EX-SITU ATRAUMATIC RETROGRADE HEPATIC ARTERY PERFUSION IN PEDIATRIC LIVING DONOR LIVER TRANSPLANTATION REDUCE THE INCIDENCE OF ANASTOMOTIC BILIARY STRICTURES?

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PURPOSE: Using left living donor grafts, the local ischemia of the left bile duct stump has been suspected to play a crucial role in post-transplant anastomotic biliary strictures; We hypothesized that the use of atraumatic retrograde hepatic artery perfusion (RHAP) in pediatric living donor liver transplantation (LDLT) reduces the incidence of anastomotic biliary strictures.

METHOD: Between July 1st, 1993 and November 1st, 2010, 203 pediatric LDLT were performed at Cliniques Universitaires Saint-Luc, Brussels, Belgium. Among them, RHAP was carried out in 63 (31%) versus 140 (69%) cases without the use of RHAP. RHAP was introduced since 2006 according to the following protocol: during ex-situ portal perfusion of the graft with University of Wisconsin solution, at the half

of portal perfusion (total volume: 3 ml/g of graft), RHAP was carried out by clamping the hepatic vein in order to obtain an inversion of the flow of the preservation fluid backwards through the hepatic artery. Biliary and arterial complications were registered during follow-up.

RESULTS: The incidence of biliary complications was 29% (n=41) in cases without, versus 24% (n=15) in the 63 cases with RHAP (p=0.264). The incidence of anastomotic biliary strictures was significantly lower when RHAP was used (27% versus 61%; p=0.021). In contrast, the incidence of anastomotic fistulae was significantly higher in the RHAP group (8% versus 0%; p=0.003). Hepatic artery thrombosis was only observed in the group without RHAP (3% versus 0%; p=0.475). The 5-year patient and graft survival rates were 95% and 95% with RHAP, versus 91% and 89% without RHAP, respectively (p=0.196 versus p=0.077).

CONCLUSION: RHAP is a safe and feasible procedure. This technique significantly reduces the incidence of anastomotic biliary strictures, probably by reducing the arterial ischemia of the left bile duct stump. We suggest to extend RHAP to all types of liver graft, including cadaveric transplants.

Abstract# 236

A PLEA FOR SURGICAL REDO AS FIRST THERAPEUTIC OPTION FOR ANASTOMOTIC BILIARY COMPLICATIONS AFTER PEDIATRIC LIVER TRANSPLANTATION.

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PURPOSE: Biliary complications (BC) still remain the 'Achilles heel' in liver transplantation (LT), with an overall incidence between 10-35% in pediatric series. We hypothesized that: (1) the use of alternative techniques (reduced-size, split and living donation) in pediatric LT contributed to increase the incidence of biliary complications BC; (2) surgery as first treatment option for anastomotic BC allowed definitive cure in the majority of the patients.

METHOD: 429 primary pediatric LT (of which 88, 91, 47 and 203 were whole liver, reduced-size, split, and living donors grafts, respectively) performed between July 1993 and November 2010 were retrospectively reviewed. Demographic and surgical variables were analyzed and their respective impact on BC was studied using uni- and multivariate analyses. Modalities of management of BC were also reviewed.

RESULTS: The 1 and 5-year patient survival rates were 94% and 90%, 89% and 85%, 94% and 89%, and 98% and 94%, respectively for whole liver, reduced-size, split, and living donor grafts. The incidence of BC was 23% (n=98). 60 of them were anastomotic complications (47 (78%) strictures, and 13 (22%) fistulae). The type of the graft was not found as a risk factor for the development of BC. At multivariate analysis, only hepatic artery thrombosis and acute rejection increased the risk of anastomotic BC (p<0.0001 and p=0.003, respectively). Anastomotic BC were managed using primary surgical repair in 59/60 cases (98%) with a success rate of 80% (n=48).

CONCLUSION: These results suggest that: (1) most of the BC were anastomotic complications without influence of the type of graft and (2) surgical management of anastomotic BC may constitute the first and best therapeutic option.

Abstract# 237

HEPATIC ARTERY COMPLICATIONS IN PEDIATRIC PATIENTS WITH LIVER TRANSPLANTATION.

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PURPOSE: Hepatic artery complications (HAC) are a frequent cause of morbidity and mortality in patients undergoing liver transplantation (Ltx) if not suspected and treated on time. The objective was to describe the clinical features, laboratory findings and surgery time of patients who developed hepatic artery complications and the therapeutic measures taken to resolve them.

METHOD: A retrospective analysis including all pediatric patients that underwent Ltx at our Program within 2005-2012 was conducted.

RESULTS: Out of 42 transplanted patients, 8 developed HAC (7 stenosis and 2 thromboses), between days 10 and 52 after transplantation. Of these 8 patients 5 (67%) were female and 3 (33%) were males, with an average age and weight of 9.2 ± 8.5 years and 27 ± 16 Kg respectively. Every patient received blood transfusions during surgery, 6 received furosemide. All the patients received prophylactic anticoagulation with enoxaparin. 5 of the patients had Sepsis prior to the hepatic artery complication. The diagnosis was suspected by Liver Doppler ultrasound and confirmed by Arteriography in all patients. Stenting was performed in 6 of them. The correlations of the complications of hepatic artery and nominal variables showed that the use of furosemide was significantly associated to the presence of hepatic artery complications (p = 0,042). Correlations