ducts in the graft or the high insertion of 1 of the ducts of the graft endangering the biliary tree of the remnant liver.

Result: The RPSG gave single posterior sector duct in all of the donors. The time taken for hilar dissection was similar in RPSG and in standard right lobe grafts. This is mainly attributable to the easy access to the extrahepatic posterior sector portal vein as predicted by the pre-operative CT angiography. The parenchymal transaction time was longer in the RPSG than in the right/left lobe graft. The diameter of artery was acceptable though the length was smaller than the right/left lobe graft. The biliary ductal length and diameter were good. All 3 donors recovered well. Two recipients recovered well with peak bilirubin and prothrombin time/INR similar to the standard right/left lobe ALRLT. One recipient had a slow but steady recovery, possibly due to small-for-size syndrome.

Conclusion: In our experience, the extrahepatic division of portal vein was crucial in deciding this type of graft, as we could always get acceptable length and diameter of artery and duct. Thus, our graft selection criteria for RPSG are useful for optimizing the use of RPSGs in donors with small remnant volume or unfavorable anatomy.

15

COMPARISON OF TRANSFUSION REQUIREMENTS BETWEEN DECEASED DONOR LIVER TRANSPLANTATION AND LIVING DONOR LIVER TRANSPLANTATION—SINGLE CENTER'S EXPERIENCE

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Background: Living donor liver transplantation (LDLT) has been implemented as an alternative to the deceased donor liver transplantation (DDLT) due to the shortage of cadaveric organs. We compared the pre-operative variables with a specific aim to compare the intra-operative transfusion requirement between recipients of LDLT and recipients of DDLT.

Method: Data were abstracted from the review of patient medical records. Pre-operative Model for End-stage Liver Disease (MELD) score, liver donor's age, baseline coagulation laboratory results, intra-operative transfusion of blood components and the volume of intra-operative salvaged blood re-infused for 36 adult-to-adult LDLTs and 65 adult DDLTs during March 2003 and April 2011 were reviewed. Statistical analysis was done by Student's *t* test, the values were expressed as mean and standard deviation and *P* value of 0.05 was considered to be statistically significant.

Result: Liver donor's age was significantly lower for LDLT group (mean 31.86 years vs 39.08 years, $P=0.01$). LDLT patients received significantly lower volume of total blood

product (mean 3673 mL vs 5645 mL, $P=0.01$), lower number of packed red blood cell unit (mean 5.86 vs 9.21, $P=0.01$), lower number of fresh frozen plasma unit (mean 6.69 vs 10.48, $P=0.01$) and lower apheresed platelet units (mean 1.0 vs 1.56, $P=0.03$), compared with DDLT patients. Five (13.8%) patients in LDLT group and 19 (29.2%) patients in DDLT group received massive transfusions.

Conclusion: Recipients of LDLT received significantly lower blood products than that of DDLT. Patients who undergo LDLT have a better preserved coagulation status and undergo transplantation earlier; hence, they received lesser blood products, whereas DDLT recipients wait for longer time for cadaveric allograft and tend to be sicker than LDLT recipients at the time of transplantation.

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AN UNUSUAL CASE FOR LIVER TRANSPLANTATION IN A CHILD

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Background: Homozygous familial hypercholesterolemia (HFHC) is an inherited metabolic disease autosomal-dominant defect on chromosome 19 that leads to decreased catabolism of low-density lipoprotein (LDL) cholesterol and childhood coronary artery disease (CAD). Liver transplantation is a therapeutic option to correct this metabolic disorder.

Case Report: A 12-year-old boy presented to a local hospital with acute antero-septal myocardial infarction and pulmonary edema. He was a known case of HFHC with a history of death of his father and grandparents due to CAD at a younger age. He was referred to our hospital for further evaluation and management. On further evaluation, he was found to be having double vessel disease, left main coronary artery and right coronary artery, moderate left ventricular (LV) dysfunction, ejection fraction 35%, aortic stenosis due to atheromatous deposits with a pressure gradient of 78/44 mmHg, and severe hyperlipidemia; total cholesterol 920 mg/dL, LDL 540 mg/dL, and triglycerides 180 mg/dL. Although liver transplantation seemed the imminent treatment, the severity of LV dysfunction and LV outflow obstruction due to cholesterol deposits gave serious concerns on his ability to withstand this surgery. He was accordingly managed with a coronary artery bypass grafting 4 grafts and reconstruction of the aortic outflow tract. Subsequently after 2 months, he underwent living donor liver transplantation. A left lobe graft from his mother was transplanted. Intra-operative anesthetic management was done as per standard protocol and the patient tolerated the procedure well; he had a smooth recovery and was discharged on the 11th postoperative day.

Discussion: Metabolic disorders constitute only a small percentage of liver transplants done today. Hypercholesterolemia

is a very rare among such inherited disorders. Timely intervention and definitive treatment can change the prognosis in this group.

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AN EVALUATION OF THE DONOR PROFILES AND OUTCOMES OF DONORS IN LIVING DONOR LIVER TRANSPLANT (LDLT)

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Background: The non-availability of organs from deceased donors has led to living donor based-transplantation programs in our country; any morbidity/mortality associated with the living donors could result in major setbacks to the transplant program.

Aim: This study aimed at an analysis of the donor profiles in liver transplants. The pre-operative condition, duration of the hospital stay, and outcomes were analyzed in the intra-operative and immediate postoperative period until the time of discharge from the intensive care unit (ICU).

Materials and Method: Retrospective analysis of prospectively recorded data of liver donors was done from August 2004 to November 2010. Total transplants – 78, deceased donors – 6, and living donor liver transplantation (LDLT) – 72 at a tertiary care referral center was performed. The demographic profile of the donors, comorbidities, the length of the hospital stay, and ICU stay was analyzed. The post-operative highest bilirubin, international normalized ratio (INR), lowest platelet count, morbidity, and mortality were also studied.

Result: The median age among the donors was 40 years (range 21–56 years), male 56 (78%), female 16 (22%), comorbidities DM-2, hypertension-6, DLP-2, median hospital stay 11 days (7–49), median postoperative hospital stay, 10 days (6–4), median ICU stay, 2 days (1–40). The grafts were right lobe with middle hepatic vein (MHV) 54 (75%), right lobe without MHV 8 (11%), left lobe with MHV 7 (10%), left lobe without MHV (34%). The postoperative average serum bilirubin levels were 2.85 mg/dL (1–23), INR 2.11 (1.32–5.57) and platelets 160,000/cmm (26–332). There was no donor mortality in the 78 donors studied. Sixteen patients had grade I morbidity—ascitic leak 4 patients, minor wound dehiscence – 4, and pyrexia – 8. Fourteen patients had grade II morbidity—urinary tract infection – 6, respiratory tract infection – 3, wound infection – 2, positive blood culture – 1, liver dysfunction – 1, and pressure sore – 1. Seven patients had grade III morbidity—sub-diaphragmatic collection – 3, postoperative bile leak – 1, incisional hernia – 2, and delayed abdominal closure – 1. Major grade IV morbidity occurred in 3 patients, superior mesenteric vein thrombosis and hepatic venous outflow

obstruction which were managed surgically. One patient had a small-sized residual liver and prolonged ICU stay.

Conclusion: LDLT donation can have significant morbidity. Careful and critical postoperative evaluation and timely intervention can avoid long-term consequences and improve outcomes.

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EARLY POSTOPERATIVE MORTALITY IN RECIPIENTS FOLLOWING DECEASED DONOR LIVER TRANSPLANTATION (DDLT)—A CLINICAL PROFILE

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Background: Liver transplant often results in hemodynamic and biochemical changes in the immediate postoperative period, often causing more concern.

Aim: To study the pre-operative clinical profile, and the hematological and biochemical changes in the immediate postoperative period up to 7 days following deceased donor liver transplantation (DDLT) patients.

Method: A detailed assessment of the patients' pre-operative clinical diagnosis, the presence of comorbid illness and postoperative hematological, biochemical, microbiological, and clinical events was made between survivors and those who died. Various parameters were compared between 2 groups to understand the various factors that determined early postoperative outcome in DDLT patients.

Result: A total of 26 patients, categorized into Group I – 18 patients (survivors) and Group II – 8 (mortality). There was no difference in the fluctuation of hemoglobin levels between the 2 groups ($10\% \pm 4\%$). Early leukocytosis and persistent azotemia predicted early morbidity and mortality. A significant fall of platelet count predicted mortality. Transaminases showed a significant rise between the second and third postoperative days, stabilized and then showed downward trends between the seventh and ninth postoperative days in both groups. Hypernatremia predicated early mortality. Cause of death was due to intra-operative events such as cardiac arrhythmias, and due to ischemic cardiac events (2), pulmonary thromboembolism (1), and hepatic artery thrombosis (1), and sepsis and multiorgan failure (4). Two patients required renal replacement therapy for resistant renal failure in Group II.

Conclusion: Pre-operative comorbid illness, postoperative worsening azotemia, persistent leukocytosis, and sepsis and cardiac events in the immediate postoperative period predict an outcome post-DDLT.