

were 4.5 cm & 2.5 cm respectively. There was neither metastatic lesion (intrahepatic or extrahepatic) nor vascular invasion. His INR was 1.68, bilirubin 3.6 mg/dl, albumin 2.7 gm/dl, ICG R15 59.7%, MELD score 17, a-FP and PIVKA II level was 15.8 ng/ml and 78.2 mAU/ml. He had moderate amount of ascites. He did not applied any kind of therapy including TACE or local ablative therapy of the HCC before transplantation. For the recipient hepatectomy, we did en bloc resection of the whole liver including retrohepatic vena cava with very limited manipulation or compression of the caudate lobe during resection and reconstructed IVC with rifampicin soaked Dacron graft (Hemashield<sup>®</sup>). We performed transplantation a right lobe that was taken from living donor, with anastomosis of the right hepatic vein to the grafted Dacron. In order to prevent kinking or awkward anatomical positioning, we made a cuff to the right hepatic vein stump with great saphenous vein on the back table. We did not use veno-venous bypass during entire procedure. Total anhepatic period was 84 minutes. The vital sign of the patient was stable and transfused 2880 ml of packed RBC during entire operative procedures.

**Conclusions:** the surgical technique is feasible in terms of safety of anatomical reconstruction and stability of the vital sign during entire procedure without veno-venous bypass. We should observe and evaluate long term safety for cancer recurrence and infection of artificial vascular graft in the milieu of immunosuppression after liver transplantation.

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### Outcome of Invasive Fungal Infection in Liver Transplantation: Five Cases at a Single Center

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**Background:** Invasive fungal infection (IFI) is associated with increased morbidity and mortality in liver transplantation (LT). Fungal infections have been reported about 42% incidence rates in LT and account for 20% to 30% of all major infections. We report 5 cases of IFIs that developed after LT. Of 670 liver transplant recipients who underwent LT between March 1988 and February 2009 in our center, 5 patients developed IFI. Their original diseases were Hepatitis B virus-related liver cirrhosis with hepatocellular carcinoma (HCC) (n=2), Hepatitis C virus-related liver cirrhosis with HCC, primary biliary cirrhosis, and fulminant hepatitis from unknown origin respectively. Only one patient underwent living-donor LT and the mean age was 50.6 years (range 34 to 66 years). The pathogens were Candida at duodenum (n=1), Aspergillus from sputum (n=1) and at liver (n=1), Cryptococcus from cerebrospinal fluid (n=1; LDLT case) and ascites (n=1). Three patients among them died of multi-organ failure and septic shock from IFIs on postoperative day 29, 138 (LDLT case), 143 respectively. Although the overall incidence of fungal infection in LT has declined now a days due to the early treatment for high-risk patients, the overall mortality rate remains high. Numerous studies have attempted to determine the independent risk factors related to IFIs and to reduce the morbidity and mortality with empirical antifungal prophylaxis. Fungal infections are often diagnosed lately because of the difficulty of diagnosis, therefore we should perform the pre-LT screening for high-risk patients and prophylactic antifungal agents should be used after LT.