



Submission No.: CS12-9126

Session : Concurrent Symposium 12 (Liver)

Date & Time, Place : November 18 (Sat), 15:30-17:00, Room 3F-1

Session Title : Technical advances in LT

Precise prognostic stratification and new technical strategies to reduce HCC recurrence after LT

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Liver malignancy remains the majority of indication of liver transplantation. As estimated, Liver malignancy accounts for 44.99% in China, with HBV-related hepatocellular carcinoma (HCC) predominant. HCC recipients have a high risk of tumor recurrence and metastasis. Therefore, it's urgent to develop precise prognostic stratification system and new technical strategies to reduce HCC recurrence after LT. Hereof, I would like to present and share our clinical practice and thinking in this field. Past decades have witnessed great progress in uncovering the mechanism of HCC, which help with identifying biomarkers. α -fetoprotein (AFP) and protein induced by vitamin K absence or antagonist-II (PIVKA-II) are widely used in clinic for HCC diagnosis and treatments. AFP has been incorporated into many transplant criteria, including Hangzhou criteria and 5-5-500 rule. Our study also constructed a precise prognostic stratification system based on the Hangzhou criteria, with incorporating tumor burden, and tumor biology (tumor histologic grade, AFP, and PIVKA-II). This prognostic stratification system further increased the number of eligible HCC patients without compromising post-LT outcomes. As for the technical strategies to reduce HCC recurrence after LT, it was recommended to apply non-touch technique during operation. Compared with conventional technique, non-touch technique significantly reduced the tumor recurrence, as well as realizing better prognosis. Also, attributed to the immunosuppressive and anti-tumor effects, as well as low nephrotoxicity, mTOR inhibitors are used commonly for HCC recipients. According to the data from China Liver Transplant Registry, the proportion of sirolimus-based immunosuppressive regimen in HCC recipient accounts for 32.3%. Several retrospective studies have indicated clinical benefits of long-term administration of sirolimus/everolimus in HCC recipients. Based on current clinical findings, it is suggested to minimize dosage of immunosuppressant, and early conversion to mTOR inhibitor for prevent tumor recurrence, as well as maintaining immunosuppressive therapy after recurrence. However, more time and effort should be devoted to optimizing current clinical management for HCC recipients.