

HBP SURGERY WEEK 2023

MARCH 23 THU - 25 SAT, 2023 | BEXCO, BUSAN, KOREA www.khbps.org



## EP 052

## Favorable Long-term Renal Outcome Following Pediatric Liver Transplantation

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**Background** : Renal dysfunction is one of the critical issues of long-term outcome after liver transplantation (LT). Post-transplant renal function in adult transplant patients is well described, however, little is known about its prevalence in pediatric transplant patients.

**Methods** : From March 1999 to May 2016, 225 recipients underwent pediatric LT in Seoul National University Hospital. Patients with follow-up period less than 3 months or preoperative chronic kidney disease (CKD) were excluded. Cumulative incidence of CKD (defined as a glomerular filtration rate of 60 ml per minute per 1.73 m2 of body-surface area or less or the development of ESRD) was determined using a Kaplan-Meier method.

**Results** : The median age at LT was 2 years (range 0.2~17). During a median follow-up of 150 months, chronic kidney disease developed in 9 patients (4.41%). Of these patients, 3 patients underwent renal transplantation. 1, 5, 10-year renal survival with CKD as the event was 99%, 97.9%, and 96.1%, respectively. In the adult group who received LT during the same period, 1, 5, 10-year renal survival was 96.2%, 85.6%, and 79.4%, respectively, which showed significant difference compared to pediatric group. In a multivariate Cox regression model, hepatic artery thrombosis (P<0.0001) and primary liver diseases with potential renal involvement (P=0.033) were associated with CKD.

**Conclusions** : Renal function can be highly preserved following pediatric LT even in the long-term period, which is distinct finding from adult LT patients. However, more attention should be paid to patients with hepatic artery thrombosis and primary liver diseases with potential renal involvement to better improve renal outcome after pediatric LT.

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