



### **Liver transplantation for hepatocellular carcinoma in children - analysis of criteria for transplantation and outcome – single center experience**

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HCC in most children arise in non-cirrhotic livers. Liver transplantation has emerged as a crucial therapeutic option for both adults and children with HCC.

The aim of the presentation was to assess the outcome of HCC patients undergoing liver transplantation.

**Material:** Between 1990 and 2022, we treated with LTx 26 children with HCC at age 4,8 to 12,7 years (median 7,9 years). In 18 (70%) patients HCC developed in non-cirrhotic livers. The majority of patients (20 pts – 77%) presented status PRETEXT III and IV and did not meet Milan criteria. Four pts underwent rescue LTx. LRdLTx was performed in 12 pts. Nineteen patients (73.1%) received preoperative and postoperative chemotherapy.

**Results:** Follow-up for living patients ranges from 14 to 273 months (median 139 months). Six patients died, with three deaths unrelated to HCC and three attributed to HCC recurrence (additional one is living with disease). Patients with HCC in cirrhotic livers tended to have lower PRETEXT stages (6 were PRETEXT I or II) and more frequently met Milan criteria. Despite the fact that majority of children did not meet adult Milan criteria, clinical results of LTx are significantly superior to conventional resection, with 77% survival rate.

**Conclusions:** Total hepatectomy followed by liver transplantation is the best treatment option for most children with HCC. Surgical treatment decisions should be done on an individual basis, always with consultation with transplant center.. Milan criteria not accurately predict transplantation outcomes for pediatric HCC patients, with the sole disqualifying criterion being the presence of extrahepatic involvement. .