Does Outcome Of Liver Transplantation In Post Kasai Biliary Atresia (BA) Differ From Non Operated BA Cases ?

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Introduction: Sequential strategies combining the Kasai operation as a first-line treatment and liver transplantation as a second-line option, if necessary, have been accepted for patients with biliary atresia (BA) which is one of the commonest diagnosis leading to to liver transplantation (LT) in children. We hypothesized that previous operation can result in difficulties during the LT.

Aim: The aim of this study was to review our experience in orthotopic liver transplantation (OLT) for biliary atresia (BA) in children to analyze and compare the outcome including complications and survival in patients who underwent LT with / without prior Kasai portoenterostomy (PE).

Methods: Prospectively collected data of living related donor liver transplantation done done by our team from mid September 2004 to mid 2015 was analysed. The cases were divided into two groups: Group A - Biliary atresia with previous Kasai PE; Group B: Biliary atresia without previous Kasai PE. Primary outcomes were patient and graft survival. The short and long term complications and outcome were compared in both the groups.

Results: 165 LDLTs were performed during this period. There were total 57 BA patients of which 37 were post-Kasai. Children in the Group A - 37 (65%) were older (40 months (5-156months)) with M:F ratio of 20:17 , mean weight 13.3 Kg (4.2-41 Kg). Mean Pediatric End-Stage Liver Disease (PELD) scores of 18(7-37).In Group B (20), mean weight was 7.9 Kg (4.8-10.9) and mean age 10.9 months (4-24 months) and mean PELD 25.5(11-37). 92% of patients in grp A and 90% in grp B required intraop BT. In comparison to Group B, patients in group A had significantly more biliary and vascular complications and perforation (7(19%) biliary , 9(24%) perforation 10(26%) vascular complications(1 Hepatic Artery Thrombosis HAT , 9 Portal vein thrombosis PVT)) ($p<0.005$) .In group B 2 had HAT and only 1 had biliary leak with no perforation. Both groups had 2 patients of chylous ascites . Average duration of stay was comparable in both groups (29 days in Group A and 21 days in group B). Three died in Group A and 2 in Group B with overall survival of 92 % and 90 % respectively over a mean followup period of 3.76 years.

Conclusions :

Having a Kasai portoenterostomy and having not performed a Kasai-PE had the same effect in patient and graft survival; however, a previous Kasai-PE increases post-LT complications such as portal vein thrombosis , biliary complications and bowel perforations.