

PEDIATRIC LIVING DONOR LIVER TRANSPLANTATION IN BELGIUM: A FAILURE TO RESCUE ANALYSIS OF RECIPIENT SURGICAL COMPLICATIONS AFTER 500 PRIMARY GRAFTS.

Authors:

Aniss Channaoui¹, Roberto Tambucci¹, Catherine de Magnée¹, and Raymond Reding¹.

Affiliations:

¹ Pediatric Surgery and Transplant Unit, Surgery and Abdominal Transplantation Department, Cliniques universitaires Saint-Luc, Université catholique de Louvain – UCLouvain, Brussels, Belgium.

aniss.channaoui@student.uclouvain.be
roberto.tambucci@saintluc.uclouvain.be
catherine.demagnee@saintluc.uclouvain.be
raymond.reding@saintluc.uclouvain.be

Background:

The concept of failure to rescue (FTR), death after a given post-operative complication, has been used to assess the quality of care in different surgical specialties, but it has not been well studied in pediatric living donor liver transplantation (LDLT).

Methods:

This study retrospectively reviewed 500 pediatric LDLT performed at a single center in Belgium. A total of 792 primary pediatric LT were performed between 1993 and 2022, of which 500 by living donation (recipient median age: 1.9 years; range 0.1-16.5 years). Main pre-LT diagnoses were biliary atresia (n=321: 64.2%), cholestatic diseases (n=62: 12.4%), metabolic diseases (n=41: 8.2%), liver malignancies (n=44: 8.8%), fulminant hepatitis (n=9: 1.8%), and miscellaneous diagnoses in the remaining cases (n=23: 4.6%). The recipient outcomes were assessed by means of patient and graft survival rates, retransplantation rates, and arterial/portal/biliary complications rates. Graft and patient losses secondary to these complications were calculated via FTR for patients (FTRp) and grafts (FTRg).

Results:

Overall 1- and 5-year patient survival rates were 94.5% and 92.1%, respectively. Overall 1- and 5-year graft survival rates were 92.7% and 89.8%, respectively. Hepatic artery complications rate was 3.6% (n=18/500), the respective rates for portal vein complications and biliary complications being 11.4% (n=57/500), and 20.2% (n=101/500). One-year FTRp rates for hepatic artery thrombosis, portal vein thrombosis, anastomotic biliary stricture, and intrahepatic biliary stricture were 28.6%, 11.8%, 6.1%, and 0%; the corresponding FTRg rates being 21.4%, 11.8%, 0%, and 57.1%.

Conclusions:

The data suggest that the FTR concept would provide a tool to analyze the missing link between postoperative morbidity and mortality. This novel way of examining data offers new perspectives for refined analyses of the quality of care in pediatric LDLT.