

Outcome of deceased donor liver transplantation after initial hepatic artery followed by portal reperfusion

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ABSTRACT

It has been 4 years since the first, long-term (> 3 years) prospective comparison of adult-to-adult living donor liver transplantation (A2ALLTx) to adult deceased donor liver transplantation (ADDLTx) was reported. In this follow up, prospective, IRB approved, 10-year comparison of A2ALLTx to ADDLTx we expand on our initial observations. This data includes: age, gender, ethnicity, primary liver disease, waiting time, pretransplant CTP/YELD score, cold ischemia time (CIT), perioperative mortality, acute and chronic rejection, graft and patient survival, charges and post-transplant complications. In 10 years, 465 ADDLTx (81.3%) and 107 A2ALLTx (18.7%) were performed at VCUHS. Hepatitis C virus (HCV) was the most common reason for transplantation in both groups (54.5% vs. 48.2%). Data regarding overall patient and graft survival and retransplantation rates were similar. Comparison of patient/graft survivals, retransplantation rates in patients with and without HCV were not statistically different. A2ALLTx patients had less acute rejection (9.6% vs. 21.7%) and more biliary complications (27.1% vs. 17.6%). In conclusion, A2ALLTx is as durable a liver replacement technique as the ADDLTx. Patients with A2ALLTx were younger, had lower YELD scores, less acute rejection and similar histological HCV recurrence. Biliary complications were more common in A2ALLTx but were not associated with increased graft loss compared to ADDLTx.



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1. Introduction

Although liver transplantation (LTx) has undergone immense progress and is a curative treatment for most endstage liver diseases, shortage of donor organs continues to be the main obstacle in the treatment of this group of patients. With the increasing number of patients waiting for a liver transplant and the rising number of patients dying while waiting, many alternatives have been developed in the last decades with the intent to increase the liver donor pool. Some of these alternatives include: marginal donors, older donors (> 60 years), split LTx, HGV-positive donors and living donor LTx. The use of live donors for LTx was initiated many years ago for children and small adults, among whom mortality was escalating as a direct result of the lack of deceased donors of appropriate size [2], [3]. In the last 10-15 years, adult-to-adult living donor LTx (A2ALLTx) has been developed on an international scale, multiplying the number of

procedures performed and increasing the pool of liver donors. Advantages and disadvantages of this technique are continuously under scrutiny. Some advantages include the increase of the pool of organs for transplantation, reduction of cold ischemia time (GIT) with an expected improvement in immediate post-transplant graft function, thorough donor and recipient evaluation and better organization of the timing for surgery. Disadvantages including donor risk, unclear standards regarding the donor, recipient selection and limits in the use of this technique, remain as difficult topics which still need clarification. Short-term outcomes after A2ALLTx seem to be comparable to deceased donor liver transplant based on experiences in Europe, Japan and the United States.⁴⁻⁶ However, the analyses of long-term outcomes and complications are still incomplete.

2. References

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