OP-002

Outcomes after live donor liver transplantation based on donor BMI

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INTRODUCTION: Live liver donors with BMI >30 are usually not considered for donation due to concerns of fatty changes and post-surgical complications. We aimed to evaluate the post-transplant outcomes for both donors and recipients with different BMIs and characteristics.

METHODS: Records of donors and their recipients who underwent adult to adult live donor liver transplantation (LDLT) between 2013 and 2018 at Johns Hopkins were reviewed. Liver steatosis >20% was excluded in all donors by imaging or liver biopsy. Survival curves were generated using Kaplan–Meier plots. Significant variables had P-values <0.05.

RESULTS: 43 donors and 43 recipients were identified. 54.7% of donors were male, had a mean BMI of 26, average age of 34.6 years and length of stay of 7.23 days. 90-day outcomes were measured and complications were reported in 11 donors. Two donors visited the ED for pain. Four needed admission with duration of 1 to 4 days. No mortality was reported in the donors. 17 donors had BMI<25, 9 BMI 25 to <28, 9 BMI 28 to <30 and 7 BMI ≥ 30. Recipients had an average age of 51.9 years, BMI 26.3, MELD of 13.8 and 64.2% were male. The most common indications for LDLT were NASH cirrhosis (23.8%), alcohol (21.43%) and PSC (16.6%). The right lobe was used in 85.7% of patients. Recipients were followed for a median of 884 (9-1984) days. Two recipients needed retransplantation within one year and overall 3 expired. Donor BMI was not associated to complication rates, ED visits or readmission among donors. Furthermore no difference was observed in recipient mortality (p=0.2) or need for retransplantation (p=0.3).

CONCLUSION: We conclude that LDLT from donors with BMI≥ 30 in the absence of graft steatosis has similar outcomes than donors with BMI <30 and can be considered for LDLT.

Keywords: live liver donor, BMI, outcomes

DOI: 10.5152/tjg.2019.02