

Hepatological exclusion in the donor (in proctor cases)

Ramu Chimakurthi
Consultant Hepatologist
Leeds Liver Unit

Turned down 3 donors after reviewing DHQs.

Case 1

- 51 F
 - Directed donation to husband (Decomp MASLD with complications of P HTN and Sarcopenia)
 - Laparoscopic cholecystectomy.
 - C section
 - Ex smoker (2013, no details on pack year)
 - Does not consume alcohol.
 - Fam Hx-Mat Grand mother-Bowel ca and T1 DM in sister and maternal uncle.
 - Runs 3 times a week.
 - Hb 137, WCC 6.9, Plts 305.
 - Normal renal function
 - Bili 6, ALT 25, ALP 87, Alb 39
 - Choles 4.6, TG 2.55 (Non-Fasting)
 - HbA1c 33
 - TSH normal.
- Ht 162 cm and Weight 92 kgs-BMI >35.

BTS UK Guidelines Living Donor Liver Transplantation July 2015

Donor Obesity

- Any donor with body mass index (BMI) $>30 \text{ kg/m}^2$ needs a liver biopsy because of the increased risk of donor hepatic steatosis and the possibility of steatohepatitis. (A1)
- Moderately obese donors (BMI $30\text{-}35 \text{ kg/m}^2$) should be counselled about the increased risk of peri-operative complications and long-term health risks. They should be advised to lose weight prior to donation and to maintain their ideal weight following donation. (B1)
- Donor BMI $>35 \text{ kg/m}^2$ should be considered a contraindication to donation because of the high risk of post-operative complications. (B1)

M Knaak et al. AJT 2016

- Apr 2000 –May 2014
- 105 pts(22%) received RL LG from donors with BMI ≥ 30 -35.
- 364 (78%) pts received RL LG from donors with BMI < 30
- 18-60 age group.
- All obese donors underwent liver biopsy as a part of their protocol.
- Liver steatosis of $> 10\%$ was excluded in all donors with BMI > 30 by imaging and liver biopsy.
- None of them had any comorbidity.

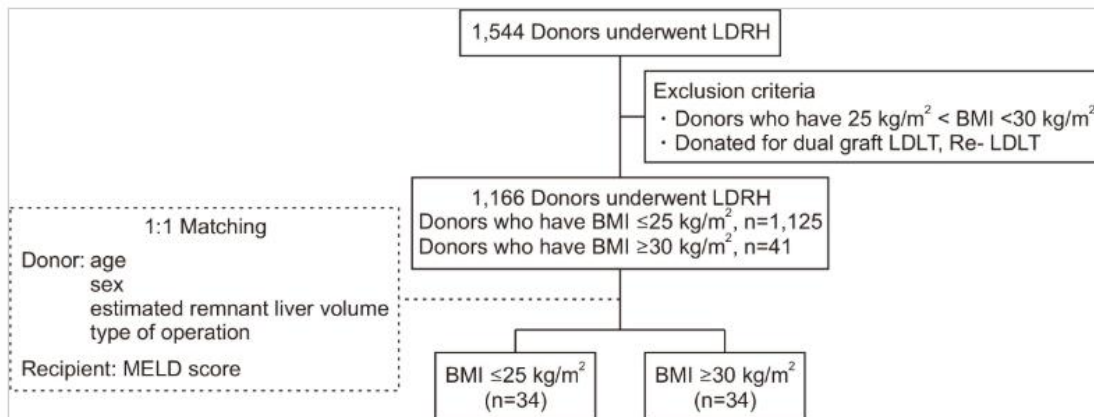
- No difference between groups in terms of post operative complications, hospital stay, recipient graft function.
- No difference in recipient complications rates either.

J S Lin et al. Transplant Direct 2023

- 2013-2020
- 66 living donors, 3 categories (BMI<25, 25-29.9 and > 30)
- MRI derived fat fraction was used to quantify steatosis. (They do not do liver biopsies)
- >10% steatosis independent of BMI were excluded.
- Donor outcomes included: LOS, ED visits within 90d, readmissions within 90d and complication severity.
- Recipient outcomes included: LOS and inpt mortality.
- Difference in wound complications with highest rate being in higher BMI groups (0% Vs 16% vs 37%, p 0.04)

Sung-Min et al. Ann Liver Transplant 2024.

- LDRL at Asan from 2015-2020



May be done safely in those without uncontrolled metabolic disease and significant steatosis.

	Obese Group	Normal-Weight Group	P-value
Preoperative			
Serum Aspartate Aminotransferase (AST)	Significantly Higher	Lower	0.021
Serum Alanine Aminotransferase (ALT)	Significantly Higher	Lower	0.003
Celiac Artery Depth Ratio	Larger	Smaller	<0.001
Graft Volume	Larger	Smaller	<0.001
Donor Perioperative Outcomes			
Operation Time	Longer	Shorter	0.019
Postoperative Major Complications	No Difference	No Difference	0.314
Length of Hospital Stay	No Difference	No Difference	0.607
Readmission Rate	No Difference	No Difference	>0.999
Recipient Surgical Outcomes			
Biliary Complications	No Difference	No Difference	0.163
Length of Hospital Stay	No Difference	No Difference	0.445

Case 2

- 42 Male
- No past medical history of note
- No surgeries either.
- BMI 19.6
- Non- smoker
- Rarely consumes alcohol
- Family history of thrombosis and Factor V Leiden
- Sister, niece and paternal uncle have Factor V Leiden
- Father had 2 provoked DVTs following surgery
- Paternal aunt had unprovoked PE.

Factor V Leiden

- FVL and its variants are expressed phenotypically as activated protein C resistance.
- Homozygous donors are usually avoided.
- Conflicting reports on Heterozygous donor outcomes.

TS Tra Institute, Pittsburgh. A Humar et al.

Characteristic	Details
Total Donors	438
Factor V Leiden Heterozygosity	17 (4%)
Other Hypercoagulable Abnormalities	None
Prior History of Thrombosis	None
Median Age	45 years
Gender Predominance	Female (60%)
Post-operative DVT Prophylaxis	Enoxaparin (Lovenox) 30 mg daily
Long-term Anticoagulation	
Discharged without	16 donors
Discharged with Apixaban	1 donor (Apixaban 2.5 mg BID)
Thrombotic Complications	None (Immediate or long-term PE, DVT, or Stroke/TIA)

Case 3

- Donor who had recent cosmetic procedures.
- Current guidelines recommend postponing donation for 6 months.
- Case by case review and if donor suitable on work up, could potentially consider donating after 3 months after careful counselling and discussing anti-viral treatments.

Thank you.