Dear Editors and Reviewers,

Thank you for your recent review of our manuscript titled “A case report of acute liver failure secondary to acute antibody mediated rejection after ABO compatible liver transplant”. We appreciate the time you put into improving the quality of our manuscript and we have addressed the issues raised as follows:

Reviewer #1:

The liver has traditionally been considered a relatively resistant organ to AMR. Since living-donor transplantation is limited to relatives, the types of human leukocyte antigen (HLA) of the recipient and donor are sometimes different, there is a high risk of rejection in DSA positive cases, so transplantation to DSA-positive cases was once contraindicated. Some groups consider that desensitization therapy similar to ABO blood group incompatible transplantation is required prior to transplantation if the MFI value is high above 10,000. 1. Please explain why the transplant was performed despite the high MFI value in this case. 2. Have you considered desensitization therapy with rituximab? 3. Which was used as the replacement solution, plasma or albumin?

Thank you for your comment. We did not routinely perform crossmatches in the past. Her crossmatch result came back after the transplant. We now do crossmatches in all our patients. In our center a positive crossmatch is not a contraindication to proceeding with a liver transplant. About 90 % of positive crossmatches turn negative the next day. In those who continue to have a positive crossmatch we follow it and increase the intensity of their immunosuppression therapy, including induction either with ATG or simulect followed by a three drug therapy, including tacrolimus, MMF, and steroids. We also perform liver biopsies if the DSAs continue to increase or remain high.

We have not been routinely desensitizing liver transplant candidates. Rituximab is an option but it would have to be used with great caution since liver transplant patients are at higher risk for developing infection.

We use albumin and FFP in combination as our replacement solution.

Reviewer #2:

1 This is an interesting and rare case of acute liver failure caused by AMR after liver transplant and requiring retransplantation. Diagnosis and Treatment are appropriate. 2 In clinical works, acute AMR after liver transplantation needs to be differentiated from TCMR. 3 This case underwent ABO compatible liver transplant, but how to explain the ultrasonic result of portal vein thrombus? 4 In the discussion part, in addition to monitoring of DSA, it is also important to comprehensively evaluate the

risk factors of AMR after liver transplantation. 5 MELD should be instantiated in the Abbreviations part.

Thank you for your comment.

MELD was included in the abbreviations section.

We made a correction about US findings and this is our change. "Allograft ultrasound demonstrated new low bidirectional flow in left, right, and main portal veins, making it difficult to exclude portal vein thrombosis, but CT scan with contrast confirmed patent portal and hepatic artery inflow."

We agree that in addition to monitoring of DSA, it is also important to comprehensively evaluate the risk factors of AMR after liver transplantation. We stated that "Risk factors for DSA development as well as the detrimental effects on the allograft have been identified, including higher MELD score, re-transplantation, use of cyclosporine, lower immunosuppression, variability in the level of tacrolimus, and non-adherence to immunosuppression therapies, female donor, and recipient/donor gender mismatch."

Again, we appreciate the opportunity to revise our work for consideration for publication in the World Journal of Hepatology. We have revised the manuscript to incorporate the suggestions and look forward to your decision.

Sincerely,

Lena Sibulesky, MD, FACS

Associate Professor of Surgery