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ANSWERING REVIEWERS

Title: Incidence and risk factors for early renal dysfunction after liver transplantation

Author: Patricia Wiesen, Paul B Massion, Jean Joris, Olivier Detry, Pierre Damas

Name of Journal: *World Journal of Transplantation*

ESPS Manuscript NO: 21965

Dear Editor, dear Reviewers:

I would like first to thank you for the time you spent to revise this manuscript and for your constructive comments and advices.

I am pleased to resubmit for publication the revised version of manuscript N° 21965 entitled "incidence and risk factors for early renal dysfunction after liver transplantation".

The most substantial revision concerns the manuscript's length. According to one of the reviewers' advice (reviewer 01560464), we have pared down the discussion's length, mainly by limiting obvious facts development or via suppression of details without direct relationship with our results.

REVIEWER COMMENTS:

1. Reviewer 00005191

Renal failure is one of the main complications after orthotopic liver transplantation (OLT), with severe impact on early and long-term outcomes and on patients' survival. Highlighting Acute Kidney Injury (AKI) risk factors associated with liver transplantation may help reduce the prevalence of early renal dysfunction. A list of preoperative conditions, as well as the quality of grafts and some postoperative factors may favour the occurrence of AKI after OLT. The manuscript is a single center retrospective study that aims at estimating the incidence and severity of early postoperative renal dysfunction in OLT recipients and at highlighting the perioperative AKI risk factors and their significance, with particular attention to the role of donation after cardiac death (DCD). Data were collected from a consecutive series of 187 patients who underwent OLT at the University Hospital of Liege (Belgium) from January 2006 until September 2012. Patients were divided into four groups according to their renal function. Univariate analysis was performed to identify variables associated with primary outcome as potential confounders. The severity of renal dysfunction was correlated in univariate analysis with patient body mass index, ascites, prior bacterial infection, preoperative bilirubin, urea and creatinine levels, surgical revision, intraoperative vasopressor requirement, postoperative mechanical ventilation, postoperative urea, bilirubin, aspartate amino transferase peak levels and minimum hemoglobin levels, ICU length of stay and transfusion of each type of products. The Authors discuss on the following aspects: - preoperative renal impairment; - vasopressor requirements; - anemia and transfusion requirements; - hyperbilirubinemia; - ischemia-reperfusion; - immunosuppressive drugs. In their conclusions, the Authors demonstrate that AKI after liver



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transplantation is a common complication, considering that more than 50% of liver transplanted patients experienced some degree of early renal dysfunction after transplantation. BMI, hyperbilirubinemia, preoperative renal dysfunction, perioperative circulatory instability requiring the use of vasopressor and postoperative anemia are independent predictors of AKI occurrence. Besides targeting improvement of graft quality, particular attention must be paid to avoid preoperative additive kidney damages, in order to optimize intraoperative hemodynamics and reduce transfusion requirements. The manuscript is well-written and deserves publication, as it carries a useful message to the clinicians involved in transplantation.

2. Specific concerns on reviewer 01560464

Comments: 1) The authors retrospectively reviewed the clinical data from 187 patients who were performed orthotopic liver transplantations (OLT), the results indicated that AKI after liver transplantation was a common complication since more than half of liver transplanted patients experienced some degree of early renal dysfunction after transplantation. BMI, hyperbilirubinemia, preoperative renal dysfunction, perioperative circulatory instability requiring the use of vasopressor and postoperative anemia are independent predictors of AKI occurrence. It is important guidance to prevent and treat the AKI after liver transplantation. 2) The content of discussion should be further condensed and refined, the discussion should be described according by authors' clinical data and statistical analysis. 3) I suggest that the article can be published in the form of short communication in world J Transplantation.

I have nevertheless a comment concerning the third item (suggestion of publication in form of short communication).

Full articles are comprehensive and should have empirical data to support the claims. We made in this study an univariate and multivariate analysis of our own data, and provided an intense discussion highlighting similarities and differences with literature data. I don't think this manuscript would be an appropriate form for a short communication.