Author's Reply to Letter "An Alternative Surgical Technique for Caval Preservation in Liver Transplantation"

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Received: 18 January 2011 / Accepted: 1 April 2011 / Published online: 6 May 2011
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Dear Editor:

Thank you for the opportunity to reply to the letter that you recently received from Drs. Kayaalp and Yilmaz. We appreciate and agree with the comments of Drs. Kayaalp and Yilmaz; however, we think it is important to clarify a few issues.

1. In their letter Drs. Kayaalp and Yilmaz indicated that the hanging maneuver of the "hepatic veins over the vena cava inferior without separation of short hepatic veins is a challenging method." We agree with that statement, however, we are unaware of a described hanging maneuver of the hepatic veins over the inferior vena cava (IVC), nor was it our intention to define such a maneuver. With our technique, we create a dissection area between the IVC and the three hepatic veins that is sufficiently large enough to place a surgical clamp across the three hepatic veins.
2. The cumulative experience of the five authors of the paper titled "An alternative surgical technique for caval preservation in liver transplantation" is over 1,200 liver transplants. These include live donor as well as cadaver donor liver transplants performed with an array of techniques that vary from the "standard" to the piggy-back technique in its various forms. Based on our cumulative experience the drawing numbered 1b

provided by Drs. Kayaalp and Yilmaz is a beautiful representation of one very important step of the "standard" or "bi-caval" technique for orthotopic liver transplantation: the encirclement of the supra-hepatic IVC before it is clamped in the very last portion of the hepatectomy—a technique that is different from the one we described in our paper. Thank you for the picture.

3. We agree with Drs. Kayaalp and Yilmaz that our proposed alternative surgical technique for caval preservation is challenging. That is the reason why in the last paragraph of the discussion section of our paper we indicated that this technique should only be performed by "experienced transplant surgeons."
4. Furthermore, the anatomy of the retro-hepatic veins is variable and not standard. This is the reason why the described surgical technique should be used in cases of favorable anatomical variation of the retro-hepatic veins which allow an easy blunt dissection of the plane between the hepatic veins and the IVC.
5. Since the paper was published, one more patient has been transplanted using this technique at our institution. Finally, as an answer to the questions posed by Drs. Kayaalp and Yilmaz in their last paragraph, when properly used in the right candidate, the handling of the hepatic veins in this technique does pose an extra-challenge that can be overcome by experienced transplant surgeons. As far as the question as to the amount of bleeding observed during the use of this technique, the answer is that the anatomy of the retro-hepatic veins was favorable enough to allow a bloodless finger dissection of the plane between the hepatic veins and the IVC.

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