LETTER TO THE EDITOR

Multivisceral Transplantation for Diffuse Portomesenteric Thrombosis

To the Editor:

We would like to congratulate Dr Vianna and the entire team for their remarkable study and publication on the role of multivisceral transplantation (MVT) in the setting of diffuse thrombosis of the portomesenteric venous system. The article helps bring into focus this unique problem in the liver transplant (LT) setting. We would like to comment on the Vianna et al study, given our experience with this problem in the LT scenario; the same was published in the December 2011 issue of Annals of Surgery. We would also like to give our view on the debate of pros and cons of available surgical alternatives in LT candidates with diffuse portal vein thrombosis (PVT) (grade 4; Yerdel et al). In our study performed over a 5-year period, the authors analyzed 25 cases of MVT, including liver, pancreaticoduodenal complex, stomach, and small intestine with or without renal transplant, in patients with diffuse PVT. They showed that this procedure could be successfully performed in patients with grade 4 PVT with satisfactory long-term survival. In theory and for anatomical reasons, MVT, including the liver and the small intestine, represents the best option in patients with diffuse portomesenteric vein thrombosis and life-threatening upper digestive bleeding because it represents the only option to provide physiological correction of extraperitoneal PVT and thus portal hypertension. However, it remains a complex procedure and the high rate of rejection of the small bowel is one of the limiting factors.

Our comments concern the following points: Of the 31 eligible patients, 6 patients were analyzed separately because LT alone either with evasion thrombendovenoctomy or with portomesenteric vein grafts could be performed. In our experience, low dissection and mechanical thrombectomy are technically difficult and there are chances of failure and complications during and after the attempt at extensive dissection due to the following reasons: (i) the presence of portal cavernoma; (ii) possible transformation of the portal vein into a fibrous cord; (iii) pancreatitis caused by extensive retroperitoneal dissection; and (iv) possible residual thrombosis of the superior mesenteric vein, which could lead to rethrombosis (although there is no evidence that rethrombosis rate is higher in patients undergoing extensive thrombectomy). This procedure is also not without the risk of perioperative mortality. Hence, we did not attempt extensive low dissection in our series and preferred a cavoportal hemi Anastomosis or more often a renoporal shunt in patients with grade 4 PVT. Again, we feel that it is unlikely that it would be possible to perform a total thrombectomy in patients with extensive grade 4 PVT involving the portal and superior mesenteric systems, which would allow an LT alone. So, it is questionable whether these 6 patients in the Vianna et al series could actually be classified as grade 4 PVT.

At least 8 other patients in this series had other abdominal comorbidities and underwent an additional complex abdominal procedure such as gastric, intestinal, or colonic resection. It would be interesting to know whether the authors tried to reestablish venous flow to the portal vein using the mesenteric venous system and perform an isolated LT in this subgroup of patients. MVT in some of the patients could also be a therapeutic option for irreversible intestinal failure. Excluding these 14 patients, the other 17 patients are possibly comparable with the 20 cases in our series published earlier regarding caval inflow to the liver graft for diffuse PVT. Like the authors, we agree that unlike MVT, nonanatomical techniques such as renoporal anastomosis or cavoportal anastomosis do not reverse portal hypertension. In our study, variceal bleeding occurred in 15% of cases and 35% of patients experienced massive ascites after the procedure. However, we have shown that, over time, postoperative complications related to portal hypertension resolve with medical treatment; for example, massive ascites resolved within 4 months of LT in our patients. The authors reported that residual complications related to portal hypertension were not observed in any of the patients. It would be interesting to know how many of their patients had massive ascites before MVT and how long ascites persisted in the postoperative period.

Although the authors report only 1 perioperative death in the study, the incidence of morbidity after MVT is high. Surgical complications were encountered in 14 patients. Eight (57%) patients required reexplo- rations for various reasons (excluding those re-operated for planned renal transplantation; n = 5). Three patients were reexplored because of wound dehiscence, 2 patients for hemorrhage, 1 patient for small bowel obstruction, and 2 patients for gastrointestinal anastomotic leak. What was the source of bleeding? Did these patients also have associated postoperative ascites?

Finally, although the 2 groups of patients are not strictly comparable, the overall patient and graft survival after MVT (Vianna et al) and liver transplantation with caval inflow to the graft (Bhangui et al) are quite similar (80%, 72%, and 72% vs 93%, 75%, and 60% at 1, 3, and 5 years, respectively). In summary, we would again like to credit and congratulate the authors for contributing to this topic. MVT, including the liver and the small bowel, is theoretically the best option for patients with diffuse PVT because it restores anatomical portal blood flow and completely reverses portal hypertension. But it is not without a risk. MVT and caval inflow to the graft are 2 possible options without evidence for superiority of one over the other. We believe that the choice between these 2 techniques depends upon individual anatomical considerations, technical abilities, and experience of the transplant center.

Chetana Lim, MD
Service de Chirurgie Digestive et Hépato-Biliaire et Transplantation hépatique
Hôpital Henri Mondor
AP-HP
Créteil cedex, France

Prashant Bhangui, MD
Medanta Institute of Liver Transplantation and Regenerative Medicine
Medanta—The Medicity
Gurgaon
Haryana, India

Chady Salloum, MD
Daniel Azoulay, MD, PhD
Service de Chirurgie Digestive et Hépato-Biliaire et Transplantation hépatique
Hôpital Henri Mondor
AP-HP
Créteil cedex, France

daniel.azoulay@hmm.aphp.fr

REFERENCES


Disclosure: None of the authors have any source of funding or any other kind of personal conflicts of interest related to this letter.

Copyright © 2013 Wolters Kluwer Health, Inc. Unauthorized reproduction of this article is prohibited.