

Reply:

We thank Drs. Jeanne M. LaBerge and Robert K. Kerlan for their interest in our study. Indeed, cases of focal liver ischemia have already been reported in TIPS performed with bare stents, related to the puncture of an arterial branch. Nevertheless, in our experience with covered stents, ischemia is secondary to the occlusion of the hepatic vein proximally to the insertion of the stent-graft, as documented here using Doppler ultrasonography (Fig. 1). Since the beginning of our experience, we have observed this complication in 5% of our patients in whom TIPS was performed with the same device. Therefore, we adapted our puncture technique to prevent this complication, trying to puncture the wall of the hepatic vein as close as possible to its ostium, so that the graft is less likely to occlude the venous lumen.

Inadvertent catheterization of the hepatic artery during the TIPS procedure is a well-known complication, but consecutive liver ischemia is exceptional, with only 2 cases being documented (only 1 with a radionuclide liver spleen scan) in the literature.^{1,2}

Furthermore, our experience of more than 100 TIPS procedures using covered stents shows that the device-related ischemia cannot be considered an exceptional event.

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Fig. 1. Doppler ultrasonography of a patient who experienced segmental liver ischemia after a TIPS procedure with covered stent. TIPS is patent (**black arrow**), the hepatic vein (**white arrow**) is occluded up to the insertion of the stent-graft.