Laparoscopic Pancreaticoduodenectomy with Reconstruction of the Portal Vein with the Parietal Peritoneum

Safi Dokmak, MD¹, Rim Chérif, MD¹, Igor Duquesne, MD¹, Raphaëlle Delattre, MD², Béatrice Aussilhou, MD¹, Olivier Soubrane, MD¹, and Alain Sauvanet, MD¹

¹Department of HPB Surgery and Liver Transplantation, Beaujon Hospital, Clichy, France; ²Department of Anesthesia-Reanimation, Beaujon Hospital, Clichy, France

ABSTRACT

Introduction. Laparoscopic pancreaticoduodenectomy (LPD) is increasingly used for resections of periampullary tumors, including pancreatic adenocarcinoma.¹ LPD with venous resection–reconstruction (VRR) has already been performed with or without vascular graft.^{2,3} The parietal peritoneum (PP) was recently described for reconstruction of the mesenterico-portal vein, with excellent results.⁴

Patients and Methods. Between April 2011 and May 2015, a total of 64 LPDs were performed in our department; however, only one patient underwent VRR. Compared with the open approach, full mobilization of the mesentery and right liver is not systematically carried out and, theoretically, vascular grafts may be more frequently needed with LPD. In this video, LPD for pancreatic adenocarcinoma with resection of the lateral right side of the portal vein (>25 mm) was performed. Reconstruction was achieved rapidly, as a lateral patch, with the falciform ligament.

Results. Surgery lasted 360 min, 60 min of portal vein occlusion, 200 ml of blood loss, and uneventful stay. Since 2010, the PP has been used as a lateral patch in 69 patients operated by open ($n = 68$) or laparoscopic approach ($n = 1$). Although handling and suturing can be difficult, no bleeding complications related to the PP were observed and the permeability rate was >95 %.

Conclusion. LPD is still restricted to selected centers, with conflicting results regarding safety; however, venous resection may be required. We feel that with the laparoscopic approach, vascular grafts are more frequently needed and the PP has many advantages compared with an open approach, including easy access, unlimited size, and rapid harvesting.

CONFLICT OF INTEREST Safi Dokmak, Rim Chérif, Igor Duquesne, Raphaëlle Delattre, Béatrice Aussilhou, Olivier Soubrane, and Alain Sauvanet declare no conflicts of interest.

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S. Dokmak, MD
e-mail: safi.dokmak@bjn.aphp.fr