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ORIGINAL ARTICLE – HEPATOBILIARY TUMORS

Laparoscopic Ultrasound-Guided R1 Vascular Liver Resection for Colorectal Liver Metastases at Caval Confluence

Fabio Procopio, MD[1,2], Matteo Cimino, MD[1], Flavio Milana, MD[1], Eloisa Franchi, MD[1], Bruno Branciforte, MD[1], and Guido Torzilli, MD, PhD, FACS[1,2]

[1]Division of Hepatobiliary and General Surgery, Department of Surgery, Humanitas Research Hospital-IRCCS, Humanitas University, Rozzano, MI, Italy; [2]Department of Biomedical Sciences, Humanitas University, Milan, Italy

ABSTRACT

Background. Patients with tumors involving the hepatic vein (HV) at the caval confluence (CC) usually receive major hepatectomies or HV grafting. For colorectal liver metastases (CLM), tumor–vessel detachment (R1vasc) has proven to be oncologically adequate.[1–3] However, parenchyma-sparing R1vasc surgery has usually been confined to the open approach. The technical tricks for accomplishing this kind of surgery in laparoscopy are disclosed.

Methods. A patient with a CLM in contact with the middle HV (MHV) and left HV (LHV) at the CC underwent liver resection. No signs of vascular invasion were observed at preoperative imaging. On the basis of the low rate of tumor–vessel regression after chemotherapy,[4] technical feasibility, and low tumor burden, patient was considered for upfront surgery. Surgery consisted in: (1) left liver mobilization with full exposure of the CC; (2) identification of the common trunk's root and its encirclement by tape; (3) the use of ultrasound to rule out HV invasion and to define a resection area favoring a transection plane smoothly approaching the point of vascular contact; and (4) careful vascular detachment by blunt dissection in a caudocranial fashion to separate the lesion from HVs.

Results. A limited resection of segments, four superior and two with MHV–LHV detachment, was performed. Operation time was 285 min, with 52 min of cumulative Pringle time and 20 ml of blood loss. Postoperative course was uneventful. The in-hospital stay was 6 days.

Conclusion. Similarly to open surgery, laparoscopic R1-vasc surgery for CLM at CC is feasible and represents an alternative to major hepatectomy. HV control by tape is recommended to manage any bleeding that may occur during tumor–vessel detachment.

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G. Torzilli, MD, PhD, FACS
e-mail: guido.torzilli@hunimed.eu

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DISCLOSURES The authors declare that they have no conflict of interest.

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