

Hepatic Vein-Sparing Hepatectomy for Multiple Colorectal Liver Metastases at the Caval Confluence

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ABSTRACT

Background. Two-stage hepatectomies generally are selected for patients with multiple bilobar colorectal liver metastases (CLMs) involving the hepatic veins (HV) at the caval confluence to reduce the risk of postoperative hepatic failure due to insufficient remnant liver.^{1,2} The use of IIOUS based on well-established criteria offers alternative technical solutions to the staged resections.^{3,4} This report describes a sophisticated IIOUS-guided parenchyma-sparing procedure.

Methods. A 57-year-old woman with multiple CLMs underwent surgery. One of these CLMs was located in segments 8 to 4 sup involving the middle hepatic vein (MHV) at the caval confluence. A second CLM was between dorsal segment 8 and the paracaval portion of segment 1 involving the right hepatic vein (RHV) at the caval confluence. Neither the inferior RHV nor the communicating veins were evident at preoperative imaging. The left hemiliver represented 27 % of the total liver volume, and segments 2 and 3 represented 16 %.

Results. After a J-shaped thoracophrenolaparotomy, liver exploration with IIOUS showed tumoral invasion of MHV and RHV at their caval confluence for one third of their circumference. No communicating veins were intraoperatively evident. A partial resection of segments 7, 8, and 4 superior and 1-paracaval sparing both RHV and MHV was

performed. The latter were partially resected, and vessel wall reconstruction was obtained by direct running suture. No congested area or vascular thrombosis occurred, and the postoperative course was uneventful. No local recurrence had occurred after 6 months of follow-up evaluation.

Conclusions. The video shows an HV-sparing IIOUS-guided hepatectomy as an alternative to conventional staged surgery. This policy represents a safe and effective alternative to major resection performed immediately or in a staged perspective.

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