

## Upper Transversal Hepatectomy

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### ABSTRACT

**Background.** For tumors involving hepatic veins (HV) at hepato-caval confluence (HC), major hepatectomy or vascular reconstruction, are recommended. Detection of communicating veins (CV) between adjacent HVs allows conservative hepatectomies.

**Methods.** A 61 year-old man was operated for multiple colorectal liver metastases (CLM). The 2 main CLM (14 and 3.5 cm in size) were adjacent, separated by the middle HV (MHV) at HC, and involved segments 1(paracaval portion), 7, and 8, and segments 4-superior(S4sup) and 1(paracaval portion), respectively. At HC the larger CLM invaded the right HV (RHV), and the smaller was in contact with the left HV (LHV). A thick inferior RHV (IRHV), and 2 CVs connecting IRHV-MHV and MHV-LHV, were evident.

**Results.** After J-shaped thoracophrenolaparotomy, intra-operative ultrasound (IOUS) confirmed the CVs. Liver was

detached from the inferior vena cava preserving the IRHV: RHV was divided, and common trunk of MHV-LHV was taped, and, once clamped, hepato-petal flow in S4inf, S5, and S6 portal branches was confirmed at IOUS. Upper-transverse IOUS-guided resection, comprehensive of S7, S8, S4sup, and S1 (paracaval portion) with preservation of the CVs was performed. MHV at HC was divided once detachment of the LHV from the tumor was ultimate. No congestive areas remained. No postoperative mortality and major morbidity occurred: patient was discharge on 17th postoperative day, and is disease-free at 7 months after surgery.

**Conclusions.** Detection of CVs between adjacent HVs enables new conservative hepatectomies for tumors at HC. The herein described upper transversal hepatectomy despite two HVs are resected, allows adequate liver out-flow and remaining functional liver parenchyma.

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