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ORIGINAL ARTICLE – HEPATOBILIARY TUMORS

Conservative Hepatectomy for Tumors Involving the Middle Hepatic Vein and Segment 1: The Liver Tunnel

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ABSTRACT

Background. For lesions invading the middle hepatic vein (MHV) at caval confluence (CC) the mini-mesohepatectomy(MMH) was proposed.[1] If the lesion is extended to the paracaval portion of segment 1(S1) in contact or invading the MHV a new procedure is proposed.

Methods. Case-1: mass forming cholangiocarcinoma (MFCCC) 4cm in size invading the MHV and in contact with right (RHV) and left hepatic vein (LHV) at the CC. In Case-2, two colorectal liver metastases (CLM) both 2cm in size occupied S1 (T1) and S8 (T2): T1 was located between RHV and the inferior vena cava (IVC), T2 was in contact with MHV at CC. According to tumor-vessel intraoperative-ultrasound classification[2] and color-flow analysis[3] parenchyma-sparing procedure was performed.

Results. In Case-1 a communicating vein (CV) between RHV and MHV was detected at color-flow-IOUS. Contacts between MFCCC with RHV and LHV were confirmed at IOUS as detachable. In Case-2 contact between T1 with MHV was confirmed at IOUS as detachable. Liver-tunnel with IVC and main portal vein bifurcation exposure was performed resecting the MHV in Case-1 and preserving it in Case-2. Both patients had ad an uneventful postoperative course and were discharged on the 8th postoperative day.

Conclusion. For tumors involving S1, S4s and/or S8 and infiltrating or in contact with the MHV at the CC, can be removed in a conservative manner by means of the herein described "Liver Tunnel" approach. The latter introduces a further step in favour of parenchyma-sparing policy for centrally located lesions with complex tumor-vessel relationship.

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This video was accepted and presented at the Hepatobiliary Surgery video session of the 99th Annual Clinical Congress of the American College of Surgeons.

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