



Novel Use of the Falciform Ligament for MHV Reconstruction During Laparoscopic Hepatectomy of Colorectal Liver Metastasis

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ABSTRACT

Background. Laparoscopic hepatectomy (LH) with oncological R0 resection combined with systemic therapy offers the best chance of cure for colorectal liver metastasis. However, tumors in vicinity of major hepatic veins require complex technique. Parenchyma-sparing resection with involved vein resection and peritoneal patch reconstruction could be an efficacious alternative to preserve liver volume for adjuvant chemotherapy and avoid venous congestion of the remnant liver.^{1,2}

Methods. A 64-year-old female, with history of colon cancer, had new diagnosis of liver metastatic tumor of S8 (2.8 cm), which was considering encroached on middle hepatic vein (MHV) with distal part patent. Thus margin-negative, parenchyma-sparing liver resection with involved vein resection and proximal MHV reconstruction was indicated for oncological radicality.

Results. With the patient in modified French position, we dissected falciform ligament and right coronary ligament to expose the crypt between right hepatic vein (RHV) and MHV. Intraoperative ultrasound localized the tumor and resection margin. Parenchymal dissection was performed caudally to cranially, left to right, to ligate dorsal branch of G8 (G8d) and V8 and

expose main trunk of MHV. The involved side-wall of MHV was incised after the proximal and distal parts clamped. Peritoneal patch was harvested from falciform ligament to repair MHV side-wall before clamps released. The patient had an uneventful recovery and remained disease-free at 1 year postoperatively with patency of distal MHV by image.

Conclusions. LH with MHV reconstruction by falciform ligament for metastatic lesion is technically demanding but feasible with oncological radicality and volume preservation for adjuvant chemotherapy.

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