Pure Laparoscopic Transhepatic Enucleation of a Mucinous Cystic Neoplasm Abutting the Major Hepatic Veins at the Hepatocaval Confluence (with Video)

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Abstract

Background A mucinous cystic neoplasm (MCN) of the liver is a rare disease entity, occurring predominantly in the left hemiliver as reported by Simo et al.¹ Thomas et al.² and Vogt et al.³ Surgical resection of tumors at the hepatocaval confluence is a technically demanding procedure. Enucleation procedures have been performed for the management of benign or premalignant lesions such as cystic tumors as previously described by Thomas et al.² and Vogt et al.³. We present a patient who underwent pure laparoscopic transhepatic enucleation to treat a MCN abutting the major hepatic veins at the hepatocaval confluence.

Methods We treated a 77-year-old man who presented with a 5-cm-sized cystic mass at the hepatocaval confluence. Using the Pringle maneuver, we performed liver parenchymal transection along the junction between the origin of the middle hepatic vein (MHV) and the inferior vena cava (IVC) as reported by Kim⁴. The MHV formed the left-sided boundary of the cystic mass. After dissection of the left boundary of the cystic wall, the dorsal side of the cystic mass was carefully dissected. Liver parenchymal transection was continued up to the right hepatic vein (RHV). Laparoscopic enucleation was performed to expose the RHV and MHV, as well as the IVC.

Results The operation time was 270 min, the estimated blood loss was 80 mL, and no transfusion was necessary in this patient. The final histopathological diagnosis of the mass was MCN. Postoperatively, the patient recovered uneventfully, and he was discharged on postoperative day 5.

Conclusions Laparoscopic transhepatic enucleation for MCNs at the hepatocaval confluence is technically feasible and offers the benefits of a parenchyma-sparing resection. However, this procedure requires a high level of technical skills and shows a steep learning curve.

Keywords Laparoscopic liver resection · Enucleation · Mucinous cystic neoplasm

Author Contributions Ji Hoon Kim was involved with study conception and design, acquisition of data, analysis and interpretation of data, drafting of manuscript, and critical revision.

Compliance with Ethical Standards

Conflict of Interest The author declares that he has no conflict of interest.

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