



Ventral approach to the middle hepatic vein in laparoscopic extended left hepatectomy (Video)



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Abstract

Background

Laparoscopic extended left hepatectomy with resection of the middle hepatic vein (MHV) is a technically difficult and complex procedure. A ventral approach provides easy and safe access to the main root of the MHV in laparoscopic hemihepatectomy. We present a ventral approach to the MHV in laparoscopic extended left hepatectomy.

Methods

A 59-year-old woman harbored a 4-cm-sized tumor located in segment 4. The tumor was close to the MHV and the umbilical portion of the left portal vein. We performed extended left hepatectomy to secure the resection margin. This surgery was performed without laparoscopic ultrasound, but it is advised to use ultrasound in such difficult cases in order to identify the tumor location and MHV. The falciform and left coronary ligament were dissected. Individual ligation of the left hepatic artery and portal vein was performed. Parenchymal transection was carried out from the ventral to the dorsal side under a bird's eye view using a flexible laparoscope, similar to an open hepatectomy. The MHV was exposed from the main root toward its peripheral branches. Segments 5 and 8 of the hepatic vein were transected. Finally, the middle and left hepatic vein were transected. The specimen was removed through the extension port used for the camera. A Jackson-Pratt

drain was placed in the operative field.

Results

The operation time was 260 min, estimated blood loss was 100 mL, and total Pringle maneuver time was 40 min. The final histopathological diagnosis showed a 37-mm-sized intrahepatic cholangiocarcinoma with a 10-mm free resection margin. The patient was discharged on postoperative day 7 without any complications.

Conclusion

A ventral approach to MHV in laparoscopic extended left hepatectomy may be a feasible and effective technique. However, this approach can be used in selected patients and in expert laparoscopic hepatobiliary centers.

Disclosures

Dr. Ji Hoon Kim has no conflicts of interest or financial ties to disclose.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.suronc.2019.07.009>.

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