



Three-Dimensional Ventral Approach with the Modified Liver-Hanging Maneuver During Laparoscopic Right Hemihepatectomy

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ABSTRACT

Background. The ventral approach differs completely from the caudal approach because of differences in surgical views and the direction of the parenchymal transection.^{1–4} A three-dimensional (3D) laparoscopy provides the advantages of better depth perception and spatial orientation.^{5,6} We present a 3D ventral approach with the modified liver-hanging maneuver during laparoscopic right hemihepatectomy (LRH).

Methods. This was a case of a 78-year-old woman with a 4 cm sized cystic tumor located at the right hemiliver. A 3D flexible laparoscope (Olympus Medical Systems Corp., Tokyo, Japan) was used to provide a bird's-eye view of the surgical field similar to that in an open approach. In the early phase, parenchymal transection was initiated in the cranioventral area of the liver. The liver parenchyma was transected in a ventral-to-dorsal direction. The segment V hepatic vein was dissected and ligated after identifying the main root of the middle hepatic vein. In the late phase, the dorsal area of the liver around the inferior vena cava and the segment VIII hepatic vein were dissected and ligated using the hanging technique.^{7,8}

Results. The operation time was 240 min, with an estimated blood loss of 70 mL. Total pringle time was 30 min. Final pathologic diagnosis was a 4.0 cm sized mucinous cystic neoplasm with low-grade dysplasia. The patient was discharged on postoperative day 7 without any complications.

Conclusion. The 3D ventral approach with the modified liver-hanging maneuver in LRH is a feasible and useful technique because it resembles open right hemihepatectomy with respect to the surgical concept.

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

INFORMED CONSENT The patient received an explanation of the procedure and provided informed consent.

ETHICAL APPROVAL This study was approved by the Institutional Review Board at our institute.

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