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ORIGINAL ARTICLE – HEPATOBILIARY–MULTIMEDIA

Totally Laparoscopic Right Hepatectomy Combined with Resection of the Inferior Vena Cava by Anterior Approach

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ABSTRACT

Background. Laparoscopic right hepatectomy has become a standard procedure for laparoscopic resection in specialized centers;[1–6] however, tumor involvement of the inferior vena cava (IVC) is still considered a contraindication. Here, we describe a safe technique of totally laparoscopic extended right hepatectomy to segment 1 combined with IVC resection using an anterior approach.

Methods. We performed 61 totally laparoscopic right hepatectomies by an anterior approach between January 2009 and April 2014. The video illustrates this procedure in a 58-year-old female with bilateral colorectal liver metastases involving the right-anterior wall of the retrohepatic IVC. Right hepatectomy was performed by initial hilar dissection and ligation of vascular inflow followed by division of the hepatic parenchyma with en-bloc segmentectomy 1, to expose the left side of the retrohepatic IVC. The right hepatic vein was divided using an endoscopic vascular stapler. As the involved portion of IVC could be isolated with the application of a single vascular clamp, the right IVC wall was divided using an endoscopic stapler. Thereafter, posterior mobilization of the right liver was performed.

Results. The surgical duration was 270 min and blood loss was 50 mL. The postoperative period was uneventful, and the patient was discharged 9 days after surgery. Histopathological examination confirmed the presence of a colorectal metastasis with tumor-free margin.

Conclusion. We devised a secure procedure to perform totally laparoscopic right hepatectomy combined with IVC resection using an anterior approach; this may be a safe and useful technique to perform laparoscopic right hepatectomy.

CONFLICT OF INTEREST Takeo Nomi, David Fuks, Aditya Agrawal, Yoshikuni Kawaguchi, Satoshi Ogiso, and Brice Gayet have no conflict of interest.

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