Laparoscopic resection of hepatocellular carcinoma at segment 7: the posterior approach to anatomic resection

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Abstract

Background Open anatomical liver resections remain one of the most effective treatments of hepatocellular carcinoma (HCC) and results in better recurrence-free and overall survival compared to nonanatomical resections [1]. On the other hand, laparoscopic hepatectomies for HCC have recently emerged with the benefits of reduced blood loss, shorter hospital stay, and less severe wound pain [2, 3]. Classically, liver lesions considered suitable for laparoscopic resection were those small tumors (<4 cm) located over the anterior and left lateral segments [3]. However, we would like to expand the current indications and here we present our techniques of laparoscopic anatomical resection for a HCC that was located at right posteriosuperior segment 7.

Methods Our patient was a 60-year-old gentleman who had Child's A hepatitis B cirrhosis and was on entecavir. During a follow-up CT scan, a 2.6-cm segment 7 lesion with early arterial enhancement and contrast washout was noted and was subsequently confirmed with arteriogram. α -Fetoprotein was 3 ng/ml (normal < 20 ng/ml). The video demonstrates a posterior approach to laparoscopic resection of segment 7.

Results Operative time was 510 min. Blood loss was 800 ml and no perioperative transfusion was required. Postoperative recovery was uneventful and only simple

oral analgesics were required for pain control. He was discharged on postoperative day 6. Histology showed a moderately differentiated hepatocellular carcinoma and all resection margins were clear. Subsequent follow-up CT scan 6 months after the operation showed no evidence of recurrence and α -fetoprotein level was normal.

Conclusions Laparoscopic hepatectomy for HCC over the right posterior segment of the liver is feasible in selected patients with favorable results in terms of wound size, postoperative recovery, and hospital stay. Maximal liver conservation was achieved in performing oncologic anatomical resection of segment 7 instead of a posterior sectionectomy. On the other hand, a posterior approach was recommended because it allowed early intrahepatic control of pedicles and identification of the right hepatic vein to guide parenchymal transection along the intersegmental plane.

Keywords Laparoscopy · Liver resection · Hepatocellular carcinoma · Cirrhosis

Disclosures K. C. Cheng, Y. P. Yeung, J. Hui, K. M. Ho, and Andrew W. C. Yip have no conflicts of interest or financial ties to disclose.

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