



# Laparoscopic Extended Left Hemi-Hepatectomy plus Caudate Lobectomy for Caudate Lobe Hepatocellular Carcinoma

Hongyu Li<sup>1</sup> · Yonggang Wei<sup>2</sup>

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## Abstract

**Background** Laparoscopic hepatectomy for caudate lobe is classified as one of the most difficult procedures to perform.<sup>1</sup> For malignant caudate lobe tumor which is close to hepatic veins, extended hemi-hepatectomy may be more suitable.

**Methods** A 60-year-old man was diagnosed with hepatitis B virus infection-related hepatocellular carcinoma (HCC). His liver function was Child-Pugh A and ICG-15 test was 2.1%. Abdominal CT showed a 5 × 6 cm mass located in caudate lobe with middle and left hepatic vein encroached. Caudate lobectomy was not adopted because of the suspicious hepatic vein invasion by HCC. Instead, laparoscopic extended left hemi-hepatectomy plus caudate lobectomy was planned.

**Results** The patient was placed in supine position. Three 12-mm trocars and two 5-mm trocars were used. After fully mobilization, the caudate lobe was exposed. The third porta hepatis was dissected before parenchyma transection. The outline was along the right side of middle hepatic vein. Pringle maneuver (15 min clamping and 5 min release, total Pringle time was 60 min with 4 times clamping) was performed during transection. The superficial tissue was divided using ultrasonic shears, while the deeper tissue was divided using LigaSure. The left pedicle was dissected and transected meticulously. The main trunk of right hepatic vein was continuously exposed from the caudal side. A linear stapler was used to transect the middle and left hepatic vein from the root. Bipolar was used for hemostasis. The specimen was removed from suprapubic incision. The operation time was 200 min and estimated blood loss was 100 ml. HCC was confirmed by postoperative pathological examination. The postoperative course was uneventful.

**Conclusions** Laparoscopic extended left hemi-hepatectomy plus caudate lobectomy is feasible and safe for caudate lobe HCC with suspicious hepatic veins invasion.

**Keywords** Hepatocellular carcinoma · Laparoscopy · Extended left hemi-hepatectomy · Caudate lobectomy

## Abbreviations

HCC Hepatocellular carcinoma

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✉ Yonggang Wei  
docweiyonggang@126.com

Hongyu Li  
lihongyu1986@gmail.com

<sup>1</sup> Department of Pancreatic Surgery, West China Hospital, Sichuan University, Chengdu 610041, Sichuan Province, China

<sup>2</sup> Department of Liver Surgery, West China Hospital, Sichuan University, Chengdu 610041, Sichuan Province, China

## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

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