

LAPAROSCOPIC ASSISTED ASSOCIATED LIVER PARTITION AND PORTAL VEIN LIGATION FOR STAGED HEPATECTOMY (ALPPS) FOR A GIANT HEPATOCELLULAR CARCINOMA (20CM)

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Background : Associating Liver Partition and Portal Vein Ligation for Staged Hepatectomy (ALPPS) is a significant and attractive alternative to portal vein embolization (PVE) for inducing rapid liver hypertrophy, despite its association with higher morbidity and mortality. To minimize postoperative pain and complications, such as wound-related issues, we adopted a laparoscopic approach for the first stage. Additionally, to reduce the risk of rupture associated with a giant hepatocellular carcinoma (HCC), an open approach was utilized for the second stage.

Methods : We present a case of a 63-year-old man with a giant HCC measuring 20 × 15 cm in the right lobe of the liver. In the first stage, a purely laparoscopic technique was performed using an “anterior approach” without mobilization of the right lobe. The postoperative course after the first stage was uneventful. A CT scan on postoperative day (POD) 9 demonstrated significant hypertrophy of the future liver remnant (FLR), and the patient’s liver function tests had normalized.

Results : The second stage was conducted two weeks after the first stage via an open approach due to the high risk of tumor rupture during mobilization of the right lobe. An extended right hepatectomy, including resection of the middle hepatic vein, was successfully performed. Postoperatively, a fluid collection was identified in the right subhepatic space and resolved with percutaneous drainage.

Conclusions : The surgical outcomes of ALPPS were superior to those of portal vein embolization (PVE) and comparable to one-stage resection. ALPPS is a safe and effective strategy for patients with giant HCCs. A laparoscopic approach during the 1st stage of ALPPS procedure offers significant advantages, including a reduced risk of wound-related complications and an open approach during the 2nd stage can minimize the risk of rupture during mobilization of the liver in a giant HCC.

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