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Total Laparoscopic ALPPS: Extended Right Hepatectomy for Metastatic Liver Tumor

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Abstract

Background: Hepatectomy is the potentially curative treatment for liver tumors. The most critical postoperative complication of extensive liver resection is post-hepatectomy liver failure (PHLF) due to insufficient future liver remnant (FLR). The ALPPS (Associating Liver Partition and Portal vein Ligation for Staged hepatectomy) effectively increases the resectability of inoperable liver tumors by achieving a rapid and an effective hypertrophy of the FLR, which lowers postoperative liver failure risk. However, this technique still carries on with high morbidity and mortality rate.

Aim: To present the first case of total laparoscopic ALPPS for extended right hepatectomy which is shown in VDO resources. Our institute proposed this technique as a valid option aim to improve the outcomes of ALPPS procedure by careful patient selection.

Technique: Total laparoscopic ALPPS involves two stages. The first stage consisted in the ligation of the right portal branch and the partition of the liver. The second stage was performed on day 14 after the first stage which the patient has already confirmed the sufficient liver remnant volume and function by the MRI upper abdomen and primovist. The de-portalized liver was removed by transected the right hepatic artery (RHA), the biliary duct and the right and middle hepatic vein (RHV, MHV).

Conclusions: The ALPPS technique is a novel therapeutic method for inoperable liver tumors by conventional methods. By careful patient selection and technical adjustment to the particular conditions of each case, better outcomes have been achieved.

Key words: laparoscopic ALPPS, metastatic lymphoma of stomach