

Laparoscopic Versus Open Repeat Liver Resection For Recurrent Hepatocellular Carcinoma In Hepatectomy Patients: Inverse Probability Of Treatment Weighting

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Background : Repeat liver resection (RLR) is a good treatment option for recurrent hepatocellular carcinoma (HCC). However, laparoscopic repeat liver resection (LRLR) is more technically demanding than open repeat liver resection (ORLR). The purpose of our study is to compare the surgical outcomes of ORLR and LRLR and to carefully present LRLR guidelines for HCC.

Methods : We performed RLR at a single institution from January 2017 to November 2019. We divided the patients into an ORLR group and an LRLR group. Inverse probability of treatment weighting was applied in this study to compare the ORLR group and the LRLR group.

Results : There was no difference between the two groups in patient characteristics, preoperative blood tests and pathological characteristics except tumor size ($p = 0.021$) and tumor grade ($p < 0.001$). The LRLR group had less blood loss (100 mL vs. 200 mL, $p = 0.011$) and shorter hospital stay (6 days vs. 8 days, $p = 0.002$). Disease-free survival was also significantly higher in the LRLR group than in the ORLR group ($p = 0.009$).

Conclusions : If regular radiologic examination is performed, most of the recurrent tumors could be detected less than 3 cm. LRLR yielded better short-term outcomes than ORLR. LRLR might be feasible and useful for recurrent HCC located contralateral to the previous tumor at a size of less than 3 cm.

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