

# The Value of Preoperative Hepatic Vein Embolization Combined with Precise TACE in Stage II Resection of Primary Liver Cancer

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# • Aims

- This retrospective study was to assess the effectiveness of inducing artificial atrophy of the liver by preoperative hepatic vein deprivation (LVD) combined with precise transcatheter arterial chemoembolization (TACE) in patients with large liver cancer, and to evaluate the impact of this treatment approach on compensatory proliferation of the contralateral liver, increasing hepatic functional reserve, and achieving surgical indications for stage II liver resection.

# • **Methods**

- Clinical data from 24 patients who underwent LVD combined with precise TACE therapy due to insufficient residual liver volume between October 2019 and December 2021 at the First Affiliated Hospital of University of Science and Technology of China were retrospectively analyzed. The study parameters included success rate of surgery, adverse reactions and complications, dynamic changes in liver function, blood routine and coagulation function, as well as the results of preoperative and postoperative liver CT examinations.

# • Results

- All 24 patients completed the simultaneous LVD and TACE treatment with a 100% success rate. The most common side effect after surgery was discomfort and pain in the liver area, and no serious complications were observed. Laboratory examination data revealed that alanine aminotransferase and aspartate aminotransferase increased significantly but recovered to preoperative levels after surgery. After LVD combined with TACE, the volume of the left liver gradually increased while the volume of the right liver gradually decreased. The preoperative future liver remnant (FLR) volume ratio was  $45.2 \pm 7.4\%$ , and the FLR volume ratios at weeks 1 and 3 after surgery were  $49.8 \pm 17.9\%$  and  $55.2 \pm 21.3\%$ , respectively. Three weeks after LVD combined with TACE, 17 cases (70.8%) met the surgical requirements for FLR.

# • **Conclusions**

- LVD combined with precise TACE is a minimally invasive and safe transformation therapy for primary liver cancer that promotes rapid proliferation of FLR and enables stage II surgical criteria to be met in a shorter waiting period.