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TITLE

RESULTS OF INCREASING THE FUTURE LIVER REMNANT VOLUME AFTER PORTAL AND HEPATIC VEIN EMBOLIZATION IN HEPATOCELLULAR CARCINOMA

BACKGROUND

This study aimed to evaluate the portal and hepatic vein embolization (LVD) outcome before hepatectomy in patients with hepatocellular carcinoma (HCC).

METHODS

From January 2021 to August 2023, HCC patients with indications for hepatectomy but inadequate initial future liver remnant (FLR) were performed LVD to increase FLR before surgery.

RESULT

Fifty-two HCC patients with a median age of 54.5 years underwent LVD. Technical success was obtained in all cases. No LVD procedure-associated complications occurred, except for 1 case presenting with grade A liver failure after LVD (then recovered after 7 days). The FLR volume before and after LVD was 405.1 ml and 639.5 ml, respectively ($p < 0.001$). The percentage of FLR of total liver volume (TLV) increased from 34.0% to 47.4% ($p < 0.001$), with the percentage of hypertrophy (FLRpost/FLRpre) reaching 1.5 times. All 27 patients demonstrated sufficient FLR after LVD (48 patients at three weeks post-LVD, two at six weeks, and two at ten weeks), but only 43 patients accepted surgery. Postoperative histopathology showed 27 patients with fibrosis F3-F4 and 16 with mild fibrosis F1-F2 (METAVIR). One patient presented with severe intraoperative bleeding due to damage of the left hepatic vein and developed grade C liver failure, then died on day 32 postoperation.

CONCLUSIONS

LVD is a safe, effective and feasible method to increase FLR in HCC patients significantly. Randomized controlled clinical trials are needed to evaluate the efficacy of LVD and compare it with other methods.

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