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Topic : **Liver**

PREDICTIVE VALUE OF THE BODY WEIGHT-ADJUSTED FUTURE LIVER REMNANT-TO-SPLEEN VOLUME RATIO IN POST-HEPATECTOMY LIVER FAILURE FOLLOWING HEMI-HEPATECTOMY

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Background : Post-hepatectomy liver failure (PHLF) is a critical complication after hemi-hepatectomy. Accurate prediction is essential for improving surgical outcomes. This study aimed to investigate the predictive value of the body weight-adjusted future liver remnant-to-spleen volume ratio (FLR/SV/Wt ratio) for PHLF.

Methods : A retrospective analysis was conducted on 224 patients who underwent hemi-hepatectomy. Demographics, laboratory data, and volumetric measurements, including FLR, spleen volume (SV), and body weight-adjusted FLR/SV ratio (FLR/SV/Wt), were analyzed. Logistic regression and receiver operating characteristic (ROC) curve analyses evaluated predictive factors for PHLF.

Results : Among 224 patients, 32 (14.3%) experienced PHLF (ISGLS grade B/C). Patients with PHLF showed significantly lower FLR/SV/Wt ratios (4.11 vs. 7.78; $p < 0.001$). Logistic regression identified the FLR/SV/Wt ratio as an independent predictor of PHLF (OR: 0.59, 95% CI: 0.386-0.901; $p = 0.015$). ROC curve analysis revealed an AUC of 0.738 for FLR/SV/Wt, with an optimal cutoff value of 7.737, sensitivity of 96.9%, and specificity of 40.1%.

Conclusions : The FLR/SV/Wt ratio is a significant predictor of PHLF following hemi-hepatectomy. Preoperative assessment incorporating FLR/SV/Wt may improve risk stratification and guide surgical decision-making.

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