Early Predictor of Mortality after Liver Resection in Patients with Hepatocellular Carcinoma

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Introduction: The mortality rate after hepatectomy has been declined to nearly zero, The postoperative liver failure is a major cause of early death, The aim of this study is to find out an early predictor of postoperative liver failure with biochemical parameters.

Materials and Methods: The medical records of 248 patients were analyzed retrospectively from Mar. 2000 to Dec. 2008. The various indices based on the biochemical parameters were analyzed on postoperative days (POD) 1, 3, 5 and 7.

Results: Mortality rate was 4.4% (11/248), 7 patients of 11 were died with 1 month. The most significant factor was the operative time (p=0.011), “50-50” criterion and new criteria revealed a significant difference in univariate analysis. The various parameters were revealed significant results: Bilirubin with INR (0.811, p=0.006) on POD 3, bilirubin with INR (0.803, p=0.007), bilirubin with cholesterol (0.775, p=0.015), cholesterol with INR (0.771, p=0.017), bilirubin with INR & MELD (0.838, p=0.03), bilirubin with INR & MELD-Na (0.908, p=0.000) on POD 5, bilirubin with INR (0.915, p=0.000), bilirubin with cholesterol & INR (0.763, p=0.017), bilirubin with INR & MELD (0.895, p=0.000), bilirubin with INR & MELDNa (0.947, p=0.000) on POD 7. The sensitivity and specificity of bilirubin with INR, bilirubin with INR & MELD and bilirubin with INR & MELD-Na criteria on POD 7 were each 57.1% & 99.1%, 57.1% & 99.1% and 71.4% & 97.2%.

Conclusion: The criterion of bilirubin with INR and MELD-Na revealed a high sensitivity and specificity and will be helpful to predict poor outcome. The validation with this index will be required in national wide base.