



According to HVPG

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Surgical resection remains to be gold standard for treatment of hepatocellular carcinoma (HCC). However, with background of chronic liver disease associated cirrhosis, surgery should be restricted to patients with resectable tumor and adequate liver reserve. With advanced technology, hepatic resection is a safer procedure than before. However, the outcome of surgery depends even more importantly on preoperative patient selection with good liver function and adequate reserve. Various criteria have been established for evaluation of hepatic reserve determining feasibility of resection. Despite that, post-operative liver failure or decompensation still appears. Investigators worldwide are working hard to refine existing criteria used for patient selection, to reduce post-operative dysfunction.

In patients with chronic liver disease, liver parenchymal fibrosis results in reduction of functional reserve despite normal appearance of liver or biochemistry. The architectural distortion leads to increased intrahepatic resistance, eventually portal hypertension. Logically, the hepatic vein pressure gradient (HVPG) reflects portal pressure, and thus severity of cirrhosis. HVPG exceeding 10mmHg is associated with increased cirrhosis-related complications in non-surgical patients.

In most guidelines for hepatic resection, clinically significant portal hypertension due to cirrhosis is a contraindication. However, that had been challenged by various studies and criticized for the inaccuracy of assessment. Pre-operative HVPG has been studied as a more accurate measurement and powerful prognostic marker to predict post-operative complication. Up to date, there is no consensus on cut-off value of HVPG. In recent studies, HVPG had been proven to be associated with hepatic fibrosis. A cut-off value of 5 mmHg could predict post-operative complication, especially liver dysfunction and ascites.

Routine pre-operative measurement of HVPG may identify patients with portal hypertension, who are at risk of post-operative complication. It may help to modify surgical plan to improve outcome of management of HCC patients. The benefit seemed to outweigh the potential risk of the measurement.