

## The Kidney in Liver Disease

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Liver failure is a devastating condition consequent on massive liver cell necrosis resulting in altered cognitive function, coagulopathy and peripheral vasodilation. These patients frequently develop concurrent acute kidney injury (AKI). This abrupt and sustained decline in renal function, through a number of pathogenic mechanisms such as renal hypoperfusion, direct drug-induced nephrotoxicity or sepsis/systemic inflammatory response contributes to increased morbidity and is strongly associated with a worse prognosis.

Advances in the understanding of the pathophysiology of liver-kidney disease have enabled the development of therapies for what used to be a fatal condition. As characterization of renal injury develops utilizing novel biomarkers, the concept of incipient renal injury has been proposed, in which biomarker changes identify an 'at-risk kidney' and inform need for preemptive therapy. Continuous renal replacement therapy (CRRT) may be considered as rescue therapy for patients with liver-kidney disease, such as hepatorenal syndrome, in whom pharmacological treatment is ineffective. CRRT is also a bridging therapy aimed at keeping the patient alive until receiving the liver transplantation.

- 1) Hartleb M & Gutkowski K., Kidneys in chronic liver diseases, *World J Gastroenterol*; 18(24): 3035-3049 ,2012
- 2) Moore JK , Love E, Craig DG, Hayes PC, Simpson KJ. Acute kidney injury in acute liver failure: a review, *Expert Rev Gastroenterol Hepatol*; 7(8):701-712, 2013