

OUTCOME OF THE POST SURGICAL ACUTE LIVER FAILURE PATIENTS TREATED WITH RENAL REPLACEMENT THERAPY FOR ACUTE RENAL FAILURE: THE NSARF EXPERIENCE

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BACKGROUND. Acute liver failure (ALF) after major operations is associated with multiple organ failure, usually with acute renal failure (ARF). The benefit of renal replacement therapy (RRT) is controversial due to poor outcome. The aim of this study was to evaluate the effects of early dialysis and dialysis modality.

METHODS. From July 2002 to January 2005, all patients having no previous liver disease but developed ALF and ARF requiring RRT after major operation were included. Patients were categorized into early or late dialysis groups based on a cut-off level of 80 mg/dL of BUN prior to RRT.

RESULTS. Eighty patients with a mean age of 57.8 years were analyzed; 38 had a history of chronic kidney disease. No differences in gender, BUN before operation, pre-dialysis urine amount, types of operation, severity or etiologies of ALF between both groups were noted. Patients with late dialysis (n=31) were older ($p=0.034$), had higher mortality rate (84.6% vs. 57.4 %, $p= 0.022$), and had poor renal function recovery (12.0% vs. 39.2%, $p =0.018$). Fifty-three (66.3%) patients died during the SICU stay. The logistic regression analysis showed the independent risk factors for SICU mortality are RRT modality [intermittent hemodialysis vs. continuous veno-venous hemofiltration (CRRT) (OR= 4.17, 95% CI 1.19-14.29; $p=0.026$)], higher disease severity score (APACHE II >20, OR= 7.69, 95% CI 1.92-30.30; $p=0.004$), and late dialysis (OR= 4.17, 95% CI 1.10-16.13; $p=0.036$). Survival estimated by Kaplan-Meier analysis revealed a significant difference between early and late dialysis (Log rank, $p= 0.031$).

CONCLUSION. Patients with post-surgical ALF associated with ARF had high mortality. Early initiation of RRT based on pre-dialysis BUN with CRRT may provide better outcomes.

Keywords. Acute renal failure, acute liver failure, continuous veno-venous hemofiltration (CVVH), early dialysis, APACHE II