

RISK FACTORS OF EARLY REDIALYSIS AFTER WEANING FROM POSTOPERATIVE ACUTE HEMODIALYSIS

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BACKGROUND. Although recovery of renal function is common in acute dialysis, the indicators that actually suggest the time point to take the patient off acute dialysis have still not been elucidated. The aim of this study was to identify risk factors for early redialysis in postsurgical acute renal failure (ARF) patients who had initially been weaned from acute dialysis.

METHODS. There were 327 postoperative patients who had received acute hemodialysis between July 2002 and January 2005 in a surgical intensive care unit. Success in taking patients off dialysis was defined as cessation from dialysis for more than 28 days.

RESULTS. There were 94 postoperative patients who were weaned from acute dialysis for more than 5 days. Among these patients, 64 (68.1%) had been successfully taken off dialysis for more than 28 days. The independent predictors for resuming dialysis within 28 days were longer dialysis-dependent time (days) (OR 1.06; $p=0.005$), disease severity score (SOFA) at D0 (OR 1.44; $p=0.003$), oliguria (OR 4.17; $p=0.039$) at D0 and older age (OR 6.35; $p=0.008$). The area under the ROC curve was 0.880 ($p<0.0001$) (fig 1). Two-way ANOVA with repeated measurements over time showed a larger decline in SOFA score ($p=0.006$) and increasing urine output ($p=0.015$) in patients with successful cessation of dialysis. Kaplan-Meier analysis showed a significant difference in early resumption of dialysis between patients with or without oliguria at D0 (log rank; $p<0.0001$) (fig 2).

CONCLUSION. More than two-thirds of patients with post-operative acute renal failure avoided redialysis within 1 month. Older age, higher SOFA score, oliguria and longer dialysis-dependent time were independent predictors of early redialysis in these patients.

Key words: Acute renal failure, Acute dialysis, urine output