

# Experience of Sustained Low-efficiency Dialysis (SLED) in Critically Ill Acute Renal Failure (ARF) Patients

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**Background :** In spite of many advantages of continuous renal replacement therapy (CRRT) in critically ill ARF patients, there are some shortcomings which include inconvenience, expensiveness, and increased workload. Many reports have suggested that SLED has comparable advantages to traditional CRRT and can overcome these limitations presented in CRRT. To the best of the author's knowledge, this is the first SLED report in Korea.

**Methods :** Between September 2003 and March 2004, nine patients were treated with SLED for a total of 34 treatment days, and 9 patients were treated with CRRT for total of 32 days. The choice of modality was made by the attending nephrologist but was based largely on availability of equipment and not on the clinical status of patients. We compared hemodynamic stability, efficiency and cost with workload between two modalities.

**Results :** The median of Acute Physiology and Chronic Health Evaluation (APACHE) II scores at the start of therapy was 32 for SLED (range, 23 to 35) versus 29 for CRRT (range, 19 to 34;  $p=0.658$ ). Mean arterial blood pressures (MAPs) were not significantly different when measured pre-dialysis (median MAP, 80 versus 85 mmHg for CRRT;  $p=0.756$ ), mid-dialysis (90 versus 85 mmHg for CRRT;  $p=0.860$ ), and at the end of treatment (95 versus 80 mmHg for CRRT;  $p=0.377$ ). Hypotensive episode was similar in both modalities. Ultrafiltration volume per treatment day was similar for the two treatment modalities (SLED, median, 2,000 mL/d; range, 1,550 to 3,750 mL/d; CRRT, 2,000 mL/d; range, 721 to 2,900 mL/d;  $p=0.562$ ). We found that SLED was more technically feasible, less costly, less labor-intensive and allowed more flexible patient mobility than CRRT.

**Conclusion :** SLED can offer comparable safety and efficiency to traditional CRRT with added advantages. We think that SLED could be useful alternative modality in critically ill ARF patients.