

SURVIVAL OF END-STAGE RENAL DISEASE PATIENTS WHO UNDERGO CONTINUOUS AMBULATORY PERITONEAL DIALYSIS AS THE INITIAL TREATMENT STRATEGY UNDER THE UNIVERSAL COVERAGE OF THAILAND

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ABSTRACT

This retrospective cohort study aimed to examine the prognosis and associated factors regarding survival of end-stage renal disease (ESRD) patients who participated in the Peritoneal Dialysis as the First Treatment Strategy (PD-First) Project of the National Health Security Office (NHSO) of Thailand. ESRD patients under the Universal Health Coverage Scheme (UC), funded by the NHSO, who required renal replacement therapy, have been obliged to have continuous ambulatory peritoneal dialysis (CAPD) as their initial treatment strategy since October 1, 2007. Patients were divided into 3 groups according to their subsequent mode of treatment: (1) those who continued CAPD; (2) those who switched to hemodialysis (HD), and (3) those who underwent kidney transplantation (KT). Data regarding survival status, mode of treatment, and associated factors were obtained from the Disease Management Information System (DMIS) managed by the Renal Failure Fund of the NHSO. Survival was estimated using Kaplan-Meier method and comparison between groups was performed using log-rank test. Factors associated with survival were analysed using Cox's proportional hazard model.

A total of 12,939 patients from 112 public health centers were included in the PD-First Project between October 1, 2007 and August 31, 2011. Additional follow-up data were obtained until January 10, 2012. A total of 11,355 patients (87.8%) continued CAPD; 1,527 (11.8%) switched to HD; and 57 (0.4%) underwent KT. Survival rates at 1, 2, 3 and 4 years were 72.2%, 58.7%, 48.8% and 40.4% respectively for patients who continued CAPD; 89.5%, 78.6%, 71.0% and 65.1% respectively for patients who switched to HD; and 100%, 98.2%, 96.1% and 87.4% respectively for patients who underwent KT. Compared to patients who continued CAPD, those who switched to HD and underwent KT had significant lower risk of mortality after adjustment for various baseline factors (HD vs. CAPD: HR 0.47, 95% confidence interval (CI) 0.39 to 0.56, $p < 0.001$; KT vs. CAPD: HR 0.21, 95% CI 0.51 to 0.83, $p = 0.026$). Other factors found to be significantly associated with mortality included age, history of diabetes mellitus, body surface area (BSA) and the type of public health center.

In conclusion, in ESRD patients receiving CAPD as the initial treatment strategy, subsequent treatment modality was significantly associated with prognosis. Specifically, survival rates of those who switched to HD or KT were significantly better than those who continued CAPD.

**KEY WORDS: SURVIVAL RATE/END-STAGE RENAL DISEASE/CONTINUOUS
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