

## 혈액투석 환자에서 오전·오후 투석 시간에 따른 생존결과

고신대학교 의과대학 내과학교실

김성빈, 박진희, 신호식, 이정림, 정연순, 임 학

### Survival by Time of Day of Hemodialysis in Hemodialysis Patients: A Single Center Study

Sung Bin Kim, Jin Hee Park, Ho Sik Shin, Jung Lim Lee, Yeon Soon Jung, Hark Rim

Department of Internal Medicine, Kosin University College of Medicine

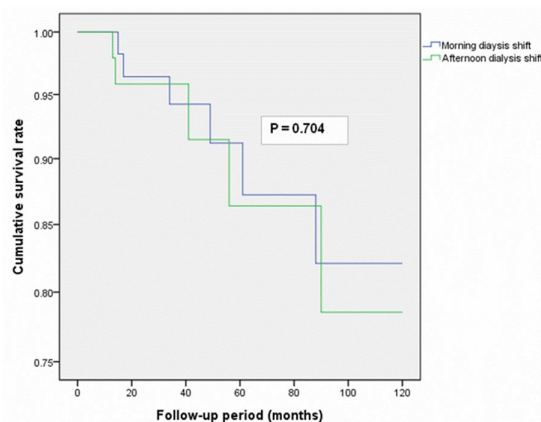
**Background:** Patients with end-stage renal disease (ESRD) typically undergo hemodialysis (HD) during the morning or afternoon, with time of treatment generally based on space availability or patient preference. No studies have investigated variation in patient survival as a function of the time of day when they receive dialysis in a Korean hemodialysis patients. We investigate the association of patients' HD treatment shift with their continued survival, controlling for well-established HD-related mortality risk factors.

**Method:** An 10-year (from January 1, 2000 till December 31, 2010) follow-up retrospective cohort study conducted among 120 ESRD patients who underwent HD at Kosin University Gospel Hospital either during a morning shift (n=60) or an afternoon shift (n=60). Comparison was done for noncontinuous variables by chi-square and t test for categorical and continuous variables, respectively. Life table analysis was used to compare survival in both treatment groups. Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS) version 18.0 (SPSS Inc., Chicago, IL, USA).

**Results:** Survival rate between morning-shift HD patients and afternoon-shift HD patients was not statistically different (mean survival, 61.1 months vs 48.2 months;  $p=0.139$ ). A Cox proportional hazards model indicated that the morning shift was not protective (relative risk, 0.793; 95% confidence interval, 0.198–3.181) independent of age, sex, body mass index, diabetic ESRD, and months of dialysis. The unadjusted 5-year survival rate for patients on morning shift hemodialysis was 87.3% versus 86.4% for patients on afternoon shift hemodialysis ( $p=0.704$  by Wilcoxon test).

**Conclusion:** Survival rate between morning-shift HD patients and afternoon-shift HD patients was not different. Results from this cohort study may warrant prospective observational studies and randomized clinical trials in a Korean HD patients that systematically alter the time of day at which HD is administered.

**Key Words:** 오전 혈액투석, 오후 혈액투석, 시각  
Morning shift hemodialysis, Afternoon shift  
Time of day



**Fig. 1.** Life table survival curves for patients undergoing dialysis during morning and afternoon shift.