

Systolic Blood Pressure is Associated with Survival Rate in Dialysis Patients

Department of Internal Medicine, Yonsei University College of Medicine

*Misol Lee, MD, Jong Hyun Jhee MD, Su-Young Jung MD, Youn Kyung Kee MD

Background: Although hypertension (HTN) is a common clinical problem in dialysis patients, the proper blood pressure (BP) target is still controversy. The object of this study is to investigate optimal BP target and adequate management of BP in prevalent dialysis patients group. **Methods:** The data were retrieved from End-stage Renal Disease-Clinical Research Center (ESRD-CRC) which dialysis patients were prospectively enrolled from 2009 to 2014. Total 2,299 patients were analyzed. Eligible patients were assigned to four groups according to distribution of systolic BP (SBP, group as SBP < 120, 120-140, 140-160, and > 160 mmHg, respectively). The primary outcome was all-cause mortality. During a baseline study visit, classes of antihypertensive agent (AHA) being taken were determined by pill bottle inspection. **Results:** There were 360, 862, 719, and 358 patients in each SBP groups. The mean SBP in each group was 106.9, 128.6, 146.4 and 170.9 mmHg ($p < 0.001$). Baseline characteristics among the groups did not show significant differences except number of AHAs (1.5 ± 1.4 , 1.8 ± 1.5 , 2.1 ± 1.4 , and 2.3 ± 1.3 pills in each group, $p < 0.001$). All-cause mortality was higher in SBP < 120 mmHg group [hazard ratio (HR) 1.44, 95% confidential interval (CI) 1.06-1.94, $p = 0.019$], while, although the statistical significance did not showed, the tendency with higher risk was revealed in > 160 mmHg group (HR 1.33, 95% CI 0.94-1.81, $p = 0.074$) compared to groups, whose BP ranged from 120 to 160 mmHg. Multiple Cox analysis revealed that SBP < 120 and > 160 mmHg group had significantly higher risk of all-cause mortality after adjustment for age, sex, history of diabetes, cardiovascular events, duration of dialysis, serum albumin, hemoglobin, sodium, and high sensitivity C-reactive proteins (HR 1.84, 95% CI 1.27-2.66, $p = 0.001$; HR 1.69, 95% CI 1.16-2.45, $p = 0.006$). The number of AHAs being taken was not associated with survival rate. **Conclusions:** This study showed that lowest (< 120) or highest (> 160 mmHg) SBP group had higher risk of all-cause mortality, irrespective of number of AHAs. BP control with optimal target is associated with better survival rate. Further study is warranted to determine optimal blood pressure target in dialysis patients.

Seven Years Survival Rate of On-line Hemodiafiltration

¹Chonnam National University Hospital

*Jung-Hwan Yoon¹, Nam-Ho Kim²

Background and Aims: Standard hemodialysis (HD) is not good as compared to normal kidney function and patient morbidity and mortality rates are still very high. To increase mid-to-large molecule clearance by combining diffusion and convection, the use of On-line haemodiafiltration (HDF) is required. So we decided to compare the long-term survival of the patients with On-line HDF and patients with standard HD through review of Chonnam National University Hospital (CNUH). **Patients and Method:** We selected patients who meet the criteria among patients attending the 'CUNH dialysis center' has decided to proceed with the study. Overall, 40 patients with ESRD switched from high flux HD to On-line HDF or start On-line HDF from August 2007 to december 2009. In the same period, patients with standard HD being enroll in the study were a total of 42 people. We will review that the long term survival rate for patients receiving On-line HDF by checking whether they were alive during each 7-year. **Results:** Survival rate of the group receiving the On-line HDF is 65%. (26 people from 40 people was survived). And survival rate of the group receiving the standard HD was 54.8%. (23 people from 42 people was survived). There was statistically significant difference in survival rate between the groups ($p < 0.05$). **Conclusions:** As a result, the 7 years of survival rate was higher in the group On-line HDF. Our study show the beneficial effect of hemodiafiltration on improving clinical outcomes and survival in chronic HD patients.

Status	N	Death	Survival	
			N	%
Standard HD	42	19	23	54.8%
Online HDF	40	14	26	65.0%
Total	82	33	49	59.8%

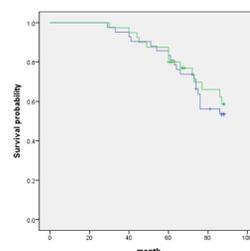


Figure 1. Kaplan-Meier plot of survival curves (7 years).