Survival analysis among hemodialysis patients in a selected tertiary hospital in Pampanga

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This retrospective cohort study aimed to determine factors associated to survival of hemodialysis patients in the selected tertiary hospital in Pampanga, Hemodialysis Unit and to estimate their mean and median survival time as well as their survival rates. The sample consisted of 200 patients who underwent hemodialysis treatment from 2007 to 2011. Patients aged below 18, those who underwent kidney transplant and transient patients (those who went through dialysis only during the course of their short stay/vacation in Pampanga) were excluded. Kaplan-Meier Survival Analysis was used for examining the distribution of the survival time of the hemodialysis patients. Survival times were compared by levels of the various demographic, hemodialysis related and biochemical factors and diagnosis or cause of ESRD using log-rank tests. P-values less than 0.05 were considered significant. Results showed that about 3 out of every 4 hemodialysis patients in the selected tertiary hospital in Pampanga started dialysis at more than 50 years of age while 3 out of every 5 of the hemodialysis patients are males. Half of the hemodialysis patients are prescribed twice a week hemodialysis sessions. Only 1 out of every 3 patients on hemodialysis for at least one year has compliant to the prescribed hemodialysis treatment. Most of the patients had hemoglobin, phosphate, BUN and creatinine and levels below the recommended range at baseline but these decreased during the course of their hemodialysis although there were several missing data on these biochemical factors during hemodialysis. Diabetes was found to be the leading cause of kidney disease leading to hemodialysis followed by chronic glomerulonephritis and then by hypertension. On the average, hemodialysis patients in the selected institution live up to about 2 and a half years after starting hemodialysis. After 5 years of hemodialysis approximately 1 out of every 3 hemodialysis patients in the selected institution would still be alive. The following hemodialysis patients were found to have a survival advantage; those who started dialysis between 18 to 40 years, males (who happened to be younger than females), baseline hemoglobin levels between 11 to 12 g/L, phosphate level more than 5.51 mg/dL during the course of dialysis, BUN level between 60 to 110 mg/dL during the course of dialysis, creatinine levels greater than 11.1 mg/dL during the course of dialysis, and with CGN as the cause of ESRD. In line with the results, the researcher recommends that the health care providers reiterate to the patients and their significant others to try to maintain during the course of hemodialysis the prescribed hemoglobin, phosphate, BUN and creatinine levels, which have been found in this study to be associated with greater survival. Incidentally, a more organized record keeping among hemodialysis patients is recommended to facilitate the development of a good database that may be used for research purposes. Since diabetes was found to be the leading cause of kidney disease leading to hemodialysis followed by chronic glomerulonephritis and then by hypertension, modifiable risk factors for these diseases have to be identified such that these factors could be modified as early as possible in the current study population. Lastly, the researcher recommends the implementation of the proposed series of seminars for hemodialysis nurses which will ultimately benefit hemodialysis patients and their significant others.

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