The Diurnal Patterns of Fatigue in Patients on Hemodialysis: A Pilot Study

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Purpose: Fatigue is one of the most common symptoms patients on hemodialysis experience. With a prevalence rate of 60-97%, it affects both mental and physical functioning. While fatigue is a frequent and often debilitating problem for patients on hemodialysis, there is little research regarding the patterns of fatigue that patients experience. The purpose of this study is to (a) determine the feasibility of measuring fatigue in patients on hemodialysis 4 times daily for one week using a self-report method, and (b) investigate the diurnal patterns of fatigue in relation to the dialysis session over one week, from Sunday to Saturday.

Methods: Thirty hemodialysis patients over the age of 21 years will be recruited for this study. A longitudinal, correlational design will be used to investigate the diurnal patterns of fatigue and how they are related to the dialysis session and demographic and physiologic variables. The Lee Fatigue Scale will be used to measure levels of fatigue throughout the day and demographic and physiologic variables will be collected from the patient chart. The feasibility of measuring fatigue four times daily for seven days in patients on hemodialysis will be assessed by success of participant recruitment and completion of data collection.

Results: Eight participants completed the study, therefore it is difficult to draw conclusions regarding the patterns of fatigue. In general, most participants have an overall fatigue score of 5 or higher (0-10); on the first day after 2 days without hemodialysis, most fatigue scores were lower after hemodialysis than before; and fatigue trends upward after hemodialysis as the week progresses.

Conclusions and Implications: It is not difficult to recruit participants in this population, however data collection is challenging. Those who declined to participate in the study often stated that they were too busy or were afraid they would forget to fill out data forms. It is likely they spend time doing necessary activities and may not have time to fit yet another activity into their day. Technology may be an effective solution to recruitment and data collection in this population plagued by fatigue as there are devices available to track activity and other variables that would help remind the participant of the data point and decrease the amount of time required to enter data. Acquiring accurate data regarding the patterns of fatigue in hemodialysis patients is necessary to intervene effectively.

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