Fatigue While Undergoing Long-Term Hemodialysis

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Fatigue is a common symptom for people living with late-stage CKD, with a diminishing effect on quality of life for many patients (1). Unfortunately, hemodialysis (HD) initiation does not assuage fatigue for most patients on this treatment type (2).

Being both a patient and a health psychologist, I took an interest in fatigue and other cognitive effects of late-stage CKD almost 2 decades ago. Once I began experiencing changes in my ability to think straight while I was still at stage 4, I started wondering about the reason for this deficit. My nephrologist and others on my treatment team were not able to offer any insights beyond the fact that fatigue is “normal” in advanced CKD.

When I started doing my own research, one of the first things I noticed was the paucity of studies on fatigue and other cognitive changes. I observed that most of the literature in that domain concentrated on depression and anxiety, but fatigue and other cognitive deficits, such as memory loss, lack of concentration, and other executive functions, were poorly researched—and that holds true to this day.

In the past decade, the focus on patient-reported outcomes and its measures has increased. I hope we will start to see more studies about fatigue and other cognitive deficits caused by ESKD once reports from patients are acknowledged as a serious metric by clinicians and researchers.

Despite being one of the most typical complaints among people on dialysis (3), there has been no patient-reported outcome measure for fatigue in HD until the “Standard Outcomes in Nephrology-Hemodialysis Fatigue” measure (4) described in a study by Ju et al. and published in this issue of CJASN. Up until now, we have had to rely on instruments developed for nondialysis-specific purposes.

The Standard Outcomes in Nephrology-Hemodialysis Fatigue measure is easy to use and measures a global fatigue score over the past week, which is great for many practical purposes. It captures the most important fatigue domains for people on HD: tiredness, lack of energy, and inability to participate in social situations.

Sadly, it does not capture an important dimension of fatigue for people doing dialysis: the difference between postdialysis fatigue (PDF) and interdialytic fatigue (IDF). Postdialysis fatigue may last from a few minutes to more than 12 hours (5). For many patients, this is the most debilitating part of their treatment.

There is most likely some causation between the treatment itself and PDF, whereas IDF is reminiscent of the type of fatigue experienced before dialysis initiation. There is much speculation about the cause(s) of dialysis-related fatigue, but sociodemographic, biologic, and psychologic factors all seem to be associated with both types of fatigue (6).

One of the things that may diminish both PDF and IDF is a longer and more frequent treatment regime (7). People doing more frequent dialysis regularly report that the trade-off between the time in treatment and time off the machine is well worth it. The extra time they spent in treatment is returned to them by having more energy and increased quality of life when not in treatment. In fact, the vast majority of people I have talked to as a psychologist who do either nocturnal or frequent dialysis (>20 h/wk) experience no PDF and very little, if any, IDF.

So, perhaps the problem with fatigue in hemodialysis is amplified by the way in which HD is currently administered. From a patient standpoint, it would be interesting to see further studies examining the connection between fatigue and more frequent treatment regimes—especially when keeping in mind that more frequent dialysis regimes also improve quality of life and longevity (8) in dialysis patients.

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