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Fatigue in hemodialysis patients: A single-center cross-sectional study

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Key words

fatigue – hemodialysis
– quality of life –
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Abstract. **Background:** Fatigue is a highly prevalent condition among people affected by chronic disease, with consequent poor health-related quality of life and lower survival rates. Fatigue is one of the most common and debilitating symptoms also experienced by hemodialysis (HD) patients after HD sessions, and given the non-specific manifestations and its invisible nature, it is under-recognized and under-treated by healthcare professionals. The complexity of fatigue's pathogenesis and the lack of measurement tools make the development of nursing interventions and practices specifically targeted at its recognition and therapy difficult. We aimed to investigate the prevalence and severity of fatigue, identify predictor variables in HD patients, and promote healthcare professionals' awareness and recognition of fatigue. **Materials and methods:** A single-center, cross-sectional study was conducted among 140 patients treated at the HD unit between August 2019 and March 2020 at the Nephrology, Dialysis, and Transplantation Unit of Padova University Hospital. We assessed patient's fatigue by Chalder's Fatigue Questionnaire, pain by Numeric Rating Scale and activities of daily living by Barthel Index. Demographic and clinical characteristics were taken from medical records. **Results:** The findings of this study indicate that age, dialysis vintage, inter-dialysis weight gain, and ultra-filtration rate are proportionally related to reported levels of fatigue. Hemoglobin, iron, ferritin, and number of sleep hours before HD session present a significant inverse correlation to fatigue. **Conclusion:** The complexity of fatigue's pathogenesis makes a better understanding of this phenomenon difficult, nevertheless, healthcare professionals should develop interventions and practices targeted at its identification and management.

Introduction

Fatigue is defined as a lingering feeling of extreme physical tiredness and emotional exhaustion that seems to be unresponsive to rest [1]. It is a highly prevalent condition among people affected by chronic disease, such as depression, rheumatologic diseases, and chronic pain; patients present generalized weakness, decreased exercise tolerance, mental exhaustion, and sleep disorders, with poor health-related quality of life (QOL) [2] and lower survival rates [3]. It reduces the ability to perform routine activities, increases dependence on caregivers, restricts social life participation, and changes familial roles. Currently, no international guidelines have been established regarding the definition, the measuring tools, and the treatment of fatigue.

Fatigue is also one of the most common and debilitating symptoms experienced by chronic hemodialysis (HD) patients, with a prevalence in this population ranging from 60% to 97% [4, 5], one of the highest among chronic-disease patients including those affected by cancer receiving chemotherapy [6], depressive disorders [7], and with systemic lupus erythematosus [8].

In HD patients, two patterns of fatigue have been identified: continuous fatigue and post-dialysis fatigue (PDF) [9]. Continuous fatigue is experienced by HD patients at all times, and is their normal, baseline feeling. PDF is experienced after the HD session and may last from a few minutes to more than 12 hours. It differs in severity and timing, and patients required almost 5 more hours of sleep to recover after their sessions and had more depression, insomnia, and body aches

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