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Editorial

Determinants of Nutritional Status and Quality of Life in Hemodialysis Patients

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Malnutrition is prevalent among patients undergoing hemodialysis (HD), affecting between 28% and 54% globally.[1] It is associated not only with increased morbidity and hospitalization rates but also with decreased functional status and impacts physical, emotional, and psychosocial health, ultimately leading to a lower quality of life (QoL).[2] Given the significant negative impacts of malnutrition, it is crucial for nephrologists to identify risk factors, make early diagnoses, and implement appropriate interventions for malnourished HD patients. Regular assessment of nutritional status and monitoring QoL should be integral components of standard management guidelines for HD patients, as ensuring quality assurance and continuous improvement are essential. It has been demonstrated that Health-related Quality of Life (HRQoL) significantly influences dialysis outcomes. Therefore, prioritizing both the duration and QoL for HD patients is paramount.[3]

Many factors are associated with the incidence of malnutrition in HD patients. However, in general, they can be divided into two categories. Firstly, dialysis-induced iatrogenic factors include chronic inflammation, catabolic effects of HD, loss of nutrients through the dialysis membrane, and inadequate HD, which can result in uremia and metabolic acidosis. These conditions can cause symptoms such as anorexia, nausea, and impaired food absorption.[4] Secondly, non-iatrogenic factors include poor appetite status, high monotonous eating pattern index, low diet quality, psychosocial and financial barriers,[5] lack of family support, changes in appetite, lack of knowledge,[6] and lack of physical activity.[7] Additionally, malnutrition must be considered before initiating HD treatments for patients, as it can manifest as metabolic disorders due to a progressive decrease in glomerular filtration rate, delays in access to a nephrologist, and inadequate pre-dialysis dietary care. Given the complexity of factors associated with malnutrition in HD patients, nutritional interventions should address multiple aspects. Studies by Decsa et al. and Satriyo et al., published in this journal, revealed that interventions focusing solely on one aspect, such as providing parenteral nutrition, have no impact on improving nutritional status.

In addition to frequent malnutrition, the QoL of HD patients decreases, both due to malnutrition and other reasons. Numerous studies have revealed a close relationship between malnutrition and low QoL in HD patients.[2, 8, 9]

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However, the critical aspects of QoL are extensive and complex, including employment, housing, schooling, neighborhood, cultural aspects, values, and spirituality. Health is widely regarded as one of the most critical domains of QoL. Health-related QoL encompasses various aspects related to physical, mental, emotional, and social functioning.[10] The US Food and Drug Administration (FDA) defines HRQoL as 'a multi-domain concept that represents a patient's general perception of the impact of a disease and its treatment on physical, psychological, and social aspects of life'.[11] HRQoL pertains to the physical, psychological, and social health domains unique to each individual,[12] which objective assessments and subjective perceptions of health can measure. Subjective perceptions include physical, psychological, and social health dimensions assessed by the patient, which are influenced by the individual's beliefs, life experiences, personality, and expectations.[13] Physical health dimensions (e.g., disability) can be assessed 'objectively' and provide information about the 'health status' or 'function' of the patient. HRQoL, on the other hand, assesses how the presence of physical symptoms of a disease affects a person's well-being, life satisfaction, or overall QoL. Based on this distinction, two individuals with the same physical health or disease severity can have significantly different HRQoL

How can QoL be improved in patients undergoing hemodialysis?

In principle, it is essential to assess each patient's QoL first by collecting comprehensive information to identify those who have or are at high risk of experiencing a decrease in HRQoL. This information forms the basis of clinical decision-making, rehabilitation, and individual patient management.[14] Conditions that can improve QoL are promoted, while those that worsen it are minimized or eliminated. Providing education and counseling to patients and families to increase awareness about the disease, as well as self-care activities, treatment options, complications, and rehabilitation programs can help patients lead productive lives. Management strategies may involve exercise training and addressing issues such as malnutrition, depression, anemia, and hormonal imbalances. Studies among elderly dialysis patients have demonstrated that growth hormone supplementation can improve muscle performance and HRQoL.[15] A study by Saffira et al., published in this journal, demonstrates the significant influence of physical exercise on increasing physical function, physical role, reducing physical pain, increasing vitality, and enhancing the general health of HD patients. Other studies have similarly shown that physical exercise can improve HD patients' functional capacity, respiratory muscle strength, and overall QoL.[16] Based on these results, integrating physical exercise should be a routine component of HD therapy to improve patients' QoL.[17]

Ultimately, Quality of Life Therapy (QoLT) is the only cognitive-behavioral treatment designed to enhance life satisfaction and happiness across various domains (such as self-esteem, relationships, and pleasurable activities) to improve overall QoL.[18] Improving the QoL in HD patients is the primary aim of kidney replacement therapy. The World Health Organization also emphasizes the significance of the patient's subjective perception of life within their values, standards, goals, and expectations.

Declarations

Competing interest

The author declares no conflict of interest.

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