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Malnutrition and its Risk Factors in Renal Patients on Dialysis

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Patients with end stage kidney disease (ESKD) on hemodialysis (HD) should follow a strict diet during the inter-dialytic period⁽¹⁾. Compliance to treatment, including diet, is key for optimal disease management and health outcomes and to protect against malnutrition^(2,3). The objective of this study was to assess renal nutrition-related knowledge, compliance with dietary guidelines, adherence to treatment and risk of malnutrition among patients with ESKD in Lebanon.

A convenience sample of 119 patients with ESKD on HD was recruited from the dialysis units of the Lebanese American University Medical Center-Rizk Hospital (LAUMC-RH) and Hammoud Hospital University Medical Center (HHUMC) in Lebanon. Demographic characteristics, 24 hour-recall and a validated food frequency questionnaire⁽⁴⁾ were collected from participants, while anthropometrics including weight status in the past 3 months, as well as biochemical data were collected from medical charts. Bioelectrical impedance tests were conducted on the patients, 30 mins after HD hemodialysis session, to assess body composition. Nutrition knowledge was assessed using a validated questionnaire⁽⁵⁾, whereby “poor knowledge” corresponds to <70% correct answers. Compliance to treatment (HD sessions, medications, fluids, and diet) was collected from participants using the End-Stage Renal Disease Adherence Questionnaire (ESRD-AQ)⁽⁶⁾ (Kim et al., 2010) and scored using the tool guide. Accordingly, adherence was classified as “poor” (scores <500), “moderate” (scores: 500-799), or “good” (scores: 800-1000).

100 of the 119 participants (85.5%) were found to have malnutrition according to the Global Leadership Initiative on Malnutrition (GLIM) criteria⁽⁷⁾. Malnourished patients were mostly found with lower education (57%), poor nutrition knowledge (68%), poor to moderate overall compliance (82%), and with no adequate caloric intake (67%). Weight loss was the most common phenotypic criterion among malnourished patients, whereby 22% of malnourished patients had weight loss of > 3Kg in the past 3 months. Malnourished patients with weight loss had a higher ($p = 0.008$) prevalence of poor overall compliance (36%), compared to those with mild or no weight loss (14%). Additionally, malnourished people with poor compliance tended to be younger (<55 years of age) and with lower levels of income and education ($p < 0.05$).

Malnutrition rates are alarmingly high among patients with ESKD in our sample and are linked with low nutrition knowledge and poor adherence to treatment, including dietary compliance. Future studies with a larger more representative cohort are required to confirm our results. Accordingly, intervention trials targeting knowledge and adherence among ESKD patients in Lebanon are warranted to prevent malnutrition and to achieve better clinical outcomes.

References

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