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DIAGNOSTIC USEFULNESS OF THE PROTEIN ENERGY WASTING CRITERIA IN PREVALENT HEMODIALYSIS PATIENTS

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INTRODUCTION AND AIMS: It is unknown whether the criteria proposed to define the Protein Energy Wasting (PEW) syndrome have diagnostic validity in patients undergoing dialysis.

METHODS: Prospective cross-sectional study including 468 prevalent hemodialysis patients from Canary Islands, Spain. Individual PEW syndrome criteria and the number of PEW syndrome categories were related to other objective markers of PEW using linear and logistic regression analyses: subjective global assessment (SGA), handgrip strength, bioimpedance-assessed body composition and levels of high-sensitivity C-reactive protein (CRP).

RESULTS: Study participants (34% women) had a median age of 66 years, 37 months of maintenance dialysis and 50% were diabetics. 23% of patients had PEW (>=3 PEW criteria), and 68% were at risk of PEW (1-2 PEW criteria). Low prealbumin was the most frequently found derangement (52% of cases), followed by low albumin (46%), and low protein intake (35%). Across higher number of PEW syndrome criteria, patients showed a longer dialysis vintage and had lower creatinine, triglycerides and transferrin (P for trend <0.001 for all). All nutritional assessments not included in the PEW definition worsened across higher number of PEW categories. In multivariable regression analyses, there was a linear inverse relationship between muscle and fat mass as well as handgrip strength with the number of PEW syndrome categories. Likewise, the proportion of SGA-defined malnutrition and serum concentration of CRP gradually increased despite adjustment for confounders (P for trend <0.05 for all).

CONCLUSIONS: The PEW criteria reflect systemic inflammation, malnutrition and wasting among dialysis patients, and may thus be used for diagnostic purposes.