Dedicated Renal Dietitian in the Hemodialysis Unit Controls Serum Phosphorus and Malnutrition, Lebanon

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Nutritional education has shown to have a positive impact on hyperphosphatemia management in hemodialysis (HD) patients. In most third world countries, the existing practice is for the general hospital dietitian (GHD) to find time for the HD patient consults within the other clinical, administrative and food service duties. This study explored whether having a dedicated renal dietitian (DRD) offering nutritional education on hyperphosphatemia management to HD patients - as practiced in developed countries - can significantly improve HD-related patient outcomes compared with the existing practice in Lebanon.

Three HD units were randomly recruited from different Lebanese regions (117 patients). The study was a self-controlled trial where patients were first educated for 6 months by the GHD on phosphorus (P) management upon the availability of the dietitians and, after 6 months of no intervention, the same patients were educated for another 6 months by the externally recruited DRD as per the study protocol which included a 20-minute weekly individualized dietary education on P management using the Transtheoretical model of behavioral change. Both GHD and DRD were trained by the study principle investigator on KDOQI renal nutrition guidelines.

Outcome variables included serum P (mg/dL), dietary P/protein ratio (mg/g/day) using 24 hour recall and malnutrition inflammation score (MIS) where the lower score indicated better nutritional status. Paired Sample t-test was used to compare the 2 phases using SPSS 16.

The DRD protocol was the only one that resulted in significant improvement in study outcome parameters: serum P (5.04±1.58 to 4.49±1.29 mg/dL); P/protein ratio (15.79±2.30 to 14.49±1.12 mg/g/day) and MIS (7.50±3.40 to 5.65±2.49). Results revealed the significant impact on patient clinical outcomes when a dedicated dietitian provided individualized education in the HD unit.