

**NUTRITIONAL INTERVENTION FOR MANAGEMENT  
OF OSTEODYSTROPHY IN HEMODIALYSIS PATIENTS: A  
DEVELOPING COUNTRY MODEL (LEBANON)**

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This study examined the use of self-management focused counseling (SMFC) to improve compliance to medical nutritional management (MNT) of renal osteodystrophy in a sample of hemodialysis (HD) patients in Lebanon.

The study was a randomized controlled study that included 122 stable HD adult patients randomly assigned to three study groups: full intervention (A) (n=41), partial intervention (B) (n=41) and control (C) (n=40), according to their dialysis shifts. The full intervention included individualized 40-minute osteodystrophy related nutritional SMFC provided in 2-weekly sessions for 8 weeks. For group A, these sessions included an educational topic followed by a relevant educational game with interactive discussion and once a month assessment of related laboratory results. Group B was given the educational games without explanation once a week for 8 weeks. Group C did not receive any intervention. All patients continued to receive their routine nutrition education from the hospital dietitian. Osteodystrophy related blood parameters: Phosphorus (P) mg/dl, Calcium (Ca) mg/dl, Ca\*P product and knowledge questionnaire on kidney disease and nutrition therapy for HD patients were used to assess the intervention. Paired sample t-test was used to examine the between groups difference.

Results of the study showed a significant improvement in P only in group A with values changing from a baseline of  $6.54 \pm 2.05$  to  $5.39 \pm 1.97$  ( $p < .001$ ) at three months. Both groups A and B showed a significant improvement in serum Ca\*P product, values changing from  $57.62 \pm 17.19$  to  $49.46 \pm 11.63$  ( $p = .006$ ) and from  $51.95 \pm 14.30$  to  $44.75 \pm 15.5$  ( $p = .011$ ) respectively. The level of knowledge, expressed in percentage, significantly improved only for scores in group A, from  $50\% \pm 0.17$  to  $69\% \pm 0.25$  ( $p \leq 0.05$ ).

Our results showed that structured nutritional education by trained dietitians in the HD setting, improved awareness and compliance to MNT among HD patients in Lebanon in. It suggests that such model is valuable for implementation in developing countries.