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## Nutritional intervention of adequate calorie and protein intake improve malnutrition among hemodialysis patients

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**Introduction:** Protein energy malnutrition is common among end stage renal disease patients (ESRD) on hemodialysis (HD) with an estimated prevalence of 10-70% and it undoubtedly contributes to increased risks of morbidity and mortality. It is compounded by the fact that these patients lose large amounts of protein in the dialysate fluid and do not consistently take the recommended amounts of energy and protein for ESRD patients on HD. They are in need of individualized meal plans but they rarely consult a dietitian.

**Purpose:** This was a prospective, clinical trial hospital based (intervention) study to evaluate the effect of nutritional intervention of adequate calorie and protein intake on malnutrition among HD patients.

**Methods:** The study was conducted on HD patients attending Dr Salma Hemodialysis & Transplant Center outpatient clinic, Khartoum. 134 adult patients (males & females) were divided into a test group (n=77) and a control group (n=57). The test group after nutritional counseling consumed individualized diets for a period of 6 months that provided adequate amounts of energy and protein according to the recommendations of the National Kidney Foundation while the control group continued consuming their usual diets. Malnutrition status was determined by using subjective global assessment (SGA) tool (which used by health officials to score protein-energy nutrition status) at baseline and after 6 months of intervention. Data were analyzed using SPSS.

**Results:** The SGA scores of the study patients was similar at baseline in both groups, the majority 88.1% were severely malnourished (92.2 test and 82.5 control), 11.9% moderate malnourished (7.8% test and 17.5% control) and there were no well nourished score in both groups. After intervention the result showed significant differences in SGA scores between the two study groups (P=0.000); 46.8% of test group had well nourished scores (A) and still no participants from control group reached the well nourished score. 33.6% participants were moderately malnourished (B) (44.2% test and 19.3% control). The control group showed 80.7% as severely malnourished (C) and only 9.7% were severely malnourished from test group. Therefore the result after intervention shows highly significant differences in SGA score between the two groups during intervention period (P=0.000).

**Conclusion:** The study concluded that nutritional intervention in the form of adequate calorie and protein intake was help in improving nutritional status and malnutrition among HD patients. Therefore, nutritional counseling by qualified dietitians should be mandatory in renal dialysis units as part of the medical therapy management to reduce the incidence of malnutrition among HD patients.

### Biography

Suhair Abdalla Khalil Abdallah has completed her PhD in Clinical Nutrition from Ahfad University for Women, Sudan. She is currently a Clinical Dietitian at King Faisal Specialist Hospital & Research Center Jeddah, Kingdom of Saudi Arabia. She has long experience of 18 years in clinical nutrition field.

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