Correlations between anthropometric measurements, biochemical indicators, dietary intake and Dialysis Malnutrition Score among haemodialysis patients in Sibu, Sarawak

ABSTRACT

Introduction: Malnutrition is a common problem associated with increased risk of morbidity and mortality among haemodialysis (HD) patients. Methods: This study determined the correlation between anthropometric measurements, biochemical indicators, dietary intake and dialysis malnutrition score among HD patients in Sibu, Sarawak. A total of 55 patients were recruited by purposive sampling and their biochemical parameters were retrieved from dialysis records. Anthropometric measurements and dietary intake were determined using standardised protocols while Dialysis Malnutrition Score (DMS) was computed to determine patients' nutritional status. Results: Mean age of the patients was 53.0±12.2 years. Mean DMS was low, indicating low tendency of malnutrition among the patients. Approximately one-third of the patients had high interdialytic weight gain (IDWG), indicating a poor adherence on fluid recommendation. Mean intakes of dietary energy (DEI) and protein (DPI) were low, with only approximately 15% achieving the recommendations according to Kidney Disease Outcomes Quality Initiative (K/ DOQI). Increase in age (r=0.337, p=0.012) and dialysis vintage (r=0.403, p=0.002) were associated with poorer nutritional status while higher BMI, MUAC, and serum albumin were associated with better nutritional status. Conclusion: This study revealed a high proportion of the HD patients with poor adherence on fluid intake, and the prevalence of inadequate DEI and DPI, indicating the importance of regular dietary counselling for HD patients. In view of their non-invasive nature and close relationship with nutritional status, body mass index, mid-upper arm circumference, and serum albumin should be included as part of the comprehensive periodic nutrition assessment of HD patients.

Keyword: Haemodialysis; Dialysis Malnutrition Score; Dietary intakes; Anthropometric parameters