

HD-FFQ to detect nutrient deficiencies and toxicities for a multiethnic Asian dialysis population

ABSTRACT

A rapid and reliable tool appropriate to quantifying macronutrient and micronutrient intakes in diets consumed by Malaysian hemodialysis (HD) patients is lacking. We aimed to develop and validate a novel HD-food frequency questionnaire (HD-FFQ) to assess habitual nutritional intakes of HD patients with diverse ethnic backgrounds. This study was conducted in three phases. In Phase I, a HD-FFQ comprising 118 food items was developed using 3-day diet recalls (3DDR) from 388 HD patients. Phase II was the face and content validation using the Scale-Content Validity Index (S-CVI). After successfully developing the FFQ, Phase III tested relative validation against a reference method, the 3DDR. Results from Phase III showed that the mean difference for absolute intakes of nutrients assessed by HD-FFQ and 3DDR were significant ($p < 0.05$). However, there was a significant correlation between the HD-FFQ and reference method ranging from 0.35–0.47 ($p < 0.05$). Cross-quartile classification showed that <10% of patients were grossly misclassified. In conclusion, the HD-FFQ has an acceptable relative validity in assessing and ranking the dietary intake of the HD patients in Malaysia.

Keyword: Food frequency questionnaire; Hemodialysis; Dietary assessment; Validity; Multi-ethnic food intake