

SCREENING FOR MALNUTRITION IN HAEMODIALYSIS PATIENTS – ARE OBJECTIVE MARKERS EFFECTIVE

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Problem Recent guidelines from the Renal Association¹ suggest that objective markers of nutritional status be used to screen for malnutrition amongst dialysis patients. However, it is unknown whether the methods proposed are effective at detecting malnourished patients.

Purpose To compare subjective dietetic and objective methods of nutritional assessment in haemodialysis patients.

Design Renal dietitians undertook the nutritional assessment of 163 regular haemodialysis patients. A subjective method, combining 24 hr dietary recall with weight history and physical examination, was used to classify individuals as “well nourished”, “at risk/moderately malnourished” or “malnourished”. The patient’s nutritional status was then determined objectively using the nutritional screening criteria recommended by the Renal Association¹ for body mass index (BMI), unintentional weight loss in last 6 months (Wt loss) and serum albumin levels (Alb). To compare the 2 assessment methods an evidence-based approach² was adopted. Using the subjective dietetic method as the reference test, the sensitivity and specificity for the objective markers were calculated.

Findings The subjective dietetic method classified 119 (73%) patients as “well-nourished”, 15 (9%) as “at risk/moderately malnourished” and 29 (18%) as “malnourished”. Values calculated for sensitivity and specificity for the individual objective criteria, and for when combined together (Composite) are provided in the table.

	<u>BMI</u>	<u>Wt loss</u>	<u>Alb</u>	<u>Composite</u>
Sensitivity (%)	14	14	39	55
Specificity (%)	100	98	91	89

The very high degree of specificity for the objective markers indicates that a finding of a positive result (a low BMI, the presence of weight loss or a low albumin level) in a patient strongly suggests a diagnosis of malnutrition. However, the low degree of sensitivity of these markers points to them failing to detect patients who are malnourished. Although sensitivity was increased to 55% by combining the objective methods together, the method remained ineffective as a screening tool since 45% of malnourished patients went undetected.

Conclusion The objective methods of nutritional assessment used in this study failed to detect malnutrition in a significant proportion of patients.

Relevance Our findings question the suitability of using the Renal Association’s objective criteria as an effective screening tool for the detection of malnutrition in haemodialysis patients.

1. The Renal Association. Treatment of adults and children with renal failure: standards and audit measures. 3rd Edition. The Royal College of Physicians of London and the Renal Association, 2002.
2. Sackett, DL et al . In “Evidence–Based Medicine”. Churchill Livingstone; London. 2000.