

Effects of Individualized Nutrition Counselling in Reducing Protein Energy Wasting among Dialysis Patients in a Private Healthcare Setting

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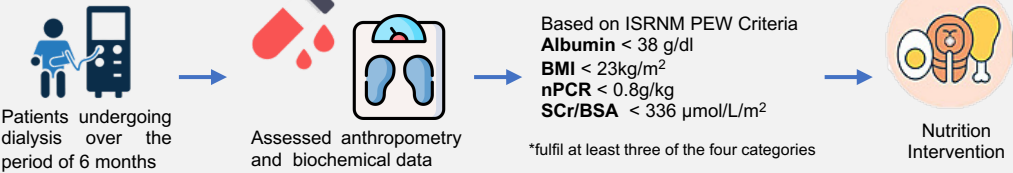
BACKGROUND

Protein-energy wasting (PEW) is a condition of disordered catabolism resulting from metabolic and nutritional derangements in end-stage kidney disease (ESKD) patients. It is highly prevalent, and patients have muscle wasting, sarcopenia, and cachexia that contribute to frailty, morbidity and mortality.

OBJECTIVES

This study aimed to understand the PEW status and to determine the effects of an individualized nutrition counseling (INC) in reducing PEW among those with ESRD on dialysis in Sunway Medical Centre (SMC).

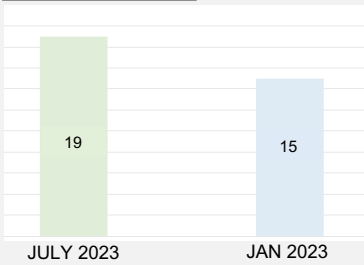
METHODOLOGY



RESULTS

- A total of 210 dialysis patients were included in the analysis.
- The mean age is 60.1 ± 16.4 years. The minimal age is 14 years old and maximal age is 96 years

Prevalence of PEW



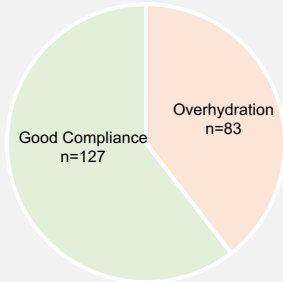
After 6 months of follow up, the prevalence of PEW dropped to 7.1% (n=15).

PEW Diagnostic Criteria

Parameters	July 2023	January 2024	P-Value
BMI (<23kg/m ²)	n=77 (26.2%) (25.36 ± 6.141)	n=77 (26.2%) (25.2 ± 5.67)	0.369
Albumin (<38g/dl)	N=76 (36.2%) (40.73 ± 4.173)	n=62 (29.5%) (25.2 ± 5.67)	0.492
nPCR (< 0.8g/kg)	N=52 (24.8%) (1.1 ± 2.22)	n=55 (26.2%) (0.97 ± 0.36)	0.267
SCr/BSA (<336µmol/L/m ²)	N=21 (10%) (478.4 ± 121.2)	n=17 (8.1%) (38.8 ± 3.4)	0.987

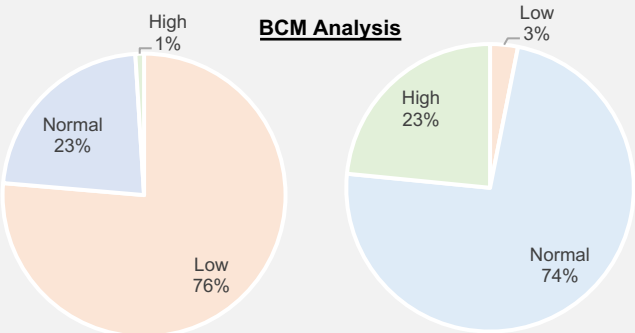
All parameters are not statically significant

Overhydration



Fluid overload: >4% weight between treatments

BCM Analysis



Lean Tissue Index

Fat Tissue Index

DISCUSSION

- The cause of PEW are multi-factorial which are hypercatabolic status, uremic toxins, malnutrition and inflammation.
- The parameters used in this study were mainly of biochemistry which may be gap for the analysis.
- The findings indicate that dialysis patients often exhibit a pattern of low lean tissue index (indicative of muscle wasting) and high fat tissue index (reflective of increased adiposity).

CONCLUSION

There is no increase in prevalence of PEW from baseline and the effect of INC did not show significant differences. More subjects and longer period of follow up are suggested for future study.

1. Carrero JJ, Stenvinkel P, Cuppari L, Ikizler TA, Kalantar-Zadeh K, Kaysen G, et al. Etiology of the protein-energy wasting syndrome in chronic kidney disease: a consensus statement from the International Society of Renal Nutrition and Metabolism (ISRNM). J Ren Nutr 2013 March 01;23(2):77-90

2. Moreau-Gaudry X, Jean G, Genet L, et al. (2014) A simple protein–energy wasting score predicts survival in maintenance hemodialysis patients. J Ren Nutr 24, 395–400.