

A STUDY ASSOCIATION BETWEEN THE NUTRITIONAL RISK INDEX AND CREATININE INDEX FOR NUTRITIONAL ASSESSMENT IN HEMODIALYSIS PATIENTS

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BACKGROUND

Malnutrition in hemodialysis (HD) patients is a powerful predictor of morbidity and mortality. It occurs in 20 to 70% patients and is attributed to three main mechanisms: insufficient feeding, abnormal nutrient metabolism and nutrient losses due to dialysis.

Assessment of nutritional status for management of malnutrition has been developed using scoring tools - SGA, MIS, PEW CI and GNRI.

OBJECTIVE

To assess the association between the nutritional risk index and creatinine index for nutritional assessment in hemodialysis patients

GNRI=[14.89×albumin(g/dl)]+[41.7×(body weight/ ideal body weight)
 CI (mg/kg/day) = 16.21+1.12× [1 if male ; 0 if female]-0.06×age(years)-
 0.08×spKt/v urea+ 0.009 × Crpre (μmol/l).

METHODS

Study : Conducted at the dialysis unit of Dept of Nephrology, Sri Ramachandra Medical College, Chennai, involving 180 patients.

Inclusion Criteria: End stage renal disease (ESRD) patients, aged 18-65 years, on maintenance hemodialysis for more than 3 months.

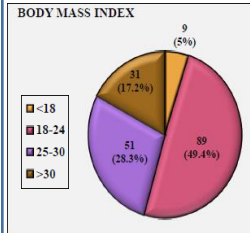
Exclusion Criteria : Patients on PD, paediatric patients , patients with acute kidney injury.

The dietary interview involved participant's qualitative and quantitative estimations of 24 hours intake of usual food and fluid intake.

The nutritional status of the maintenance hemodialysis patients analysed by GNRI & CI.

Results analysed with ANOVA software.

RESULTS



| AGE | GNRI | | | | CHI-SQUARE | P-VALUE |
|-------|------------|---------------|-------------|-------------|-------------------|---------------|
| | <82 | 82 TO 91 | 92 TO 98 | >98 | | |
| 18-45 | 7 21.9% | 32 100.0% | 8 25.0% | 14 43.8% | Chi square=11.437 | p value=0.010 |
| 46-65 | 7 4.7% | 148 100.0% | 40 27.0% | 74 50.0% | | |

| EI/IBW | GNRI | | | | CHI SQUARE | P-VALUE |
|--------|-------------|-------------|-------------|-------------|-------------------|----------------|
| | <82 | 82 TO 91 | 92 TO 98 | >98 | | |
| ≤35 | 11 15.1% | 21 28.8% | 26 35.6% | 15 20.5% | Chi square=43.046 | P -value=0.000 |
| >35 | 3 2.8% | 9 8.4% | 22 20.6% | 73 68.2% | | |

| VIN | CI | | CHI SQUARE | P-VALUE |
|---------|-------------|------------|-------------------|---------------|
| | <15.2 | 15.2-21 | | |
| <1.5 | 70 94.6% | 4 5.4% | Chi square=12.736 | P-value=0.002 |
| 1.5-3.5 | 66 94.3% | 4 5.7% | | |
| >3.5 | 27 75.0% | 9 25.0% | | |

CONCLUSION

A significant association between geriatric nutritional risk index with age ,body mass index, dry weight, hemoglobin, calcium, albumin, protein intake , energy intake, A significant association between creatinine index with age, gender, vintage.

Elderly hemodialysis patients were found to have a higher risk of malnutrition compared to the younger hemodialysis patients.