

## **Assess the nutritional status and influencing socio economic, demographic factors, duration of Chronic Kidney Disease and length of time on dialysis in Chronic Kidney Disease patients who are undergoing hemodialysis at hemodialysis unit in Teaching Hospital Jaffna.**

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**Background:** Malnutrition is a prevalent complication in patients on maintenance hemodialysis. Malnutrition is associated with increased morbidity and mortality. The Malnutrition Inflammation Score (MIS) is a quantitative tool that is based on the original Subjective Global Assessment Scale (SGA) and it is recommended by the NKF KDOQI to assess the nutritional status in hemodialysis patients.

**Methods:** In this descriptive cross sectional study, 152 hemodialysis patients participated. Our estimated sample size was 427. However only 154 patients were underwent hemodialysis at data collection period. Therefore the data was collected from all the patients available during the data collection period. All the patients were interviewed and the MIS of the patients was recorded. Malnutrition-Inflammation Score (MIS) has 10 components, 7 components from the SGA and 3 additional non-SGA component namely, body mass index (BMI), serum albumin, and total iron-binding capacity (TIBC), each of which has four levels of severity, from 0 (normal) to 3 (very severe). These scores were compared with socio-economic, demographic factors, dialysis related factors and laboratory measurements. Chi-square test, independent sample t-test, one-way ANOVA test and Pearson correlation coefficient test were used to analyze the data.

**Results:** In this study, 45.4% patients had normal nutritional status 52% had mild to moderate and 2.6% had severe malnutrition. Mean MIS was  $9.4 \pm 4.8$ . Among the socio-economic demographic factors there was statistically significant relationship between educational level and nutritional status ( $P \leq 0.039$ ). Among the hemodialysis (HD) patients, duration of CKD ( $P \leq 0.003$ ), length of time on dialysis ( $P \leq 0.01$ ), dialysis count ( $P \leq 0.009$ ), serum Albumin ( $P \leq 0.0001$ ), TIBC level ( $P \leq 0.01$ ) and BMI ( $P \leq 0.016$ ) had significant correlation with nutritional status.

**Conclusion:** In this study, more than 50 percent of patients (52%) on hemodialysis were at risk of mild to moderate malnutrition and least number of patients (2.6%) were at risk of severe malnutrition. Correlation between MIS and educational level, CKD duration, dialysis period, dialysis count, serum Albumin, TIBC and BMI was significant.

**Keywords:** CKD, Hemodialysis, Malnutrition, Malnutrition Inflammation Score (MIS)