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Assessing the Adequacy of Haemodialysis and its Associated Factors in Patients Undergoing Regular Haemodialysis in Teaching Hospital Jaffna

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Haemodialysis is the most common renal replacement therapy for patients who are with the end-stage renal disease. Providing adequate dialysis can improve their survival, while minimizing disease complications and recurrent hospitalizations. Adequate delivery of haemodialysis dose, measured by Kt/V or urea reduction ratio (URR) is a crucial determinant of the clinical outcome of chronic haemodialysis patients. The objective of this study was to assess the adequacy of haemodialysis and its associated factors in patients who are undergoing regular haemodialysis in Teaching Hospital Jaffna. This was a laboratory-based descriptive cross-sectional study performed among 100 haemodialysis patients in Teaching Hospital Jaffna. Blood samples were obtained for the measurement of blood urea (pre dialysis and post dialysis). The URR and Kt/V were calculated to assess haemodialysis adequacy. Associated factors were obtained from the patient's clinical records and assessed using the Chi-square test and Fisher exact in SPSS (23.0). Among the total of 100 patients, 76% were males. The mean (±SD) age was 48 (±16) years. In the present study, 66% and 69% achieved adequate haemodialysis based on URR and Kt/V, respectively. The mean (±SD) URR and Kt/V were 66 (±7) % and 1.33 (±0.24), respectively. There were statistically significant associations between dialysis adequacy and gender (p=0.04), BMI(p=0.03), and primary renal disease (p=0.01). None of the other factors, including age, haemoglobin level, serum albumin level, vascular access type, blood flow rate, haemodialysis frequency and ultra-filtration volume, showed a significant association with haemodialysis adequacy. The results of the study revealed a satisfactory number of patients received adequate haemodialysis in Teaching Hospital Jaffna. The patient's gender, BMI and primary renal disease were found to be significantly associated with haemodialysis adequacy.

Keywords: *haemodialysis adequacy, Kt/V, urea reduction ratio*