# Assess the adequacy of haemodialysis and its associated factors in patients undergoing regular haemodialysis in Teaching Hospital Jaffna

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**Introduction and Objectives:** Haemodialysis is the most common renal replacement therapy for end-stage renal disease patients in the world. Providing adequate and effective dialysis can improve patients' survival and quality of life along with minimal disease complications and hospitalizations. Adequate delivery of a dose of haemodialysis measured by Kt/V or urea reduction ratio (URR) is a vital determinant of the clinical outcome of chronic haemodialysis patients. This study aimed to assess the adequacy of haemodialysis and associated factors in patients undergoing regular haemodialysis in Teaching Hospital Jaffna.

**Methods:** 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). Patients who have undergone haemodialysis less than a month duration were excluded. The URR and Kt/V were calculated, and they were used to assess haemodialysis adequacy. Data for associated factors were obtained from the patient's clinical record books. The associated factors were assessed using the Chi-square and Fisher's exact tests in SPSS (version 23.0).

**Results:** 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 urea reduction ratio and Kt/V, respectively. The mean (±SD) URR and Kt/V were 66 (±7) % and 1.33 (±0.24), respectively. There were a statistically significant associations between dialysis adequacy and gender ($p=0.04$), body mass index ($p=0.03$), 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.

**Conclusion:** The results of the study revealed that a satisfactory number of patients received adequate haemodialysis in Teaching Hospital Jaffna. The patient's gender, body mass index, and primary renal disease were found to be significantly associated with haemodialysis adequacy. Other socio-demographic factors, clinical characteristics, and dialysis characteristics were not found to be associated with haemodialysis adequacy.

**Keywords:** Haemodialysis adequacy, Kt/V, Urea reduction ratio.