

Original Paper

Hemodialysis efficacy in patients with end stage renal disease (ESRD) in Gorgan, Northern Iran (2008)

Shariati AR (MSc)*¹, Mojerloo M (MD)², Hesam M (MSc)³

Mollae E (MSc)¹, Abbasi A(MSc)¹, Asayesh H (MSc)¹, Khalili A (BSc)⁴

¹Academic Instructor, Faculty of Nursing and Midwifery, Gorgan University of Medical Sciences, Gorgan, Iran.

²Assistant Professor, Department of Internal Medicine, Gorgan University of Medical Sciences, Gorgan, Iran.

³Educational management Instructor, Faculty of Nursing and Midwifery, Gorgan University of Medical Sciences, Gorgan, Iran. ⁴Nurse, 5 Azar Hospital, Gorgan, Iran.

Abstract

Background and Objective: Hemodialysis is one of the common therapeutic procedure for terminal renal failure. Insufficient and low efficient hemodialysis increases the mortality rate, therefore the assessment of hemodialysis efficacy is important. This study was done to determine the hemodialysis efficacy based on urea reduction ratio (URR) model and kt/v (Clearance Time Volume) criteria in Gorgan, Northern Iran.

Materials and Methods: In this descriptive and analytical study 113 hemodialysis patients were selected prior to hemodialysis and five minutes after pump stopping, arterial blood urea nitrogen (BUN) was measured and then kt/v and URR were calculated. Also kt/v relations with weight, gender, educational level, length of hemodialysis session, blood flow rate, TMP (Trans Membran Pressure), filter Ku/f (Clearance Ultrafiltration), preliminary disease, time of hemodialysis per week and the type of vessel access were determined. Data analyzed using SPSS-13 and independent t-test, chi-square, fisher exact test and Pearson correlation coefficient.

Results: The mean of hemodialysis history was 37 months and mean of Patient's ages were 51.6 years. 77.9% of subjects had hemodialysis efficacy according to Kt/v and URR criteria. There was a statistical significant correlation between hemodialysis efficacy and time of hemodialysis session, blood flow rate, time of hemodialysis per week and type of vessels access ($P < 0.05$), but there was not any significant correlation between hemodialysis efficacy and weight, gender, education, TMP, filter Ku/f and preliminary disease.

Conclusion: This study suggested that hemodialysis efficacy in this center was better than other studies in Iran.

Keywords: Hemodialysis, Efficacy, End stage renal disease

* Corresponding Author: Shariati AR (MSc), E-mail: shariati1382@yahoo.com

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