

DETERMINANTS OF THIRST DISTRESS IN TURKISH PATIENTS ON HAEMODIALYSIS

Belguzar Kara

Department of Internal Medicine Nursing, School of Nursing, Gulhane Military Medical Academy, Ankara, TURKEY.

OBJECTIVES

Thirst sensation can induce nonadherence with fluid restriction in patients on haemodialysis (HD), which results in an increase in interdialytic weight gain. Therefore, morbidity and mortality rates are adversely affected (1-5). Although thirst is a crucial problem in patients on HD, few studies have mainly focused on thirst distress (6-9).

▪ The primary aim of this study was to evaluate thirst distress and its determinants in Turkish patients on HD.

▪ The secondary aim was to describe fluid management strategies used by patients on HD.

METHODS

Design and sample: This cross-sectional study was conducted in a sample of patients who were followed in three HD centres in Turkey, between January and June 2015. The approval of the hospital ethical committee was obtained for the study.

▪ The inclusion criteria were patients aged ≥ 18 years with end-stage renal disease undergoing thrice-weekly, 4-hour HD for ≥ 1 month and able to communicate in Turkish.

▪ The exclusion criteria included cognitive impairment, major psychiatric disorders, malignancies and clinical instability.

Of the 208 eligible patients, 203 (58.1% male) agreed to participate.

Instruments: Data were collected by using a personal information form and the Thirst Distress Scale (TDS). The Visual Analogue Scale (VAS) was used to evaluate thirst and xerostomia levels of the patients.

Data analysis: Descriptive statistics, the one-way analysis of variance, Student's t-test, Pearson's correlation coefficients and linear regression analysis were used for data analysis. A p value of < 0.05 was considered as statistically significant.

Table 1. Effects of various variables on thirst distress of patients based on multivariate linear regression analysis (N = 203)

Variable ^a	β	p value
Higher thirst intensity	1.73	<0.001
Higher xerostomia	0.42	<0.001
Higher interdialytic weight gain	1.20	0.003

^a This table includes only the final model as determined by the multivariate linear regression analysis with backward elimination.

RESULTS

▪ The mean age of the study group was 60.09 ± 15.30 years, and the median HD vintage was 60 months.

▪ The majority of the patients (86.7%) had a comorbid condition.

▪ The mean TDS score was 20.71 ± 8.34 (range: 6-30), which indicates a slightly higher than moderate level of thirst distress.

▪ The mean VAS scores for thirst and xerostomia were 5.78 ± 3.15 and 4.69 ± 3.55 (range: 0-10), respectively.

▪ The mean interdialytic weight gain was 2.02 ± 1.00 kg (range: 0.10-5.90).

▪ As seen in **Table 1**, multivariate linear regression analysis revealed that thirst distress was significantly associated with the intensity of thirst (unstandardized $\beta = 1.73$, $p < 0.001$) and xerostomia (unstandardized $\beta = 0.42$, $p < 0.001$) and interdialytic weight gain (unstandardized $\beta = 1.20$, $p = 0.003$), after controlling for specific variables. These three variables together explained 66.7% of the variation in thirst distress ($R^2 = 0.667$).

▪ The most common strategies used to reduce fluid intake or relieve thirst by the patients were avoiding salty foods (70.9%), limiting salt on food (70.9%) and spacing liquids over the entire day (57.6%).

CONCLUSIONS

▪ The results of this study suggested that thirst is a common source of distress for patients on HD.

▪ Patients with higher levels of thirst, and xerostomia and those with a high interdialytic weight gain were more likely to have higher thirst distress.

▪ The most commonly used strategies for fluid management were avoiding salty foods, limiting salt on food and spacing liquids.

▪ A greater understanding of thirst distress and its related factors could contribute to more effective interventions that improve health and well-being in patients on HD.

▪ Longitudinal studies with larger samples are required to examine the causal mechanisms underlying the associations between the study variables.

References

1. Bots CP, Brand HS, Veerman EC et al (2004) Interdialytic weight gain in patients on hemodialysis is associated with dry mouth and thirst. *Kidney Int* 66:1662-1668.
2. Fan WF, Zhang Q, Luo LH, Niu JY, Gu Y (2013) Study on the clinical significance and related factors of thirst and xerostomia in maintenance hemodialysis patients. *Kidney Blood Press Res* 37:464-474.
3. Mistiaen P (2001) Thirst, interdialytic weight gain, and thirst-interventions in hemodialysis patients: A literature review. *Nephrol Nurs J* 28:601-604, 610-613; quiz 614-615.
4. Curtin RB, Bultman DC, Thomas-Hawkins C, Walters BA, Schatell D (2002) Hemodialysis patients' symptom experiences: Effects on physical and mental functioning. *Nephrol Nurs J* 29:562, 567-74; discussion 575, 598.
5. Bots CP, Brand HS, Veerman EC, et al (2005) Chewing gum and a saliva substitute alleviate thirst and xerostomia in patients on haemodialysis. *Nephrol Dial Transplant* 20:578-584.
6. Welch JL (2002) Development of the thirst distress scale. *Nephrol Nurs J* 29:337-341, discussion 343.
7. Kara B (2013) Validity and reliability of the Turkish version of the Thirst Distress Scale in patients on hemodialysis. *Asian Nurs Res* 7:212-218.
8. Jacob S, Locking-Cusolito H (2004) Thirst distress and interdialytic weight gain: How do they relate? *CANNT J* 14:33-37.
9. Porcu M, Fanton E, Zampieron A (2007) Thirst distress and interdialytic weight gain: A study on a sample of haemodialysis patients. *J Ren Care* 33:179-181.

