Identifying the Relationship between Quality of Life and Fatigue of Patients with Chronic Renal Failure Undergoing Dialysis Treatment in Greece

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Introduction

- Chronic Renal Failure is an irreversible disease, strongly associated with high cardiovascular risk.[1]
- When the patient ends up with end-stage chronic renal failure, then he or she must undergo renal function replacement therapy (dialysis or peritoneal dialysis) or transplantation. The majority of patients are started on dialysis.[2]
- Fatigue is the feeling of intense tiredness and reduced vitality experienced on an emotional, physical and mental level.[3,4]
- The prevalence of post-dialysis fatigue ranges from 42.9-80% of patients.[5]
- This is a debilitating symptom (hence 5-24% report severe fatigue), which increases the risk of mortality in dialysis patients .[6]

Objective

The objective of the study was to evaluate the degree of fatigue in patients with chronic renal failure undergoing hemodialysis treatment and the effect in patient's quality of life.

Methods

- A cross sectional study was performed from January to February 2024.
- The research sample constituted by 101/110 (response rate: 91.8%) patients undergoing hemodialysis treatment in public units and living in the Western Greece, specifically in Patras, Pyrgos, Agrinio and Mesolongi.
- The study was conducted through the distribution of two questionnaires: the Greek version of Multidimentional Fatigue Inventory (MFI) and the Short Form Survey (SF-36).

Results

- Demographic and medical data are presented in table 1.

Table 1. Demographic / medical data of the sample

Characteristics	N = 101	%
Sex		
Male	29	28.7
Women	72	71.3
Age		
18-35	9	8.9
36-45	5	5
46-55	10	9.9
56-65	36	35.6
>65	41	40.6
Citizenship		
Greek	94	93.1
Other	7	6.9
Marital status		
Singles	29	28.7
Married	61	60.4
Divorced	8	7.9
Widowers	3	3
Educational status		
Illiterate	8	7.9
Compulsory education	24	23.8
Secondary education	49	48.5
University degree	20	19.8
Work		
Unemployed	24	23.8
Retired	61	60.4
Public servant	4	4
Private employee	4	4
Student	1	1
Other	7	6.9
Age of entry into a chronic dialysis program		
18-45	22	21.8
46-55	17	16.8
56-65	27	26.7
>65	35	34.7
Method of Dialysis		
Blood Perfusion on line	24	23.8
Classic Dialysis	77	76.2
Type of vascular access		
Central venous catheter	37	36,6
Fistula	48	47,5
Graft	16	15,8

Results

- Higher fatigue was recorded at the physical level (Mean: 13.5), general level (Mean: 12.5) and activity level (Mean: 13.1) while lower levels of fatigue were noted in terms of vitality (Mean: 9.8) and mental level (Mean: 8.7) (table 2).
- In terms of quality of life, better QoL was recorded in terms of physical pain (Mean: 73.1), social functioning (Mean: 63) and mental health (Mean: 58.6).(table 3).
- Patients with more symptoms during or after hemodialysis had greater fatigue at the general (b=1.42, p<0,001), physical (b=1.21, p<0,001) and mental level (b=0.90, p<0,001) while they had reduced activity (b=1.12, p<0,001) and vitality (b=0.73, p=0,005).
- Additionally, patients' fatigue correlates with their quality of life as patients with less physical fatigue had better quality of life in terms of physical functioning, emotional role, mental health, vitality and general health while patients with less overall fatigue had better quality of life in terms of vitality and physical pain.

Table 2. Descriptive results for the five scales of the MFI questionnaire

Scale	Mean	Standard deviation	Median	Minimum	Maximum
Fatigue at the general level	12.5	4.3	13	4	20
Fatigue at the physical level	13.5	4.5	14	4	20
Activity level	13.1	4.4	13	4	20
Vitality	9.8	3.7	9	4	19
Fatigue at the mental level	8.7	4.3	8	4	20

Table 3. Descriptive results for the eight scales of the SF-36 questionnaire

Scale	Mean	Standard deviation	Median	Minimum	Maximum
Physical functioning	58.8	34.0	65	0	100
Social functioning	63.0	34.0	62.5	0	100
Physical role	45.5	45.3	25	0	100
Emotional role	40.0	41.5	33.3	0	100
Mental health	58.6	22.2	60	0	100
Vitality	46.9	22.4	45	0	95
Physical pain	73.1	34.0	89.8	0	100
General Health	43.5	21.0	45	0	90

Conclusions

Early diagnosis and treatment of fatigue, will contribute to better functionality of the patients in various aspects of their life.

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