

Quality Of Life Of Haemodialysis Patients And Complications Of CVC And AVF

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1. INTRODUCTION

The increase in life expectancy, as well as in chronic diseases, has resulted in giving emphasis not only to medical interventions, but to the continuous care of the patient. The measurement of QOL of haemodialysis patients provides information relevant to their needs and the consequences of haemodialysis in their life, which could be used to implement interventions that will lead to the improvement of their QOL.

THE AIM of this research was to imprint the QOL of haemodialysis patients, correlation with demographic characteristics and health information, as well as to record and compare the complications of CVC and AVF.

2. METHODS

- **Sample:** 193 haemodialysis patients from Larnaca and Nicosia G.H. units.
- **Period:** 26/2/2014 - 15/4/2014.
- **Data:** 1. Questionnaire of demographic characteristics and patient health data.
2. Questionnaire of WHOQOL-BREF – Greek version.
3. Questionnaire of complications of vascular access.
- **Statistical analysis and progressing the data:** Software SPSS 20.

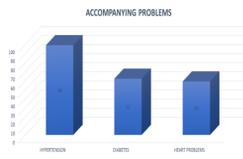
3. RESULTS

DEMOGRAPHIC CHARACTERISTICS:

- **Sample:** 193 haemodialysis patients
 - Male: 128 (66.32%)
 - Female: 65 (33.68%)
- **Average age:** 69,55 years old
- **Educational level:**
 - Primary: 107 (55,44%)
 - Secondary: 65 (33,68%)
 - Higher: 21 (10,88%)
- **Marital level:**
 - Married: 147 (76,17%)
 - Widows: 18 (9,33%)
 - Single: 14 (7,25%)
 - Divorced: 14 (7,26%)
- **Occupational status:**
 - Retired: 140 (72,54%)
 - Out of work: 34 (17,62%)
 - Household: 10 (5,18%)
 - Full time job: 5 (2,59%)
 - Part time job: 4 (2,07%)

ACCOMPANYING PROBLEMS:

- Hypertension: 99 patients
- Diabetes: 62 patients
- Heart problems: 59 patients

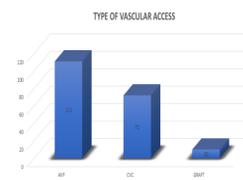


PRIMARY CAUSES:

- Hypertension: 41 patients (21,24%)
- Hypertension and Diabetes 24 patients (17,62%)
- Diabetes: 27 patients (13,99%)
- Drug intake: 19 patients (9,84%)

TYPE OF VASCULAR ACCESS:

- AVF: 111 patients (57,51%)
- CVC: 72 patients (37,31%)
- GRAFT: 10 patients (5,18%)



CORRELATION OF DEMOGRAPHIC AND HEALTH DATA OF THE SAMPLE THAT HAVE STATISTICALLY SIGNIFICANT CORRELATION WITH THE TOTAL SCORE OF QOL

- Female hemodialysis patients present lower QOL scores in relation to the males (P=0,003).
- The educational level affects positively the QOL (P<0,001).
- The accompanying health problems (P=0,001) and the number of complications in vascular access (P=0,001) affect it negatively.

COMPARISON OF THE MEAN FACTORS OF QOL OF THE SAMPLE TO THOSE OF THE HEALTHY POPULATION FROM THE PROJECT OF TZINNIERIKOKKOSI (2012)

	Sample (N=193)	Healthy (N=67)	P-value	Mean Difference	95% Confidence Interval
Physical Health	32,27(19,10)	74,56 (13,40)	<0,001	-42,31	(-47,28, -37,34)
Mental Health	52,59 (21,21)	66,79 (12,95)	<0,001	-14,20	(-19,62, -8,78)
Social Relations	59,61 (15,75)	71,49 (13,70)	<0,001	-11,88	(-16,14, -7,62)
Environment	68,15 (12,85)	54,06 (11,69)	<0,001	14,09	(10,58, 17,60)

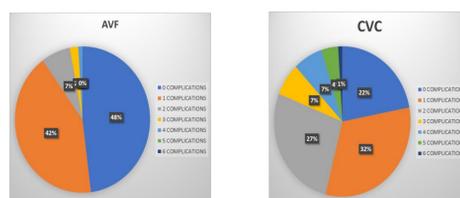
- The QOL of the majority of haemodialysis patients is located at a medium level and is lower in comparison to the healthy population.
- Lower scores in the factor of physical health in relation to the other factors.

COMPARISON OF THE MEAN FACTORS OF QOL WITH VASCULAR ACCESS OF PATIENTS WITH AVF AND CVC

	AVF Mean	CVC Mean	Mean Difference	95% Confidence Interval	P-value
Physical Health	21,25 (7,06)	19,76 (6,52)	1,49	(-0,56, 3,54)	0,153
Mental Health	19,46 (5,08)	17,40 (4,98)	2,06	(0,55, 3,56)	0,008*
Social Relations	17,07 (3,32)	16,76 (2,85)	0,31	(-0,63, 1,25)	0,518
Environment	30,05 (3,97)	29,54 (4,24)	0,51	(-0,71, 1,73)	0,408
Total Score	87,84 (16,57)	83,47 (15,84)	4,37	(-0,50, 9,23)	0,078

- The QOL of patients with AVF appears better in the factor of mental health in relation to patients with CVC.

COMPARISON OF NUMBER OF VASCULAR ACCESS COMPLICATIONS IN PATIENTS WITH AVF AND CVC



PERCENTAGE COMPARISON OF VASCULAR ACCESS OF COMPLICATIONS IN PATIENTS WITH AVF AND CVC

	AVF Patients (N=111) (60,7%)	CVC Patients (N=72) (39,3%)	P-value	Percentage difference	95% Confidence Interval
INFECTIONS					
Local	2 (1,80%)	21 (29,17%)	<0,001**	27,37	(17,08, 38,78)
Bacteraemia	5 (4,50%)	32 (44,44%)	<0,001**	39,94	(27,68, 51,69)
VASCULAR ACCESS DYSFUNCTION					
Low arterial supply	4 (3,60%)	30 (41,67%)	<0,001**	38,06	(26,14, 49,80)
High Venous Pressure	0 (0%)	7 (9,72%)	0,001*	9,72	(3,76, 18,74)
Stenosis/Obstruction of Central Veins	8 (7,21%)	13 (18,06%)	0,024*	10,85	(1,24, 21,85)
Aneurysm Formation	27 (24,32%)	0 (0%)	<0,001**	24,32	(15,66, 33,08)

- Patients with CVC present higher percentages in:
 - local infections
 - bacteraemia
 - low blood supply
 - increased venous pressure
 - narrowing or occlusion of the central veins
- Patients with AVF present aneurysms in relatively high percentages.

TREATMENT OF VASCULAR ACCESS COMPLICATIONS IN PATIENTS WITH AVF AND CVC

	AVF Patients (N=111) (60,66%)	Patients CVC (N=72) (39,34%)	P-value	Difference Percentages	95% Confidence Interval
During Haemodialysis	9 (8,11%)	37 (51,39%)	<0,001	43,28	(30,18, 55,08)
Treatment at home	4 (3,60%)	17 (23,61%)	<0,001	20,01	(10,15, 31,21)
Admission	19 (17,12%)	29 (40,28%)	0,001*	23,16	(9,87, 36,11)

4. RESTRICTIONS OF RESEARCH

- In the absence of a healthy Cypriot population in the sample of research, it was not possible to compare the QOL to the Environment factor.
- The type of CVC and AVF was not specified.

5. RESEARCH APPLICATIONS

- The results of this research can be used to:
- Develop and improve health services provided to haemodialyzed patients by healthcare professionals by selecting the right vascular access with the least complications and facing the symptoms and concerns of patients, which affect their QOL.
 - Strengthen and widen scientific knowledge associated with the QOL and vascular access of haemodialyzed patients.

6. CONCLUSIONS AND DISCUSSIONS

The QOL of haemodialysis patients is at a medium level and below the healthy population. Providing holistic health care could contribute to an improvement in their QOL. Patients with AVF present less complications of vascular access and higher percentages of mental health in relation to the patients with CVC, which is why AVF is recommended as first choice of permanent vascular access.

