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FACTORS AFFECTING QUALITY OF LIFE IN PATIENTS UNDER CLEAN INTERMITTENT CATHETERIZATION

Hypothesis / aims of study

Clean intermittent catheterization (CIC) have been well documented as an effective method of bladder drainage in some patients with dysfunctional voiding and incomplete bladder emptying, resulting in improved quality of life [(1,2)]. The aim of this study was identify factors that affect quality of life of patients on program of clean intermittent catheterization.

Study design, materials and methods

The study was performed between January and September 2009. The patients performing CIC were invited to come back to the outpatient clinic and participate in this questionnaire survey. The 66 participants included answered a semi-structured interview created for this survey and two validated measures: World Health Organization – Quality of Life – brief version – WHOQOL-bref, to complete the evaluation of quality of life in four domains: physical, psychological, social and environmental and the Beck Depression Inventory (BDI), to identify and assess depressive symptoms. The four domain scores of WHOQOL-bref denote an individual perception of quality of life in each particular domain. They are scaled in a positive direction (0-100): higher scores denote higher quality of life[(3)]. Statistical analysis was performed using Student t test, Mann-Whitney, ANOVA, Kruskal-Wallis with significance when $p< 0.05$.

Results

The mean age of the participants was 48.7 ± 15.8 years (range 18 to 82), with 42 males (63.6%) and 24 females (36.4%). Patients are under CIC during a mean period of 74.87 months (3 to 552 months). The etiology of bladder dysfunction were trauma (39.4%), acquired disease (37.9%), congenital (12.1%) or iatrogenic (10.6%). Table shows clinical characteristics of the sample and the mean WHOQOL-bref domain scores. No statistically significant differences were found in gender and age in the four domains of quality of life. Psychological domain was significantly impaired among patients with comorbities ($p=0.011$). Wheelchair users have disorders in the physical domain ($p=0.001$). Patients dependent on caregivers for clean intermittent catheterization are negatively affected in their quality of life in physical ($p<0.001$) and psychological domain ($p=0.022$). Symptomatic urinary infections lead to disorders in environment domain ($p=0.029$). The WHOQOL-brief score was significantly lower for all domains in patients with depressive symptoms, mainly in the psychological domain ($p<0.001$) and social relationships ($p<0.001$)

Interpretation of results

Reduced quality of life scores in patients performing clean intermittent catheterization are significantly associated with comorbities, wheelchair dependence and necessity of caregiver. More than one symptomatic urinary infection a year equally affects the QOL. In addition, these findings suggest that depressive symptoms have a strong association with poor quality of life in this group.

Concluding message

The benefits of CIC are counterpointed by limitations affecting quality of life. This study reveals that the necessity of caregiver to perform CIC and the occurrence of symptomatic urinary infections are important factors contributing to QOL impairment and depressive symptoms. An extra effort should be directed to make CIC auto applicable and to minimize symptomatic urinary infections.

Table: Average scores on the Whoqol-bref domains according to clinical characteristics

Variable	N (%)	Physical domain (SD)	p value	Physicological domain (SD)	p value	Social domain (SD)	p value	Environment domain (SD)	p value
Comorbities			0.225		**0.011**		0.071		0.154
Yes	38 (57.6)	51.78 (10.94)		54.27 (13.88)		56.79 (19.55)		53.04 (14.48)	
No	28 (42.4)	55.35 (12.69)		63.83 (15.55)		63.09 (19.30)		58.81 (14.41)	
Locomotion			**0.001**		0.746		0.800		0.472
Independent	25 (37.9)	59.28 (8.68)		58.66 (15.06)		62.33 (18.65)		58.37 (11.85)	

Require assistance	18 (27.3)	52.77 (11.72)	60.18 (14.37)		55.09 (25.90)	53.99 (11.23)	
Wheelchair users	23 (34.8)	47.20 (11.84)	56.52 (16.56)		59.78 (14.35)	53.53 (19.13)	
Agent of catheterization			**< 0.001**	**0.022**	0.543		0.084
Patient	50 (75.8)	56.28 (10.09)	60.75 (14.87)		60.66 (19.05)	57.25 (13.39)	
Caregiver	16 (24.2)	43.97 (12.00)	50.78 (14.37)		55.72 (21.23)	50.00 (17.26)	
Symptomatic Urinary Infection (last 12 months)			0.122	0.215	0.973		**0.029**
Yes	23 (43.4)	50.42 (9.52)	55.33 (15.79)		61.33 (13.58)	50.50 (16.60)	
No	30 (56.6)	55.05 (12.72)	60.16 (14.82)		58.33 (22.51)	58.53 (12.53)	
Depressive symptoms			**0.001**	**< 0.001**	**< 0.001**		**0.002**
Yes	27 (40.9)	47.75 (10.34)	45.21 (10.76)		47.22 (17.60)	49.65 (11.70)	
No	39 (59.1)	57.14 (11.23)	67.41 (10.59)		67.94 (16.17)	59.53 (15.20)	

SD – Standard Deviation

References

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Comissão de Ética para Análise de Projetos de Pesquisa - CAPPesq da Diretoria Clínica do Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**