

## THE IMPACT OF CLEAN INTERMITTENT SELF CATHETERIZATION ON QUALITY OF LIFE OF NEUROGENIC AND NON-NEUROGENIC PATIENTS

### Hypothesis / aims of study:

Quality of Life can be defined as individuals perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. This is a broad ranging concept, that may be affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and environment. Thus, QoL is a complex association of several different variables. Some studies have suggested that CISC may improve QoL or at least some aspects of the QoL. One of the main concerns to refer a patient to a CISC program is the impact it may have on the QoL, including self stem and social, sexual and physical activities. We design a study to evaluate the impact on quality of life on neurological and non-neurological patients after initiate a clean intermittent self-catheterization program.

### Study design, materials and methods:

We performed a prospective study to evaluate the QoL before and after initiate a CISC program. All patients filled a WHOQoL-Brief questionnaire before receive the CISC training and 4 weeks after being considered able to perform the catheterization. The WHOQOL-Brief questionnaire have 4 domains; physical, psychological, social relationships and environment. According to World Health Organization, these domains can access and reveal significant changes in patient's quality of life that underwent some treatment. The WHOQoL have a score range from 0 -100, the higher the score, the better the QOL. Patients with psychiatric or cognitive problems, with difficult to understand the procedure and those patients with difficult to self-handle the catheter and did not have a homecare person to help them with the catheterization or those who refused to participate were excluded.

### Results:

Third six patients (11 female and 25 male) with mean age of 48.3±19.3 years old (range: 14 to 88 years old) were evaluated. The patient's voiding dysfunctions included, vesico-sphincter dyssinergia, idiopathic and neurological urinary retention, hipocontractile and acontractile bladder and outlet bladder obstruction. Out of the 36 patients, 18 (50 %) patients had neurogenic voiding dysfunction (VD). On the follow up, 10 (27.8%) patients have not adhered completely to the program. The adherence rate for neurogenic and non-neurogenic voiding dysfunction was 78% and 67%, respectively (p= 0.471). There were 8 patients with indwelling catheterization. All of them adhered to the program. Overall, there was not difference in the WHOQoL score before and 30 days after initiate the CISC program (Table 1).

Table 1: Quality of life evaluation (WHOQoL-Brief) before and after CISC program.

WHOQoL Domains	Before (n=36)	After (n=28)	p value
Physical	50.92	53.06	0.430
Psychological	65.00	64.73	0.922
Social relationships	63.80	63.69	0.956
Environment	53.75	53.57	0.929
Self evaluation quality of life	54.64	58.04	0.336

When we evaluate patients that adhere to program versus those that did not, we found a significant difference on the social relationship domain (table2).

Table 2: Comparison between quality of life before treatment in accordance to the patient's adherence to the CISC program.

WHOQoL Domains	Before treatment (CISC)			p value
	Adherent (n=25)	Non adherent (n=10)		
Physical	51.86	48.57		0.339
Psychological	65.33	64.17		0.702
Social relationships	65.67	59.17		0.011*
Environment	52.75	56.25		0.167
Self evaluation of life quality	56.50	50.00		0.131

The QoL was not affected by the CISC either in the neurological and non-neurological patients (Table 3). However, before initiate the CISC program, the neurological patients had a poor QoL, especially on the Environment domain (Table 4).

Table 3: QoL evaluation for Neurogenic and Non-neurogenic patients before and after CISC

WHOQoL Domains	Neurogenic patients			Non neurogenic patients		
	Before (n=18)	After (n=15)	p value	Before (n=17)	After (n=13)	p value
Physical	48.41	45.71	0.415	53.57	61.54	0.085
Psychological	62.96	61.11	0.648	67.16	68.91	0.649
Social relationships	62.96	65.56	0.380	64.70	61.54	0.342
Environment	50.17	51.88	0.530	57.54	55.53	0.489
Self evaluation of life quality	46.52	50.83	0.363	63.24	66.35	0.497

Table 4: Comparison between QoL of Neurogenic and Non-neurogenic patients

WHOQoL Domains	Neurogenic	Non neurogenic	p value
----------------	------------	----------------	---------

	(n=18)	(n=17)	
Physical	48.41	53.57	0.129
Psychological	62.96	67.16	0.307
Social relationships	62.96	64.70	0.552
Environment	50.17	57.54	0.013*
Self evaluation of life quality	46.52	63.24	0.003*

**Interpretation of results:** Patients with neurogenic voiding disfunctions had a higher adherence rate. However, this difference was not significant. Patients that did not adhere to the program had a significant lower score on social relationships domain. The lower scores on this domain may reflect a poor support from relatives and friends, as well as, some sort of problem in the sexuality.

**Concluding message:** The CISC did not have an impact on the QoL of neurogenic and non-neurogenic patients with voiding dysfunction. Family and friends support may be associated with the adherence rate.

<b>Specify source of funding or grant</b>	<b>none</b>
<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>Comite de Ética e Pesquisa - UNIFESP</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>