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HOW DOES THE PAIN INTERFERE ON THE PATIENT´S ADHERENCE TO CLEAN INTERMITENT SELF CATHETERIZATION?

Hypothesis / aims of study:
The use of intermittent catheterization with aseptic technique is an alternative to bladder emptying for patients with neurogenic bladder dysfunction. Patients refereed to initiate a CISC program usually create a great expectation about the treatment. The major concerns are due to their ability to perform a potentially challenging "medical procedure" and the pain associated to the catheter introduction. Procedures which trigger pain are usually less accepted by patients. This study intends to evaluate the role of pain on patient's adherence to a clean intermittent self-catheterization (CISC) program and determine if neurogenic and non neurogenic patients have a different perception of pain and adherence.

Study design, materials and methods:
We prospectively evaluate 44 consecutive patients that complete the CISC training program. It was included patients refereed our continence center to train CISC. Patients with motor problems, psychiatric or cognitive disorders with difficult to handle a catheter or understand the procedure were excluded from the study. All patients were asked about their expectations of pain and were asked to answer a pain visual analogical scale (VAS), just before the training. Patients re-answered the VAS, after being trained and considered able to perform the catheterization. The VAS has a range from 0 to 10, where 0 means no pain at all and 10 is the worst scenario of pain. Patients were followed after two weeks, then monthly with urinary diary to determine the adherence to the program and the ability to self catheterization.

Results:
We evaluated 44 patients, 14 female and 30 males, with mean age of 51.11±19.43 (range: 14 to 88 years old). All patients were considered able to perform the catheterization after two weeks evaluation. The follow up showed 15 patients – 14 men and 1 woman – who did not adhere to the program by stopping or do not performing the self-catheterization at least three times a day.
Overall the pain expectation (VAS mean score before training) was 5.40±2.85 and after training was 2.25 ± 1.77 ($p < 0.001$).
Out of the 44 patients, only 3 (6.8%) of them had an increase of two points on the VAS scale, 13 (29.5%) did not change the previous evaluation and 28 (63.7%) patients had a decrease on the pain evaluation after being trained.
We compared the VAS scores regarding the patient adherence to the CISC program (Table 1). We have also compared the VAS score regarding the adherence to the CISC program between neurogenic and non neurogenic patients (TABLE 2).

Table 1– Comparison of the pain VAS for adherent and non-adherent patients to the CISC program.

	Adherent patient (n= 29)	Non adherent patient (n = 14)	*p* value
VAS pre training (pain expectation)	6.29 ± 2.29	3.73 ± 3.10	$p < 0.000$*
VAS post training	2.30 ± 1.73	2.15 ± 1.91	$p = 0.664$
P value	$p < 0.000$*	$p = 0.068$	-

Table 2 –Comparison of the pain VAS for adherent and non-adherent patients to the CISC program, according to the voiding dysfunction etiology.

	n	Adherent patient (n= 29)	Non adherent patient (n = 15)	VAS pre training (pain expectation)	VAS post training	*p* value
Neurogenic	21	17	4	6.00±2.68	2.20±1.70	$p < 0.000$*
Non neurogenic	23	12	11	4.87±2.94	2.30±1.87	$p < 0.000$*
p value		-	-	$p = 0.079$	$p = 0.813$	

Female had a greater pain expectation, but after performing the catheterization, both men and women had similar scores (Table 3).

Table 3 – Difference in the pre and post treatment VAS between adherent and non-adherent patients.

	Male patients (n = 15)	Female Patients (n= 29)	*p* value
VAS pre training (pain expectation)	6.77 ± 1.92	4.80 ± 3.00	$p = 0.003$
VAS post training	2.00 ± 1.83	2.36 ± 1.73	$p = 0.491$
p value	$p < 0.001$	$p < 0.001$	

Interpretation of results:
In this series, we did not have found that the ability to pass the catheter is a problem, as long as, all patients were able to perform the procedure when evaluated after two weeks. Our results showed that patients, especially women, are very apprehensive regarding the pain. It can be demonstrated by a significant decrease on the VAS after the patient become familiar with the self-catheterization. Women had a higher pain expectation, but after performing the CISC they present a similar VAS value as their

counterparts. Pain did not play a role on patient's adherence. Patients with neurogenic and non neurogenic bladder have no difference concerning acceptance of CISC program.
These findings are very important, since it may improve health care counseling.

Concluding message:
Patients refereed to CISC program have greater pain expectation than they will really notice after performing the procedure. The pain expectation is even greater in women. Pain itself did not play a role on the patient adherence to the treatment. Differently, patients with the higher pain expectations were those that had the greater adherence rate and significant decrease on the pain evaluation after being familiarized to the procedure

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