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ANALYSIS OF PATIENT'S SATISFACTION WITH CLEAN INTERMITTENT URETHRAL CATHETERIZATION

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ABSTRACT

Objectives: To compare and evaluate the aspects of the use of two bladder catheters for the person undergoing treatment with post-void residual, in clean intermittent bladder catheterization (CIL). **Method**: Quantitative, observational, and descriptive analysis developed in a reference outpatient clinic, for 48 municipalities, from September to November 2020. Fifty patients with post-void residual, who underwent CVIL, took part in the study. Their average age was 44,8 years old, and 72% of them were male. Two lubricated catheters were compared, from different technologies, both with attached bags, for seven days, six catheterizations a day, using a validated instrument of perception of customer satisfaction. Data were analyzed by the software Statistical Package for the Social Sciences (SPSS) Statistics 23.0, and for the comparison of the two catheters it was used the Wilcoxon's non-parametric test. **Results:** The polyvinyl chloride (PVC) catheter pre-lubricated with glycerol reached greater participant satisfaction in the evaluated attributes (90 versus 86%) in relation to the hydrophilic polyurethane (PVP) pre-lubricated catheter, although there was no statistical significance on the partial or total scores of the instrument used. **Conclusion:** The study allowed the comparison of two catheters, and the evaluation of the general score for both was positive. Some negative evaluation for certain attributes is possible to be improved. This kind of study is able to discriminate the catheters, and it can be reproduced.

DESCRIPTORS: Health education. Intermittent urethral catheterization. Patient satisfaction. Urinary incontinence. Enterostomal therapy.

ANÁLISE DA SATISFAÇÃO DO PACIENTE COM O CATETERISMO VESICAL INTERMITENTE LIMPO

RESUMO

Objetivos: Comparar e avaliar os atributos de dois cateteres vesicais para pessoa em tratamento com resíduo pós-miccional, no cateterismo intermitente limpo (CIL). **Método:** Estudo quantitativo, observacional e descritivo desenvolvido em ambulatório de referência para 48 municípios, entre setembro e novembro de 2020. Participaram 50 pacientes com resíduo pós-miccional que realizam CIL, com 44,8 anos de idade média, sendo 72% homens. Foram comparados dois cateteres lubrificados, de diferentes tecnologias, ambos com bolsa acoplada, por sete dias, na frequência de seis cateterismos diários, utilizando instrumento validado de percepção da satisfação do cliente. Os dados foram analisados por meio do *software* Statistical Package for the Social Sciences (SPSS) Statistics 23.0, e para comparação dos cateteres foi usado o teste não paramétrico de Wilcoxon. **Resultados:** O cateter de policloreto de vinila (PVC) pré-lubrificado com glicerol alcançou maior satisfação entre os participantes nos atributos avaliados (90% *versus* 86%) em relação ao cateter hidrofílico de poliuretano (PVP) pré-lubrificado, embora sem significância estatística nos escores parciais e totais do instrumento utilizado. **Conclusão:** O estudo

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possibilitou comparar os dois cateteres, e a avaliação do escore geral para ambos foi positiva. Algumas avaliações negativas para determinados atributos são passíveis de melhorias, além de ser esse modelo de estudo capaz de discriminar os cateteres, podendo ser reproduzido.

DESCRITORES: Educação em saúde. Cateterismo uretral intermitente. Satisfação do paciente. Incontinência urinária. Estomaterapia.

ANÁLISIS DE LA SATISFACCION DEL PACIENTE COM CATETERISMO VESICAL INTERMITENTE LIMPIO

RESUMEN

Objetivo: Comparar y evolución los atributos de las sondas vesicales para personas cometidas a tratamiento de residuo posmiccional, en cateterismo intermitente limpio (CIC). **Método:** estudio cuantitativo, observacional, descriptivo, realizado en un ambulatorio de referencia, para 48 municipios entre septiembre y noviembre de 2020. Participaron 50 pacientes con residuo posmiccional sometidos a CIC, edad media de 44,8 años, de los cuales el 72% eran hombres. Se compararon dos catéteres lubricados de diferentes tecnologías, ambos con bolsa adherida, durante 7 días, con una frecuencia de 6 cateterismos diarios, utilizando un instrumento validado para la percepción de satisfacción del cliente. Los datos se analizaron con el software SPSS Statistics 23.0 y se utilizó la prueba no paramétrica de Wilcoxon para comparar los catéteres. **Resultados:** El catéter de PVC - Cloruro de Polivinilo prelubricado con glicerol mostró mayor satisfacción de los participantes en los atributos evaluados (90% versus 86%) en relación con el catéter de PVP - catéter de poliuretano hidrofílico prelubricado, aunque sin significación estadística en el puntajes parciales y totales del instrumento utilizado. **Conclusión:** El estudio permitió comparar los dos catéteres y la evaluación de la puntuación general de los catéteres fue positiva. Algunas valoraciones negativas para determinados atributos son susceptibles de mejora y pueden ser implementadas, además de ser este modelo de estudio capaz de discriminar entre catéteres, y pudiendo ser reproducido.

DESCRIPTORES: Educación en salud. Cateterismo uretral intermitente. Satisfacción del paciente. Incontinencia urinaria. Estomaterapia.

INTRODUCTION

Neurogenic lower urinary tract dysfunction (NLUTD), i.e., of the urinary bladder and its sphincter complex, results from lesions of the central and/or peripheral nervous system that put the patient at risk and compromise their quality of life. Thus, the healthy process of urination, which results from alternating activation of the urination reflexes (parasympathetic bladder stimulation) and inhibition of filling reflexes (inhibition of sphincter activation), is impaired in the filling and emptying phases, with alterations in bladder sensitivity, as well as impairment of the upper urinary tract (ureters and kidneys), with increased intravesical pressure, incomplete bladder emptying, difficulty to initiate or interrupt urination, and often urinary tract infection (UTI)[1,2].

Urinary retention (UR) is the spontaneous partial or total inability of the bladder to empty the urine, which is produced by the kidneys. When acute, the bladder is distended, tense and painful, and, in chronic UR, there is gradual dilation of the bladder, with leakage of urine, being less symptomatic and may compromise the upper urinary tract[1,2].

Clean intermittent catheterization (CIC) is considered the first-choice procedure for complete bladder emptying in NLUTD, safe and effective[2] since its invention in 1972 by Jack Lapides et al.[3], who found that the clean technique is preferred for managing UR, minimizing its complications.

Because it is a simple technique, performed by the patients themselves, the nurse acts in an educational manner, using clarifying and assertive communication techniques. On the other hand, the professional applies their knowledge in the assistance, planning the care related to the NLUTD, preventing complications. Therefore, the binomial patient/family and

nursing professional must be established, so that the teaching-learning process occurs in a satisfactory way for the complete rehabilitation of the individual who needs CIC[4,5].

Catheters, like all technologies, have been improved, especially in the last two decades, regarding material, design, and packaging. At the beginning of their use, they needed to be lubricated with specific gels to avoid lesions on the urethral mucosa, but in 2001 great advances were achieved, with the development of catheters coated with antimicrobials or with chemical impregnation, to reduce incrustation and contamination[6].

Catheters can be made of various materials, such as polyvinyl chloride (PVC), ethylene vinyl acetate (EVA), silicone and polyurethane prelubricated with polyvinylpyrrolidone (PVP). With these different technologies for CIC, it is emphasized the relevance of the patient being indicated a device suitable to their needs and preferences, which contributes to adherence to CIC, a huge challenge in clinical practice[7-9].

In this context, the importance of presenting as the objective of this study the comparison of the attributes of two bladder catheters for the patient with postmicturition residue in clean intermittent bladder catheterization is understood.

METHODS

This is an observational and descriptive study with a quantitative approach. Data collection was performed in a rehabilitation clinic in the countryside of the state of São Paulo, from September to November 2020. By searching for names and medical record numbers of patients who attended the outpatient clinic for vesicointestinal reeducation, it was verified whether these patients were being followed up in other specialties, so that the researcher could contact them by phone and invite them to participate in this study.

Inclusion criteria were: being over 18 years old, literate, not complaining of ICU symptoms, having postvoiding residue as an indication for CIC, and not being dependent on a caregiver to perform the bladder catheterization technique. Participants who had signs of ICU or urinary tract complications during the study were excluded.

The participants were informed that the research was part of a master's thesis and that the project was submitted to the Research Ethics Committee of the Faculdade de Ciências Médicas e da Saúde da Pontifícia Universidade Católica de São Paulo and approved, under Certificate of Ethics Submission number 25994019.3.00005373. Afterwards, they received ethical and informed orientation about all the aspects of the study and were invited to participate in it. They were considered included only after signing the Informed Consent Form.

Patients received information about the anatomy of the urinary system, guidance on the technique for passing the catheter, care and handling, benefits, and frequency of use of CIC. Emphasis was given to hand washing, use of alcohol gel and intimate hygiene, and then the participants demonstrated in practice the technique they had been taught, and it was possible to verify their ability and understanding about the CIC, or the need for further training until all were able to perform the procedure correctly and safely[10].

The catheters were provided free of charge by the manufacturing companies, which allowed orientation on health education, seeking autonomy in self-care with the CIC[11]. The SpeediCath Compact Set® hydrophilic catheter was then provided, henceforth called PVP catheter, to be used for seven consecutive days, with a preestablished frequency of six times a day. A new appointment for the following week was made so that the patients could answer the "scale to evaluate the client's perception regarding the catheter in clean intermittent bladder catheterization"[12]. The items scored by the Likert scale were summed to result in a score that classified the catheter between the extremes very bad and very good.

Data collection occurred through two instruments, the first at the beginning of the study, to characterize the sociodemographic profile, with information about name (initials), age, gender, education, time performing the CIC and which catheter was used.

The second instrument was the scale mentioned above, developed and validated through the author's experience in CIC training, with a minimum sum of 7 points and a maximum of 34[12]. This instrument, in its final version, has 11 questions, which analyze the opening of the package (very difficult to difficult); catheter handling, from its insertion, lubrication,

until removal; feeling of safety (extremely unsafe to extremely safe); time spent performing the CIC; and discomfort when performing the procedure[12].

In the items that refer to the introduction and removal of the catheter, if the patients answered "difficult," they should justify their answer to understand how this item could be improved. All patients answered both instruments, with no loss of information.

This second moment—when the catheter was changed—was a unique opportunity for the patient to clarify their doubts regarding the new catheter, before the material was provided for the following week. It was the Actreen Glys Set catheter[7], hereinafter called PVC catheter, which was used at the same frequency, six times a day, for the same seven-day period. On the last return, the questionnaire was applied, according to the research steps.

The stages of the research can be better visualized in Figure 1.

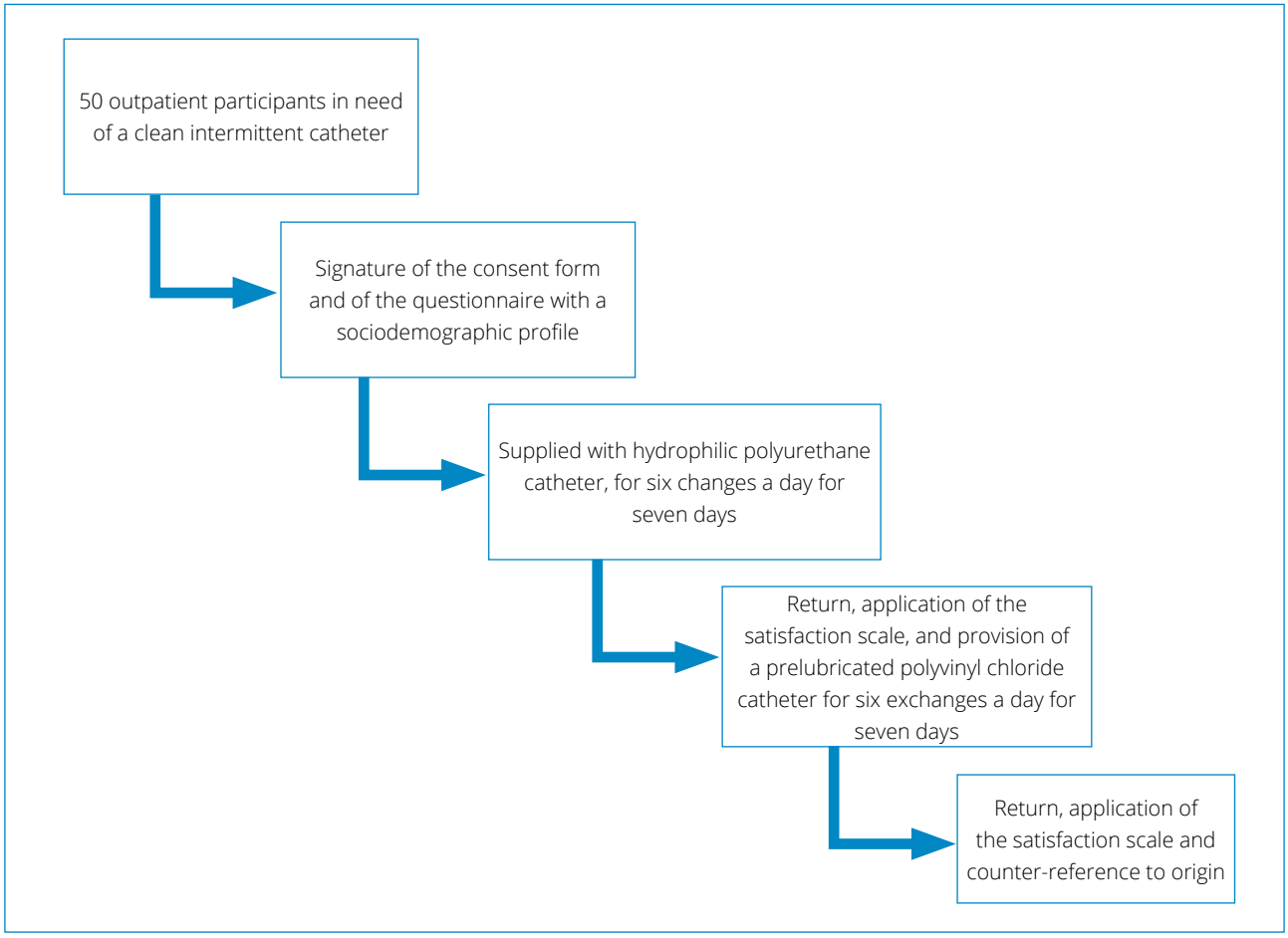

Figure 1. Stages of the research.
Source: Elaborated by the authors.

It should be noted that the patients, after participating in the study, maintained their follow-up in their cities of origin, to which they were counter-referred, because the outpatient clinic for vesicointestinal rehabilitation no longer operates in the teaching hospital, the site of this research.

This study evaluated the attributes of different technologies and compared them with three studies, and the items' introduction, sliding and withdrawal, perception and satisfaction with CIC were analyzed.

For statistical analysis, the categorical variables had their results compiled in a Microsoft Excel spreadsheet and expressed as mean, median, standard deviation and percentage. The comparison tests were performed using the Statistical Package for the Social Sciences (SPSS) Statistics software (version 23.0) and the nonparametric Wilcoxon test, with significant p when < 0.05.

RESULTS

Sociodemographic characterization is shown in Table 1.

Table 1. Sociodemographic characterization of the participants. Sorocaba (SP), 2021.

Variable	N	%	Average	Standard deviation	Minimum	Maximum
Participants						
Men	36	72				
Women	14	28				
Age (years)			44.8	14.1	21	77
20-30	8	16				
31-40	13	26				
41-50	12	24				
51-60	10	20				
61-70	6	12				
> 71	1	2				
Education			-	-	-	-
Uneducated	1	2				
Some elementary school	5	10				
High school	40	80				
College degree completed	4	8				
Time since catheterization (years)			10.3	7.3	1	30
Never performed it	3	6				
1 |-----| 5	12	24				
6 |-----| 10	18	36				
11 |-----| 20	11	22				
21 |-----| 30	6	12				
Type of catheter used*			-	-	-	-
Conventional	34	68				
Lofric	7	14				
Speed	6	12				

*It was not possible to obtain this information from three interviewees. Source: Elaborated by the authors.

In total, 50 participants were approached, and 72% of the sample was composed of men. The age was over 40 years (58%), and the mean age was 44.8. The average time of catheterization was 10.3 years, and the majority (66%) had catheter insertion practice of up to 10 years. The most used catheter was the conventional one (68%).

Table 2 shows the items evaluated with median values and the difference between the catheters. Regarding the opening of the package, the answers "very easy" and "easy" were more frequently mentioned by the participants when evaluating the PVC catheter, with 82%, and the PVP catheter, with 80%, with no statistically significant difference between the catheters (p = 0.796).

Table 2. Median satisfaction of respondents with the use of bladder catheters with different technologies. Sorocaba (SP), 2021.

Appraised attribute (median values)	PVP Median	PVC Median	p-value
Package opening	4	4	0.796
Catheter introduction into the urethra	3	3,5	0.643
Sliding of catheter in the urethra	4	3,5	0.236
At the end of intermittent catheterization, removal of the catheter from the urethra	4	4	0.561
Difficult catheter removal	2	5	0.317
Feeling while using the catheter	3	3	0.272
Time taken to perform CIC (from opening the package to the beginning of urine output)	2	2	0.592
For those who reported urethral sensitivity, presence of discomfort when performing the procedure with the catheter	1	1	0.083
Grade for the catheter	4	4	0.146

PVP: prelubricated polyurethane hydrophilic catheter with attached bag; PVC: vinyl polychloride catheter with attached bag. Source: Elaborated by the authors.

In the analysis of catheter introduction, 32% of the participants mentioned the PVC catheter as "easy," not presenting significance in comparison to the PVP catheter (p = 0.643), and 49.2% of the participants were unsatisfied in this item. In the participants' assessment of sliding, 40% considered it "reasonable" in the PVC catheter, and the same perception was found for the PVP, with 36% for "very good," again without statistical significance (p = 0.236).

In the evaluation of the catheter removal from the urethra, the answers "good," "very good" and "reasonable" were mentioned by 86% of the participants for PVC catheter and 78% of the participants for PVP catheter (p= 0.317), without statistical significance.

As for the perception of the catheters, the participants chose the classifications "safe" and "extremely safe," with a percentage of 78% for both catheters. The insecurity (22%) may be related to the fact that they are new technologies. In the item regarding the procedure time, 36% of the participants performed the CIC with the PVC catheter within 2 minutes, and 30% did it in the same time with the PVP catheter.

Regarding discomfort, this was observed in 40% of the participants with the PVC catheter and 34% with the PVP catheter, which may be linked to catheter flexibility sliding in the urethra, which may also lead to nonadherence to CIC.

In the score/concept attributed to the catheters, 70% of the participants considered the PVP catheter as "good" and "very good," and, for the PVC, the percentage was 62% for "good" and "very good" answers. This evaluation of the catheter set and its characteristics, such as coating, design, comfort, safety from the beginning to the end of the CIC, and ease of transportation help in its adherence.

The attributes evaluated in Table 2 showed the satisfaction of the participants, except for the introduction, sliding, and withdrawal of the PVP catheter (p = 0.317), showing no significance for this study. It was observed that 90% of participants scored the PVC prelubricated catheter between 28 and 34 points, followed by the PVP hydrophilic catheter, with 86% of participants showing satisfaction.

Table 3 shows the attributes evaluated in four studies with different technologies. Three of them (I, II, and III) employed the same instrument for customer perception of CIC, and the fourth study used its own purpose-built questionnaire.

These studies have shown the participants' satisfaction with the catheters in use, and, through this data, it was possible to observe that the participants are willing to learn about new technologies that meet their individual needs and preferences.

Table 3. Evaluation of the studies referring to different technologies.

Variable	Participants	Time (days)	Training	1	2	3	4	Introduction	Sliding	Removal	Perception				Satisfaction			
											1	2	3	4	1	2	3	4
Study I	50	14	2 days	x	x			Easy (50%)	Good (40%)	Good (86%)	46%	60%			66%	68%		
Study II	32	4	16 hours	x	x	x	x	Very easy (47%)	Easy (41%)	Easy (50%)		50%	41%	28%				
Study III	59	3	1 day	x	x		x	Easy (45.8%)	Easy (89.8%)	Good (88.9%)					48%	61%		72%
Study IV	365	56	1 day			x		Easy (78%)	-	Easy (92%)					From 81 to 79%			

Study I: current one; Study II: Bonello et al.[11]; Study III: Assis et al.[12]; Study IV: Koeter et al.[13]; 1: prelubricated polyurethane hydrophilic catheter with attached bag; 2: vinyl polychloride catheter with attached bag; 3: polyolefin elastomer catheter; 4: vinyl polychloride catheter conventional. Source: Elaborated by the authors.

In this study, two catheters were compared, PVP hydrophilic catheter and PVC catheter, with a seven-day interval for each. It is possible that the similarity of our data for the two technologies is associated with the fact that the catheters are analogous in their characteristics, have safety, no-touch technique, hygienic insertion, are ready for use, and are easy to transport. In the study by Bonello et al.[11] of 32 users, 84% were men, with a mean age of 54 years, and the authors analyzed the satisfaction of the person with UR with four different types of catheter for a period of four days:

- Prelubricated PVP hydrophilic;
- Of PVC;
- Of polyolefin elastomers;
- Of conventional PVC.

Most of the interviewees (73%) preferred the polyurethane catheter with hydrophilic coating, converging with the percentage of satisfied users with the same catheter. The technology with the highest satisfaction was the polyurethane catheter with hydrophilic coating when compared to the PVC catheter with lubricant ($p = 0.001$), because of several attributes, such as lubrication, firmness, packaging, sliding in the urethra, handling, fast elimination of urine and comfort[11].

Assis et al.[12] the authors analyzed the satisfaction of 59 users, with an average age of 35 years, most of them male, all of them diagnosed with spinal cord injury. Three different technologies were used:

- Prelubricated PVP hydrophilic catheter;
- PVC catheter with attached pouch;
- Conventional PVC catheter.

The conventional catheter brought the lowest degree of satisfaction (50.8% evaluated it with concepts "good" and "very good"), followed by 69.5% for the hydrophilic catheter. The catheter with the highest percentage of satisfaction was the prelubricated PVC hydrophilic catheter with attached pouch (78%). The mean score was statistically higher for the prelubricated catheter with pouch in relation to the conventional catheter and the hydrophilic catheter ($p = 0.001$)[12].

In the fourth study, Koeter et al.[13] sought to evaluate user perception with polyolefin elastomer catheter in comparison to the catheter in use. A total of 365 patients participated in all phases of the study, and the new catheter tested was evaluated with an overall satisfaction rating of 81% (N = 289/359), and 72% continued to use it. The hygienic adherence of the catheter was appreciated by 85% of the participants, and the foldable feature by 67%. The results show that convenience, ease of use and hygienic factors are the patient's preferred features for a urinary catheter. These factors were confirmed for the evaluated hydrophilic-coated catheter[13].

DISCUSSION

This study evaluated the satisfaction of participants with postmicturition residue regarding two hydrophilic catheters. As for the opening of the package, both catheters were satisfactorily evaluated by the participants, and their characteristics were their differentials, such as being hydrophilic with pouch, their packaging and ease to carry. This perception was found in the catheter manipulation. In the study by Assis et al.[12], there was also no statistically significant difference in the satisfaction of two catheters, one of PVP and the other of PVC, when compared to the conventional ones. That is, our findings were reproducible previously for the same questions.

For introducing the catheter into the urethra, the evaluation was similar for PVP hydrophilic catheter and conventional PVC catheter, with "very easy" and "easy" answers for about half of the participants. It is noteworthy that many (n = 47) had already used a catheter before, and only three were new to CIC treatment. The study by Koeter et al.[13] also analyzed the perception of and adherence to the procedure and, although with a different instrument, pointed out results similar to those of this study, when detecting that individuals were satisfied with the ease of insertion and reduction of urethral trauma, and these participants already used some hydrophilic catheter.

In the current study, the catheter removal was evaluated as "difficult," and their justifications considered the rigidity and the fact that the catheter is short as negative points. These perceptions may be indicators of poor adherence to CIC. In another study, the highest percentage for "bad" and "very bad" was pointed out, with 15.3% to the prelubricated PVP catheter without collecting bag, and, according to the authors, this data did not present statistical significance. The justification of the participants for the negative evaluation involved problems arising from removal of the catheter, for not being foldable and not connecting perfectly to the collecting bag, with risk of loss of urine that remained in the lumen of the catheter[12].

In a scoping review, some difficulties in the use of the catheter were listed, such as not mastering the technique, resistance in the introduction, spasms, and the very manipulation of the catheter[14]. In another study, dissatisfaction was found with the following items: lack of lubrication, lack of firmness of the catheter during the procedure, difficulty of transport, because it is large, and problems in removing the packaging, and these negative aspects may be responsible for nonadherence to the CIC[12].

According to Vahr et al.[8] and Campeau et al.[15], hydrophilic catheters cause less urethral trauma and decrease microscopic hematuria and bleeding episodes. Besides, they allow hygienic insertion prehension and there is the hydrophilic coating of different natures, but always facilitating the procedure, and these characteristics are important for adherence to CIC[15]. These catheters may be coated with PVP, for example, which is a polymer that absorbs water, being capable of absorbing up to 10 times its own weight, and, when exposed to water, the catheters become slippery, reducing the friction between catheter and urethra in its insertion[16]. In this study, the item safety was positively evaluated for both catheters with pouch attached. The participants spontaneously reported comfort when carrying them and considered it positive that they were ready for use. Studies point out that the lack of safety may be associated to the lack of firmness when inserting the catheter, and this catheter is the same as the one in the present study[12,17,18].

In this study, patients were found capable of performing the procedure in seconds and up to a maximum of 20 minutes for the two catheters evaluated, and the greatest concentration was up to 5 minutes, which corroborates the findings of Assis et al. [12], whose mean time to perform the CIC was 4.5 minutes for the catheter with the coupled bag, with no significant

difference between the catheters. The fact that it is a new technology implies in adequate (re)training, with the necessary time for a satisfactory learning process to occur, and haste may be reverted into complications[17].

According to Vahr et al.[8], teaching the procedure properly facilitates adherence to treatment. The appropriate material is essential to make the therapy safe and effective, emphasizing its insertion and preventing possible outcomes.

It was observed in this study that 68% of the patients used conventional catheter, 26% hydrophilic catheter, and 6% were new to CIC treatment. That is, none of the participants had used these technologies before, making it possible to observe their individual difficulties and needs in face of the similarities between the catheters, and their final score for both showed their satisfaction by means of the classification defined by the instrument's score from 21 to 27 points as "good" and from 28 to 34 points as "very good." Participants (90%) scored the PVC catheter with pouch attached as "good" and "very good" between 28 and 34 points, followed by the prelubricated PVP hydrophilic catheter with pouch attached (86%), demonstrating their satisfaction in rating the catheters.

As already explained here, 94% of the participants used some type of catheter and had received previous instructions, that is, they had some previous knowledge about it. Some, for the time they had been performing catheterization, it could be assumed that they were more trained to perform the procedure, but, on the other hand, they presented more management habits. Thus, one of the difficulties encountered in this research was the practical training, breaking the barrier of their self-knowledge and of the (bad) habits and behaviors that were part of their daily catheterization routine, for some for more than 30 years[19]. Another resistance factor that had to be broken was the change of the catheter with which they were familiar and felt comfortable, because they knew it.

FINAL CONSIDERATIONS

This study made it possible to compare two catheters of different technologies, and each participant was trained to perform CIC for seven days, which can be considered a benefit for them and reproducible for other users who also need this procedure, using the already validated assessment instrument.

Enterostomal therapy is present in this dialogical and meaningful education between patient/family and professional. An exchange of knowledge occurs; nurses are based on the understanding and use of words in the form of gestures inserted into their daily practice, promoting the transmission of technical knowledge to users, demonstrating positive attitudes and skills in the procedure that can reflect in self-care[20].

In the evaluation of the overall score for the two catheters, the evaluation was positive and without statistically significant differences between them, showing satisfactory technologies that should be available according to the individual preferences of each patient, enabling greater safety, quality of life, and adherence to treatment.

Some negative evaluations for certain items can be improved, such as the ease of opening the package, more flexibility and better lubrication during insertion, making it easier to slide in and out of the urethra, in order to promote safety, self-esteem and quality of life for the user.

AUTHORS' CONTRIBUTION

Substantive scientific and intellectual contributions to the study:: Greghi EFM, Azevedo GR andRodrigues CIS; **Conception and design:** Greghi EFM and Azevedo GR; **Technical procedures:** Greghi EFM; **Data collection, analysis and interpretation:** Greghi EFM, Azevedo GR and Rodrigues CIS; **Article writing:** Greghi EFM; **Critical review:** Azevedo GR and Rodrigues CIS

AVAILABILITY OF RESEARCH DATA

Data available at https://repositorio.pucsp.br/jspui/handle/handle/26046.

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