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APPLICATION ARTICLE OF BLADDER TRAINING TO PREVENT URINE INCONTINENCE IN PATIENTS WITH CATHETERS

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ABSTRACT

Background: Urinary incontinence is the uncontrolled excretion of urine at unwanted times and regardless of the amount or frequency, this condition can cause physical, emotional, social and hygiene problems. As a result of inserting catheter for a long period of time, it can cause the bladder to contract and unfilled. Besides, it can also cause the bladder to lose its tone. The detrusor muscle cannot do contraction and the patient cannot control his urine output, or this is called urinary incontinence. Bladder training requires the client to delay urination, resist or inhibit the sensation of urgency and urinate according to a predetermined time and not in accordance with the urge to urinate. **Objective:** To determine the effect of implementing bladder training to prevent urinary incontinence in patients who have catheters installed. **Method:** This research used a case study method for 1 respondent. **Results:** This research journal shows that the effect of bladder training can increase control over the urge or stimulation of urination. **Based on the results:** Based on the results of this study, Bladder Training is able to increase the strength of control when there is an urge to urinate. **Conclusions and suggestions:** Bladder Training is carried out by clamping the catheter/according to the patient's voiding response, if there is a sensation of urination, the catheter tube is removed. Bladder training has been proven to have an effect on increasing control over the urge or stimulation of urination. And it is hoped that this bladder training can be applied as an intervention before removing the catheter.

Keywords: Catheter, Bladder Training, Urinary Incontinence

INTRODUCTION

Urinary catheters are commonly used for long-term surgical patients to connect urine output, as well as for patients with nerve problems or urinary tract obstructions affecting the urinary system, as well as inpatients who are immobile. Catheter placement has a therapeutic and diagnostic function, by removing the blockage that blocks the flow of urine and emptying the bladder. [1]

More than 5,000 people have catheters inserted each year, with 25% of these procedures performed in acute care settings and 4% performed at home. Catheters are used by 15-25% of hospital patients to monitor urine flow and aid bladder emptying. [3]

Patients who experience blockages in the urinary tract system or cannot control urination can undergo a catheter installation procedure. Other problems that may arise from this include damage to the urethra, infection, and reduced stimulation of the bladder. Long-term use of a catheter can cause the bladder to lose its tone, resulting in the bladder not filling. Urinary incontinence is a term used to describe a patient's condition. [4]

Uncontrolled flow of urine at inappropriate times is called urinary incontinence. Regardless of the volume or frequency of the disorder, it can cause problems with hygiene, social interactions, emotional health, and physical health. [5]

The central and peripheral nervous systems in the sacrum area work together to coordinate and regulate the correct physiological process of urination. Usually, the urge to urinate first appears when the bladder capacity reaches 150–350 ml. Urine can usually be

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retained in the bladder up to 500 cc without leaking. Urinating every three hours or no more than eight times a day is a common frequency. [6]

According to data compiled by DEPKES (2012), Ministry of Health in Indonesia, 5.8% of the population suffers from urinary incontinence. Data from the World Health Organization (WHO), a global health organization, shows that 200 million people worldwide live on this continent. Thirteen million Americans suffer from incontinence; women constitute eight-five percent of this population. Because there are still many cases that have not been reported to the Indonesian Hospital Association Data and Information Center or PDPERSI (2015), these statistics truly represent the actual situation. Urinary incontinence affects around 5.8% of the population in Indonesia. This percentage is low compared to countries in Europe.

Data from the Edelweis Room at Bayu Asih Regional Hospital, Purwakarta Regency, January-October 2023, shows that around 162 patients, the majority of whom were female, underwent catheter installation and removal.

Patients who have a catheter in place for a long period of time in the hospital tend to experience a decreased desire to urinate. If this happens, the patient will have difficulty controlling urination, which can cause bedwetting or urinary incontinence. Patients must undergo bladder training to prevent this from happening. The bladder training process is used to regain control over the need to urinate. Bladder training is often carried out from the time the catheter is inserted until it is removed.[7]

It is very important to undergo bladder training before the permanent catheter is removed. By blocking or encouraging the passage of urine, the goal is to restore a normal urination rhythm and allow the patient to feel the sensation of urination. Therefore, bladder training is necessary before removing the catheter.

Urinary incontinence can be controlled with bladder training, having a P value of 0.038 or less than 0.05. By restricting or encouraging the release of urine, bladder training is used to retrain the bladder to produce a normal urination pattern. Like the three previous publications that showed the impact of bladder training on urinary function, there was a reduction in urinary incontinence so that 63.3% of respondents were able to urinate regularly. The previously mentioned point of view underlines the important role of bladder training in preventing urinary incontinence.[8]

From the description above it is clear that the nurse's task in bladder training is to help patients avoid urinary incontinence due to catheter placement and to help patients restore bladder function to optimal function by providing structured exercises that allow long and regular urination intervals. Therefore, the author would like to raise the title to be able to carry out bladder training, namely "APPLICATION OF BLADDER TRAINING TO PREVENT URINE INCONTINENCE IN PATIENTS WHO HAVE CATHETERS INSTALLED IN THE EDELWEISS ROOM, BAYU ASIH REGIONAL HOSPITAL, PURWAKARTA".

METHOD

This research uses a quantitative approach, which is a method used to answer research problems related to bladder training measures to prevent urinary incontinence in patients with catheters. This quantitative research method uses a case study design which includes an intensive study of one research unit, for example a client, family, group, community or institution. In this case study, a problem is examined through a case consisting of a single unit.

The research subjects that will be studied are patients who have catheters installed in the Edelweiss room at Bayu Asih Regional Hospital, Purwakarta Regency. In the data, the number of respondents used is 1 person who has the following criteria: patients with post-operative catheters installed, using catheters for a minimum period of 3 days , patients aged >50 years, patients are willing to be respondents, and can communicate well.

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Bladder training is a procedure carried out to restore control over the urge to urinate. In general, bladder training is carried out from the time the catheter is inserted until the catheter is removed. The goal is to return the urination pattern to normal and enable the patient to be able to feel the sensation of urination by inhibiting or stimulating the release of urine. Therefore, before removing the catheter, bladder training is very necessary. Bladder training has an effect on preventing urinary incontinence. Bladder training is carried out to train the bladder with the aim of restoring normal urination patterns by inhibiting or stimulating the release of urine.

Research instruments are measuring tools used to obtain and collect research data, as a step to find results or conclusions from research without abandoning the criteria for making a good instrument. In this study, the instruments used by researchers included: Researchers used patient documents to find out patient identity, diagnosis, fluid administration, medical history, nursing care plans, especially in catheter removal, SOP (Standard Operating Procedure) bladder training with catheter fixation techniques. RUIS urinary incontinence frequency measurement observation sheet.

The research was carried out in the Edelweis room at Bayu Asih Regional Hospital, Purwakata Regency in October 2023 for one week. This research was carried out based on a code of ethics permit that was submitted under Number 196/D/KEPK-STIKes/X/2023 with 5 research ethics, namely: Confidentiality: This issue is an ethical issue that guarantees the confidentiality of research results, both information and other issues. All information collected is guaranteed to be kept confidential by the researcher, only certain groups of data will be reported in the research results. namely Benefits: In principle, this is done by considering the benefits and losses that may arise in this research. Virtue entails the prevention of wrongdoing or evil, the elimination of wrongdoing or evil and the promotion of good by oneself and others. Justice: The principle of fairness is necessary for equal and fair treatment of other people that upholds moral, legal and humanitarian principles. This value is reflected in professional practice when nurses work to obtain the right therapy according to the law, practice standards, and the right beliefs to obtain quality health care. Non-Maleficence: In principle, a nurse must always carry out nursing service actions in accordance with the nursing knowledge and nursing tips they have without causing harm or endangering the patient. Researchers need to explain the benefits of this research to prevent errors that could harm respondents. Autonomy: The principle of autonomy is based on the belief that individuals are capable of logical thinking and are capable of making their own decisions. Adults are considered competent and have the power to make their own choices and have various decisions or choices that must be respected by others. The principle of autonomy is a form of respect for someone, or is seen as consent without coercion and acting rationally. Autonomy is the right to individual independence and freedom that demands self-distinction. Professional practice reflects autonomy when nurses respect clients' rights to make decisions about their own care.

RESULT

After conducting research on "Implementation of Bladder Training Actions to Prevent Urinary Incontinence in Patients Who Have Catheters Installed in the Edelweiss Room, Bayu Asih Regional Hospital, Purwakarta" which was carried out on October 11 2023 - October 14 for 4 days directly with one respondent, the following results were obtained:

Assessment

The author provides informed consent first to the patient and family and explains the meaning, purpose and procedures for bladder training. The first data collection was carried out on 11 October 2023 – 14 October 2023 in the Edelweiss Room at Bayu Asih Regional Hospital, Purwakarta. In this application, clients use the assessment stage through

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interviews, observation and physical examination. So we found a client with the initials Mrs. E, aged 03/10/1957 (66 years), female, Muslim and lives in Kp. Krajan, Purwakarta.

The client said that the client complained of pain in both legs and had suffered from Knee Osteoarthritis for 5 years so it was necessary to undergo Total Knee Replacement surgery on the right leg which required the client to use a catheter and the catheter was installed the day before the operation, namely on October 10 2023, based on the results of the client's examination. it is recommended to be hospitalized in the Edelweiss Room. At 10.00 WIB a physical examination was carried out with blood pressure results of 118/75 mmHg, pulse 70x/minute, breathing 19x/minute, temperature 35.5oC. Apart from the above data, information was also obtained from the client and family that the client had a habit of using diapers for quite a long period of time due to having a history of knee osteoarthritis which caused the client to be unable to carry out activities as usual, thus requiring the client to use a wheelchair to support daily activities. Meanwhile, to meet elimination needs, clients use diapers. Based on this problem, the results of a case study were obtained using bladder training.

Diagnoses

Based on this problem, a nursing diagnosis is obtained:
Risk of Urinary Incontinence Urgency

Intervention

Based on the data obtained, the author carried out bladder training actions in accordance with Standard Operating Procedures (SOP) which were carried out 6-7 times a day. Actions will be carried out on October 11, 2023 – October 14, 2023

Implementation

The action begins on the first day, October 11 2023, at 11.00 WIB, an assessment is carried out on the respondent, asking the client's identity, providing informed consent and explaining the actions to be taken to the respondent. Next, make observations to find out whether the client is experiencing incontinence or not using the Revised Urinary Incontinence Scale (RUIS). The results obtained from point 3 stated that the client did not experience urinary incontinence. Then bladder training was carried out, first the researcher measured and threw away the urine in the urine bag and after measuring it the researcher clamped the catheter tube according to the program for 1-2 hours and the client was advised to drink 200-250 cc. After that, an evaluation is carried out whether the client feels like urinating or not, the clamp is opened and urine flows out. This action is repeated 6-7 times in 24 hours and at night when the client is going to sleep the clamp is opened to prevent infection of the bladder. From morning to evening it is carried out by researchers and in the evening assisted by the client's family. Previously, the client's family is given education to be able to carry out bladder training procedures.

Table 4.1 Schedule and Results of Bladder Training Implementation

No	Day, Date & Time	Intake	Output	Evaluasi setiap tindakan
Wednesday, 11 October 2023				
1	11.00-12.00 AM	-	100 cc	Client has no urge to urinate
2	12.05-01.05 PM	200 cc	100 cc	Client has no urge to urinate
3	01.10-02.30 PM	200 cc	200 cc	Client has no urge to urinate
4	02.35-03.20 PM	200 cc	150 cc	Client has no urge to urinate
5	03.25-05.00 PM	200 cc	-	Client has urge to urinate
6	05.05-07.30 PM	200 cc	300 cc	Client has urge to urinate
Thursday, 12 October 2023				

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1	07.00-08.00 AM	200 cc	100 cc	Client has no urge to urinate
2	08.05-09.00 AM	200 cc	-	Client has no urge to urinate
3	09.05-10.30 AM	2002 cc	150 cc	Client has urge to urinate
4	11.15-01.15 PM	200 cc	150 cc	Client has urge to urinate
5	01.20-03.30 PM	250 cc	200 cc	Client has urge to urinate
6	03.35-7.00 PM	200 cc	100 cc	Client has urge to urinate
Friday, 13 October 2023				
1	07.30-09.00 AM	250 cc	200 cc	Client has urge to urinate
2	09.05-11.00 AM	250 cc	150 cc	Client has urge to urinate
3	11.05-00.20 PM	200 cc	100 cc	Client has urge to urinate
4	00.25-02.00 PM	200 cc	100 cc	Client has urge to urinate

Evaluation

After bladder training was carried out on Mrs. E for 4 days, the results were:

Table 4.2 Table of RUIS Scale Observation Results Before and After Bladder Training

Day & Date	RUIS Scale Point Results	Information
Before intervening Wednesday, October 11, 2023 At 10.30 AM	3	The client experiences a decrease in the detrusor muscle and sphincter muscle due to the habit of using diapers to meet the client's elimination needs.
After carrying out the intervention Saturday, October 14 2023 At 10.30 AM	0	After bladder training was carried out, the evaluation results showed that the client was able to hold BAK longer, within a period of 15-30 minutes.

DISCUSSION

The goal of bladder training is to maximize the development of the muscles that form the bladder sphincter and muscle tone. Bladder training requires patients to wait to urinate, hold or suppress feelings of urgency, and urinate at set times, not when they feel the need to urinate.

Based on the results of research on Mrs. And it can be seen from the development that the results of implementing bladder training actions have a positive impact on clients. On the first day of implementation, Wednesday, October 11 2023, the client did not have the urge to urinate, on the second and third days there was visible progress, the client began to feel the urge to urinate.

From the evaluation results before bladder training was carried out, the client was accustomed to using diapers for quite a long period of time. However, after bladder training, the client is now able to hold pee longer, namely 15-30 minutes. And the evaluation results obtained through interviews and observations using the RUIS scale showed that the client did not experience urinary incontinence with a result of point 0. When observed by researchers, the client did not experience any leakage or seepage when urinating. When the client does activities such as sitting in bed or at the bedside, no urine comes out, which proves that the client does not experience leaks during activities, coughing or sneezing. The client can feel the

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bladder is full and there is a sensation of wanting to urinate, the client does not feel any discomfort when urinating, the urine output comes out smoothly.

These results are supported by the journal "Effectiveness of Early Bladder Training Before Urinary Catheter Removal on the Occurrence of Urinary Incontinence in Postoperative Patients at SMC Telogorejo Hospital by Lucky Angelia Shabrini, Ismonah, Syamsul Arif in 2015" that the bladder will eventually start to lose its tone (atonia) or weakening and loss of capacity when the catheter is inserted because it no longer fills and contracts. When the catheter is removed due to atonia, the patient may experience urinary incontinence due to the inability of the detrusor muscle to contract and expel urine. Therefore, before removing the urinary catheter, bladder training is necessary. When a person is catheterized, bladder training is a useful method to return the urethral sphincter to its original function. Muscle contractions in the pelvis, stomach, and bladder are necessary when urinating. The muscles of the external sphincter and perineum constrict voluntarily during the start of bladder training, preventing urine from escaping from the bladder.

The external sphincter and perineal muscles contract voluntarily during the first phase of bladder training, blocking the flow of urine through the urethra or stopping the flow of urine during urination. Until the bladder is completely filled, intravesical pressure does not increase significantly with the influx of urine. Bladder tension will increase in proportion to the contents of the organ, but as the radius of the organ increases, the pressure will only increase slightly until the organ is relatively full. When it is time to urinate, the external sphincter of the bladder can be obstructed and a urinary reflex can be triggered by stimulating the sacral urinary center. This is made possible by the cortical centers. Urine passes through the urethra when the detrusor muscle contracts, the external urethral sphincter relaxes, and the perineal muscles relax and urination occurs.. [22]

According to research published in this publication, daily bladder exercises are thought to restore bladder muscle tone compared to exercises performed before discharge. When a urinary catheter is inserted, the bladder never fills completely, thereby reducing bladder muscle tone and eliminating the possibility of the bladder feeling the need to urinate.

CONCLUSION AND SUGGESTIONS

Based on the results of this research and discussion, several results can be concluded as follows:

Based on the results of research on Mrs. And it can be seen from the development that the results of implementing bladder training actions have a positive impact on clients. On the first day of implementation, Wednesday, October 11 2023, the client did not have the urge to urinate, on the second and third days there was visible progress, the client began to feel the urge to urinate.

From the evaluation results before bladder training was carried out, the client was accustomed to using diapers for quite a long period of time. However, after bladder training, the client is now able to hold BAK longer, namely 15-30 minutes. And the evaluation results obtained through interviews and observations using the RUIS scale showed that the client did not experience urinary incontinence with a result of point 0. When observed by researchers, the client did not experience any leakage or seepage when urinating.

It can be concluded that bladder training can increase bladder muscle tone and prevent urinary incontinence.

Based on the results of the author's research regarding the application of bladder training measures to prevent urinary incontinence in Mrs. E can provide evidence that this application is used as a useful action for the development of nursing science in handling to prevent urinary incontinence. For STIKes Budi Luhur Cimahi: The results of this case study

can be a recommendation to be included in the learning of the Medical Surgical Nursing course as a useful action for the development of nursing science in preventing urinary incontinence. For Bayu Asih Regional Hospital, Purwakarta Regency: It can be used as additional information and input for the hospital so that it can implement bladder training as an intervention before removing the catheter. For future researchers: Can be used as a source of data, information and results to carry out further research regarding bladder training to prevent urinary incontinence in patients with catheters.

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