UFSM

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REVISTA DE ENFERMAGEM DA UFSM

ISSN 2179-7692
OPEN ACCESS

Rev. Enferm. UFSM, v.13, e6, p.1-19, 2022 •
Submission: 8/26/2022 • Acceptance: 1/10/2023• Publication: 2/28/2023

Original article

Meaning of the use of silicone penile prosthesis in the follow-up of pelvic brachytherapy

Significado del uso de prótesis peneana de silicona en el seguimiento de la braquiterapia pélvica

Significado do uso da prótese peniana de silicone no seguimento da braquiterapia pélvica

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Abstract

Objective: to describe the meaning of the use of silicone penile prosthesis for vaginal dilation in the follow-up of brachytherapy in women with gynecological cancer. **Method:** narrative research conducted at the *Centro de Pesquisas Oncológicas*, Brazil, with 34 women after pelvic brachytherapy, under follow-up at the physical therapy service. Data collection through semi-structured interviews, including sociodemographic and clinical data and the significance of the use of penile prosthesis in vaginal dilation, submitted to content analysis and discussed in the light of the study From 'sex toy' to intrusive imposition. **Results:** the meaning permeates the vaginal dilation exercise; difficulties related to vaginal conditions, disease, treatment, pain, sex, constraints, prejudices, failures in health education; motivations are related to the search for quality of life, support of partners and professionals. **Conclusion:** the approach of possible emotional, psychological, social and physical barriers should be planned and executed for prevention of vaginal stenosis and better reception.
Descriptors: Nursing; Physical therapy Modalities; Genital Neoplasms, Female; Brachytherapy; Radiotherapy

Resumo

Objetivo: descrever o significado do uso da prótese peniana de silicone para dilatação vaginal no seguimento da braquiterapia em mulheres com câncer ginecológico. **Método:** pesquisa narrativa, realizada no Centro de Pesquisas Oncológicas, Brasil, com 34 mulheres, após braquiterapia pélvica, em seguimento no serviço de fisioterapia. Coleta de dados por entrevistas semiestruturadas, incluindo dados sociodemográficos, clínicos e o significado do uso da prótese peniana na dilatação vaginal, submetidas à análise de conteúdo e discutidas à luz do estudo *From 'sex toy' tointrusiveimposition*. **Resultados:** o significado perpassa o exercício de dilatação vaginal; as dificuldades relacionadas às condições vaginais, doença, tratamento, dor, sexo, constrangimentos, preconceitos, falhas na educação em saúde; as motivações relacionam-se à busca por

qualidade de vida, apoio dos companheiros e profissionais. **Conclusão:** a abordagem de possíveis barreiras emocionais, psicológicas, sociais e físicas deve ser planejada e executada para prevenção da estenose vaginal e melhor acolhimento.
Descritores: Enfermagem; Modalidades de Fisioterapia; Neoplasias dos Genitais Femininos; Braquiterapia; Radioterapia

Resumen

Objetivo: describir el significado del uso de una prótesis peneana de silicona para la dilatación vaginal posterior a la braquiterapia en mujeres con cáncer ginecológico. **Método:** investigación narrativa, realizada en el *Centro de Pesquisas Oncológicas*, Brasil, con 34 mujeres, después de braquiterapia pélvica, en seguimiento en el servicio de fisioterapia. Recopilación de datos a través de entrevistas semiestructuradas, incluyendo datos sociodemográficos y clínicos y el significado del uso de prótesis peneana en la dilatación vaginal, sometidos a análisis de contenido y discutidos a la luz del estudio *From 'sex toy' to intrusive imposition*. **Resultados:** el significado impregna el ejercicio de dilatación vaginal; dificultades relacionadas con condiciones vaginales, enfermedad, tratamiento, dolor, sexo, vergüenza, prejuicios, fallas en la educación para la salud; las motivaciones están relacionadas con la búsqueda de calidad de vida, apoyo de la pareja y profesionales. **Conclusión:** se debe planificar y ejecutar el abordaje de las posibles barreras emocionales, psicológicas, sociales y físicas para prevenir la estenosis vaginal y una mejor recepción.
Descriptores: Enfermería; Modalidades de Fisioterapia; Neoplasias de los Genitales Femeninos; braquiterapia; Radioterapia

Introduction

The gold standard for the treatment of locally advanced cervical cancer includes chemotherapy and radiotherapy, in teletherapy and brachytherapy modalities. Pelvic brachytherapy may result in acute reactions such as vaginal erythema, wet scaling, mucositis, ulceration and endothelial injury, small vessel thrombosis, edema, submucosal hemorrhage, and smooth muscle necrosis. These changes usually disappear within three months of the end of treatment.[1]

However, in some women, progressive vascular impairment and tissue hypoxia can result in permanent damage to the vaginal mucosa, causing tissue atrophy, fibrosis, and obliteration. Clinically, this promotes the development of telangiectasias, wall adhesions, vaginal narrowing and shortening, loss of elasticity and mucosal fragility. About one-third of this population has altered vaginal stenosis and/or vaginal epithelium, which decreases lubrication and leads to dyspareunia and sexual dysfunction.[1]

Thus, vaginal stenosis is a common problem and consequent to therapy, negatively affecting sexual functioning, among other aspects. Current guidelines recommend prescribing the use of the vaginal dilator to prevent its occurrence.[1] However, there is still no standardization for the use of vaginal dilators after pelvic brachytherapy, regarding the duration of each application and the continuity of the intervention.[2-5] Some studies state that the continued use of the dilator leads to the elongation of the vaginal canal and the growth of new epithelial cells, which prevent the formation of fibrosis and adhesions,[6-8] but the evidence is not

consistent and needs to be confirmed.[1]

The patients' adherence to the use of the dilator, in general, is evidenced as low.[1] In the scenario of this study, nurses and physical therapists guide the use of the vaginal dilator, whose adherence is close to 50% with the use of the dilator two or three times a week by patients undergoing physical therapy follow-up, with a percentage increasing in the continuity of health practice, according to the observation of the physical therapist responsible for the follow-up of patients.

Other studies indicate the use of the dilator, at least twice a week, in 88% of the participants (16 women);[9-10] adherence of 42% in the first trimester and decrease in adherence over time;[5] low adherence over time.[3] At the one-year follow-up, a study affirms the continuity of adherence to the use of the vaginal dilator by 21 women (35%) in the first six months after brachytherapy and by 22 (36.7%) one year later, demonstrating that women who adhered to the exercises since the first evaluation maintained adherence throughout the follow-up.[11].

Scientific dissemination about the use and adherence to vaginal dilators is on the rise, however, in relation to its meaning, production is still incipient.[4,12] A study describes that women refer to the use of the dilator as an obligation, with a negative influence linked to the dilation linked to the rigid plastic design, pain or blood loss and brachytherapy. Some women even mention the lack of instrumental support, for example, lubricants and adequate professional information.[13] Currently, dilators are produced in various materials, such as non-toxic poly vinyl, latex, silicone and still in electronic format, with dilation controlled by the patient.[12]

The vaginal dilator adopted in the scenario of this study, *Centro de Pesquisas Oncológicas* (CEPON), a reference institution in Oncology in the state of Santa Catarina, Brazil, is a device in silicone, in the shape of a penis (silicone penile prosthesis), with recommendation of continued use, three times a week, for 20 minutes, regardless of the maintenance of sexual intercourse. Guidance for use is provided by nurses at discharge from brachytherapy and by a physical therapist after the end of treatment (quarterly follow-up visits). The choice for this type of device was given by the silicone material, soft texture, mild temperature, available diameters and the anatomical shape that fits the vaginal canal.

Empirically, it is observed in clinical follow-ups that some women are embarrassed to use the device offered by nurses and physical therapists of CEPON, demonstrating resistance to use, stating that they feel embarrassed and that partners also demonstrate discontent. Other women verbalize the need and benefits of this practice.

In view of the above, the objective is to describe the meaning of the use of silicone penile prosthesis for vaginal dilation in the follow-up of brachytherapy in women with gynecological cancer.

Method

Narrative research with a qualitative approach carried out at CEPON, presented according to the Consolidated criteria for reporting qualitative research.[14]

The study participants were women diagnosed with gynecological cancer undergoing brachytherapy, having as inclusion criteria hysterectomized or non-hysterectomized women prior to brachytherapy, under follow-up in the physical therapy service, at least six months after completion of therapy (period considered necessary to follow the nurses' recommendations for the use of the silicone penile prosthesis and to carry out at least one consultation with the CEPON physical therapist). As exclusion criteria, women under 18 years of age, in recurrence of gynecological cancer (this condition could alter the meaning investigated) and with clinical alterations that prevented communication at the time of data collection.

To select the participants, it was decided to schedule the women to consult with the physical therapist, at the different times provided by the institution for this type of care and according to the availability of the researchers (convenience) for data collection. Between October and December 2021, the researchers responsible for collecting the data with the participants were: PhD and professor of nursing working in Oncology and nursing student/scientific initiation scholarship holder. Data collection in the medical record was carried out by the student scholarship and PhD/teacher and physical therapist in the study scenario, between November and December 2021.

The data collection strategy was the semi-structured interview. Two interviews were conducted as a pilot test to confirm the applicability of the script of closed and open questions. These two collections were discarded and the script of questions was maintained. The number of inclusions was defined by data saturation, when no new elements were revealed in the content of the participants' narratives.[15]A total of 34 women were included.

The invitation to participate in the research occurred after the end of the consultation with the physical therapist, when the Informed Consent Form (ICF) was applied. The semi-structured interview included closed questions, covering sociodemographic and clinical data, and open questions, covering the meaning of using the silicone penile prosthesis for vaginal dilation. The triggering questions were: how do you perform vaginal dilation? In your perception, what is the meaning of using the silicone penile prosthesis for vaginal dilation after brachytherapy? When necessary, according to the researchers' assessment, complementary questions were asked to better understand the narratives.

The data related to the closed questions were extracted from the medical records of the participants and consisted of the records of the first consultation with the physical therapist: age, education, origin, marital status, diagnosis of gynecological cancer, staging, number of applications of brachytherapy and pelvic teletherapy, degree of vaginal stenosis (Grade 0: asymptomatic woman; Grade 1: mild shortening or vaginal narrowing; Grade 2: vaginal narrowing and/or shortening without interfering with the performance of the

gynecological examination; Grade 3: vaginal narrowing or shortening interfering with the use of tampons, sexual activity or gynecological examination),[16] uterine condition (hysterectomized or non-hysterectomized), use of silicone penile prosthesis, frequency of use of penile prosthesis, maintenance of sexual intercourse, changes to vaginal touch.

The interviews were conducted in a private, audio-recorded environment (mean interview time between 10 and 25 minutes). Additional notes were recorded to contribute to the transcripts of the interviews, considering that some excerpts from the narratives were expressed by the participants by non-verbal communications and recorded in brackets in the transcripts from the complementary notes.

The narratives of the women were submitted to the content analysis technique.[15] Thus, the transcription of the interviews constituted the pre-analysis, the exhaustive reading with the coding of the record units (RU) and context units (CU), grouped into thematic categories and subcategories, constituted the exploration phase of the material. Enumeration rules (frequency measures) were applied in the sociodemographic and clinical variables, obtained in the collection of data in the medical records. The interpretation and discussion configured the phase of treatment of the results.

Two thematic categories emerged from the analysis: Use of the vaginal dilator in the follow-up of pelvic brachytherapy (subcategories: the exercise of vaginal dilation; Difficulties for the use of the vaginal dilator; Motivations for the use of the vaginal dilator) and, Living with brachytherapy and its effects (subcategories: brachytherapy: experiences and meanings and adverse effects of brachytherapy). This article presents the category: Use of vaginal dilator in the follow-up of pelvic brachytherapy. Due to the volume of data, the second category was published in another article.[17]

The results found and presented here were discussed in the light of a Canadian study,[18] entitled "From 'sex toy' to intrusive imposition: a qualitative examination of women's experiences with vaginal dilator use following treatment for gynecological cancer" that explored the rehabilitation experiences of women with the use of vaginal dilators after gynecological cancer treatment, revealing that the use of vaginal dilator is a complex and personal phenomenon that carries profound psychological and emotional implications related to an invasive symbology, such as: the use of vaginal dilator as an embarrassing sex toy; Revive invasion of treatment; aversive practical experience; Something that was not part of my recovery; Minimizing resistance. The choice of this theoretical support occurred due to the detailed presentation of the meanings of the intervention in the perception of women. Other publications updated and linked to the theme helped in the discussion of the findings.

The research was conducted in accordance with the ethical standards required by Resolution 466/2012, of the Ministry of Health and ethical assessment registered under opinions 4,050,347 (issued by the study proponent on 05/26/2020) and 4,133,605 (issued by the co-participant on 07/03/2020). To guarantee the anonymity of the participants, the alphanumeric coding (MB1-MB34) was adopted.

The results were presented to the professionals of the study scenario through a video made available to the Nursing Management and shared by an institutional permanent education strategy and recorded in an infographic, fixed on the wall of the CEPON physical therapy service for access by the participants, in compliance with what was agreed upon when the ICF was applied.

Results

We interviewed 34 women, aged 29-76 years (mean: 54.4 years), nine women (26.5%) aged 30-39 years, eight (23.5%) aged 60-69 years, seven (20.6%), respectively, aged 40-49 years and 50-59 years; two (5.9%) aged 70 years or more, and one (2.9%) aged 20-29 years; 16 (47%) with elementary education; nine (26.5%) with high school, eight (23.5%) with higher education and one (3%) without information on her education; 23 (67.6%) with fixed partners, four (11.8%) widows, four (11.8%) divorced, and three unmarried (8.8%).

Regarding the diagnosis of gynecological cancer, 30 (88.3%) with cervical cancer and four (11.7%) with endometrial cancer. The staging comprised, for the most part, the classification IIb (41.2%) and IIIb (20.6%); 30 women (88.2%) not hysterectomized; 28 (82.3%) underwent four sessions of brachytherapy with the radiation dose in grays (Gy) corresponding to 28 Gy and six (17.7%) underwent three sessions of brachytherapy, with 21 Gy. Women prior to brachytherapy underwent teletherapy, with the number of sessions ranging from 25-30, in most cases with 25 sessions (41.2%) or with 28 sessions (38.2%), with a dose of ionizing radiation between 45 and 55 Gy.

Regarding the use of the prosthesis in the first consultation with the physical therapist, 20 women (58.8%) used it, at the time of the interview 32 (94.1%). Regarding the frequency of use, a variation of one to four times or more per week was identified, five (15.6%) perform once a week, six (18.8%) twice a week, 16 (50%) three times a week and five (15.6%) four or more times a week. As for maintaining sexual intercourse, 17 (50%) reported having sex.

Regarding the occurrence of vaginal stenosis in the first consultation with the physical therapist, it was identified that 13 participants (38.2%) had some involvement in the vaginal mucosa; eight (23.5%) with grade I stenosis, four (11.8%) with grade II stenosis, and one with (2.9%) grade III stenosis. At the first visit, ten women (29.4%) were observed with changes, including complaints of pain, discomfort and bleeding. This sociodemographic and clinical characterization are included in the discussion of meaning in a complementary way to the discussion of the thematic categories.

The use of the vaginal dilator in the follow-up of pelvic brachytherapy

The narratives gathered by the content analysis that make up this thematic category, and its subcategories, declare a set of information that means the use of the silicone penile prosthesis for vaginal

dilation in the follow-up of brachytherapy in women with gynecological cancer. Such narratives present a range of details that allows the understanding of the phenomenon, enabling reflection on the care practices that can and should be offered to women during and after the completion of pelvic brachytherapy.

The vaginal dilation exercise

The recording units in this subcategory explore the range of onset of vaginal dilation, how to dilate, the materials needed, and the frequency of exercises.

The beginning of the early vaginal dilation exercise is important for the prevention of vaginal stenosis and should be started after the inflammatory phase caused by the treatment. The findings show opposite sides, most women started within 15 days after discharge from brachytherapy, others showed some resistance to the beginning of the use of the silicone penile prosthesis, due to fears and prejudices.

> *I used the prosthesis, I did it right, since when the girl* [the nurse at the radiotherapy clinic] *asked me to start doing it, when I finished brachytherapy. After seven days I started using the prosthesis*. (MB16)
> *I did not start after brachytherapy, after a while I started using the prosthesis, because I was ashamed.* (MB19)

Regarding the frequency and time of the use of the silicone penile prosthesis, the records in the medical record indicated the number of times and the duration of vaginal dilation adopted by each woman, as described in the clinical characterization of the participants. However, the narratives show that the frequency of the use of vaginal dilation changes according to the perception and evaluation of each woman and over the course of time after the conclusion of brachytherapy, increasing or decreasing the frequency of the dilation exercise. In the testimonies, some details of this use and the implications for the woman can be verified.

> *I do vaginal dilation twice a week, when I do not have physical therapy here at CEPON, I use prosthesis at home. Here, it usually lasts between half an hour to 40 minutes, and at home I use the prosthesis for 15 minutes.* (MB17)
> *So, I used to do it twice a week, then I started doing it every 15 days, then I came to doctor* X [physical therapist]*, I saw that I was closing* [the vaginal canal]*, so I started doing it once a week. I never stay less than 20 minutes, I stay about 30 minutes until 1 hour with the prosthesis, because I stay in the game* [games on mobile]*, and I forget, it's good that you forget. I started wearing the prosthesis three times a week. I used it for a year three times a week because I was afraid to close, but as I managed to get 8-9 cm* [vagina length]*, I relaxed a little bit, and started using it every 15 days. Since from a year and a half here I am relaxed, then I use it once a week and sometimes every 15 days*. (MB32)

Regarding the materials and stages of the use of the prosthesis, the narratives of the women describe how they perform vaginal dilation. Most patients, when performing the technique, in addition to the silicone penile prosthesis, use condoms and lubricating gel, opt for the gynecological position to perform the

exercise and maintain hygiene care, as recommended by the nurses and physical therapists of CEPON. The stages of dilation include: choosing the place for their own positioning and insertion of the penile prosthesis into the vaginal canal, preparation of materials, body positioning, introduction of the penile prosthesis, permanence of the prosthesis for about 20 minutes (some women change this time to more or less), removal, hygiene and storage of the prosthesis.

It was also observed that during the stages of dilation the woman herself can identify the shortening of the vagina (vaginal stenosis), but the evaluation and guidance of the professional in the follow-up of treatment become essential, as they allow the intervention to adapt to the health reality of each woman, reducing fears and expanding the possibility of care and prevention of vaginal stenosis.

> *I always do it in my bed, lie down in bed, put the condom on the prosthesis. I did not adapt to coconut oil* [lubrication option given by the physical therapist]*, so I use lubricant, the coconut oil dried more. I place the prosthesis and hold it until the end of the vaginal canal, for 20 minutes, leave it inside, without touching the prosthesis. I put it slowly, to avoid it to hurt or cause pain, I put it very slowly, and when it reaches the end* [of the vagina]*, I start counting the 20 minutes.* [...] *I was putting it straight, normal, as in the intercourse, and I was holding it at the bottom, just because the left side of the vagina stuck, but it was just little. She* [the physical therapist] *just moved it a little more from one side to the other.* (MB1)
>
> *I put the condom and the gel, then I lie down, I put it on, I hold it like the physician taught me. I'll do it lying down. I push here more, sometimes I change the side, pushed on the other side. Thank God she said the opening* [of the vaginal canal] *is very good. Then, of course, I wash well with plenty of running water. Then there's a little place I keep.* (MB26)

Difficulties in using the vaginal dilator

Despite the guidance given in the discharge of brachytherapy by nurses and the clinical follow-up offered by the physical therapist, the women's narratives show difficulties in the use of the silicone penile prosthesis. The RUs of this thematic subcategory permeate the gynecological conditions related to the vaginal canal, the link between the need for dilation and the disease, treatment and sex, the prejudice of women and others, and the absence of professional guidance for dilation.

Pain, bleeding, dryness and loss of elasticity were the verbalized vaginal conditions that hindered the use and maintenance of vaginal dilation. Faced with fear and pain, women are afraid to make use of the penile prosthesis, due to the physical discomfort, presented at the time of exercise and as an anticipatory condition, predicting said discomfort even before the intervention.

> *At first I had difficulty, it hurt a little, I started to be afraid to put it in there, because I went a year without having sexual intercourse. It was a year of treatment and a year of doing nothing, and then I think I held back a lot* [...]. *Fear of hurting, fear of putting it there. But then I started doing it.* (MB23)
>
> [...] *at home, I did not do it, because it hurt a lot, because it was closed.* [...] *I was bleeding and I was scared. I thought, my God, I'm hurting myself, so now with physical therapy, I understand that it really has to bleed to open it, otherwise it won't*

open. (MB02)

In addition, the diagnosis and treatment of cancer bring with it several impacts. The reports showed the link between vaginal dilation exercise and the disease, treatment and painful perception. Other findings refer to the perceptions experienced in the diagnostic phase and the difficult coping with brachytherapy.

The use of the prosthesis reminds them that they received the diagnosis of cancer, leading them to resume the moments lived for the administration of brachytherapy, including the insertion of instruments, the gynecological position necessary for the administration of ionizing radiation, the exposure of the body and the necessary isolation to prevent radioactive risks, in addition to the pain felt during and after treatment, which is associated with physical and emotional perceptions.

> *Because I had a lot of pain, a little bit of my psychological and another thing is because I discovered cancer through a lap wound, I was afraid of pain, so more for that, but since I'm coming, a year ago, this has all been* [...] it *'s getting better and better. Gradually I am able to work my mind to do, forget the pain, because there is no pain, it is psychological.* (MB25)
>
> *But I was very resistant to use, because at the beginning after brachytherapy is a lot of pain, both in the intercourse and in the use of the prosthesis. I was very angry, I thought, "I'm never going to be the same woman I was, I'm not going to feel pleasure, I'm never going to have desire again." Because I also said that I would never recommend brachytherapy to anyone, if someone asked me I would say, don't do it, don't do it, don't do it. I was really angry, the first few months I didn't use it, I tried to use it, but I hated it, you know? That* [the prosthesis], *I was repulsed by it, even trying to do it, it was not even by pain, even because I am very resistant to pain, I was repulsed, I was really furious.* (MB27)

Lack of privacy, embarrassment, fear and judgment of other people are perceptions that have emerged signifying vaginal dilation. It was also observed that the shape of the prosthesis (similar to the penis) and the cultural concept linked to the device makes the woman link vaginal dilation to sex, as something libidinous, negatively interfering with the adhesion of vaginal dilation.

> *It's kind of embarrassing, like, when we have a husband, and you have to do it* [...] *and sleep in the same room* [...]. *Now we are sleeping separately, so for me it is more relaxed* [...] *when I traveled to Mato Grosso, I was there for two months, I had to take it* [the prosthesis]. *It was complicated* [...] *I even had to tell my sister-in-law, what a shame, because I had to ask her for a condom, because mine was over. It was complicated* [...]. (MB10)
>
> *My husband did not accept much, because he said: "if we have intercourse, why?" It took him a while to understand why. He said, "goodness, don't I please you?" And I said, "No, it's the other way around, you please me, we're married, I use the prosthesis, but I'm not going to be cheating on you."* (MB22)
>
> *For me, it was embarrassing. The day the nurse gave me the prosthesis I looked at it and thought, "My God, am I going to have to wear this?" But I think if it wasn't for the drawing there* [if it wasn't for the penis shape], *it wouldn't be so embarrassing. Because for me, sexual intercourse was between me and my husband.* (MB15)
>
> *So using that there, it's right that it's not something that will give pleasure, so I fell on the side of medicine, and I forgot its shape. Only personal difficulty of having to*

> *wear the prosthesis, because I was never adept at these things.* [...] *I had no difficulty in using, following the guidelines, it was my feelings even of having to use a prosthesis that brought me difficulties.* [...] *for me to have a penis there, other than my husband's, is some what embarrassing.* (MB13)

Another limitation pointed out was the failure in the information provided by professionals for vaginal dilation. The lack of understanding about the importance of this care led women to postpone the beginning of the use of the dilator, generating judgment about the conduct of professionals and the implication of this condition on their own health.

> *At first, there was this failure, that I didn't know how many times I had to do it. Because at first they said I had to make three a week, make a shower with chamomile tea, all this I did. Then he* [husband] *always accompanied me in brachytherapy, they did not find it necessary to give me a prosthesis. Only I think it is necessary to warn the person, even having a husband has to use the prosthesis, I only took the prosthesis after I started doing physical therapy.* (MB02)
>
> *When I got the prosthesis, I thought, "What's it for?" Then the girl* [nurse], *gives the sheet* [guiding printed material], *I started reading, and I said to myself: "now I understand, it's not to let it close, so we can have the intercourse", that should be it. And also do the exams not to close, to get the preventive. And it was a thud, but it's coming.* (MB16)

Motivations for the use of the vaginal dilator

This thematic subcategory brings together the RU that reveal that vaginal dilation is related to the continuity of treatment, by preventing vaginal stenosis; by the support of partners, by giving strength and security to its realization; by the follow-up of the physical therapist following treatment, by allowing a better understanding of health care, clinical evaluation (physical and emotional) and reception. It can also be said that most women started to see the vaginal dilator as a necessary treatment to allow better quality of life, reframing the usefulness of the penile prosthesis, which ceased to be an erotic object and became a therapeutic object.

> *For me it is an alternative for me to go back tomorrow to my normal life, as it was before, without worrying about what I have to do to improve my health for later, I see it as a medicine that I cannot forget to do, because if I do not, I know it will entail something later, and it will be worse for me.* (MB12)
>
> *Everything was new to me, the disease was once a surprise, it was an adaptation to use the prosthesis, but now it's going well. It's good, it's important, I hope the women who are starting now are not afraid because it doesn't hurt, the prosthesis is like this, you feel your body, it's you who are putting it on, it's not even a partner, it's not even another person, you know your limit, if it hurts, for a little bit, breathe, relax, but the more the prosthesis fits inside us, it's better, because all that bottom of our lap will keep open. Just to help not close, because if close I think it's very sad, because when a woman closes, if not take care, how will the gynecologist examine later?*(MB22)

It is noteworthy that the support and encouragement of the partners actively contributed to the

adherence to the vaginal dilation exercise, according to the perception of the participants.

> *I always try to do it at night, and my husband is always present, he collaborated a lot so that I didn't give up, because sometimes we get tired, but he had a lot of his collaboration in the process. He helped stimulate me, I had a lot of help from my husband; to this day I still have. It was in June, since then he's always saying: "let's do it, let's do it", so I can't stop doing it, so it's been a couple of months since I've been doing it two to three times, but at first it was three times a week. The moment I told him about the prosthesis, I thought he would think it was bad and such, but no, he always tried to support me, give me strength, tell me like this: "no, we're not going to give up", sometimes I think "we're only going to do it twice" and he says "no, we're going to do three". So, this was very valuable for me, I was losing that resistance that, sometimes, we have.* (MB11)
>
> *You know, he encourages me to do it when I'm afraid. Today I'm leaving here scared, I'm really scared, today I'm going to start working on the psychological, I have to use the prosthesis, I'm going to get home, I'm going to talk to my husband. He encourages me to do it, because if you have someone on your back, you can do more, and even establish a routine, like, on Tuesdays, Thursdays and Saturdays I'll do it.* (MB23)

Still as motivation for the use of the prosthesis was described the importance of monitoring the professional physical therapist in the follow-up of treatment, associated with its reception. Practice adopted in the study scenario, which has allowed, in the perception of women, a better approach to the difficulties faced by each woman.

> *After the first consultation with the physical therapist I started to do more, because the use was only indicated at the end of the brachytherapy by the physician and the nurse gave me the prosthesis and explained how to use it. It took me a while to adjust. After I came here* [at the physical therapist], I *was already doing it, but then* [with the physical therapist's follow-up] *I did better. Then she explained to me what it was for, because I thought it was something more superficial, and I didn't see anything, but she showed me that it doesn't, that it starts from inside the closure of the vaginal canal, from the bottom, that's why I had to use it, so I understood the purpose better.* (MB29)
>
> *From the moment I did, I was very insecure, so Physician* XXX [physical therapist] *talked to me a lot, gave me a lot of instructions. So, everything she said I did, and gradually I relaxed and did the exercise, because as I was very insecure, someone was missing to stimulate me.* (MB11)

In view of the results revealed in this study, the meaning found is summarized. The use of silicone penile prosthesis for vaginal dilation following pelvic brachytherapy by women with gynecological cancer includes the need for vaginal dilation exercise, difficulties related to vaginal canal conditions, the perception that dilation is consequent to cancer and its treatment, strongly linked to painful perception. Other aspects include the lack of privacy in households, the cultural link between the silicone penile prosthesis and sex, and something libidinous, which favor prejudices, constraints, fears and judgments of women themselves and coming from other people. These difficulties contribute negatively to adherence to the use of silicone penile prosthesis.

The non-receipt of professional guidelines for vaginal dilation by some women causes judgment of the conduct of professionals, further compromising the understanding of the importance of dilation and its effective onset. Conversely, the support of the partners and the physical therapist in the follow-up of brachytherapy alleviates the difficulties and motivates the use. The motivation is related to the prevention and treatment of vaginal stenosis, thus contributing to a better quality of life. In this perspective, women re-signify the usefulness of the object (silicone penile prosthesis) from erotic to therapeutic.

Discussion

Vaginal dilation is recommended for the prevention of stenosis caused by pelvic brachytherapy and is considered a rehabilitation strategy, carried out differently in the various national and international health contexts. However, with the scientific advancement, new consensuses have contributed to the standardization of this care.[2]

Recognizing the meaning of the use of silicone penile prosthesis, after the end of brachytherapy, allows the approximation with the feelings, facilities and difficulties found by women in the survival of gynecological cancer. It gives possibilities for better cancer care, in an attempt to reduce the negative impact on coping with cancer and the use of silicone penile prosthesis for vaginal dilation and its implications on women's health.

The Canadian study[18] chosen as a theoretical framework to support this discussion highlights the psychological and emotional implications and the invasive symbology of the dilator, which is similar to the findings of this investigation. The study points out that the dilator is seen as an embarrassing sex toy, portraying the degree of embarrassment and shyness to humiliation around owning the object, buying and using it, in addition to the sexual and erotic nature perceived by women, which is exacerbated by the fear of other people's judgment. Such perceptions contribute to the rejection of one's own sexuality and the use of the dilator.

When we associate the statements of the study developed in Canada[18] with the results presented in this article, it is inferred that the way the women see the silicone penile prosthesis for vaginal dilation interferes with the adhesion and the quality of its use and dilation. However, the dilator having the shape similar to a penis (silicone prosthesis) or the cylindrical shape (difference in the two investigations), are shown to be symbolically similar.

The perception about the aspect of the dilator is significant, but can be mitigated considering the diversity of devices in different shapes, sizes and colors existing in the current market, thus, one can give more than one alternative to facilitate the use, adding to this care the professional support to women, their partners and family members, health education, including various educational materials, psychological support and sex therapy.[12,19] Focusing on the empowerment of women to face the challenges of dilation that

are multifactorial, mainly strengthening their psychological well-being. The thematic subcategory "Motivations for the use of the vaginal dilator" highlights aspects that should be mentioned in the approach with patients, considering the stimulating character for this practice.

In CEPON the silicone penile prosthesis is offered free of charge, in order to minimize the need for acquisition by the woman herself; other devices are not offered because they have higher cost. At the beginning of this intervention in CEPON, the silicone penile prosthesis was offered only to the most needy women; other women needed to make the purchase with their own resources. This experience made adherence even more difficult, as women revealed embarrassment at the time of purchase, which led the service to seek resources to offer the prosthesis to all women.

The significance pointed out by the Canadian study [18] further includes reliving the invasion of treatment, evoking difficult emotions associated with the disease, and the experience of invasion and violation caused by brachytherapy. An aversive experience, which generates fear and fear of damage to the vagina, considered uncomfortable, unpleasant, unnecessary in the face of the maintenance of sexual relations, and also perceived as something cold, mechanical and aversive. The benefits pointed out by the professionals, in the perception of women, emphasized the recovery of sexual function, even overlapping with the adequate gynecological evaluation, which reduced the interest in adherence and did not minimize the aversive experience.

It can be seen that the shape of the prosthesis resembling a penis and the cultural concept linked to the device and sex influence the feelings of the participants. However, the perceptions experienced with the diagnosis and coping with treatment add up, expanding this meaning. This result shows the importance of the preventive approach to talk about such perceptions. Drug and non-drug strategies, such as anesthetic and analgesic procedures, health education for self-care, relaxation and/or audiovisual techniques during the administration of brachytherapy, psychological approach during and after treatment are interventions that can minimize this condition.

In this context, the meaning brought in this article differs from the Canadian study [18] regarding the relevance of sexual function perceived by women in professional recommendations. It is understood that the inclusion criterion adopted in this investigation, referring to physical therapy follow-up, may have favored this differentiation. Recruitment in the survey conducted in Canada[18] covered women who received the recommendation for vaginal rehabilitation.

However, the perception of the woman that the maintenance of sexual intercourse by itself already prevents vaginal stenosis was similar to the findings. Thus, clarifications related to vaginal dilatation in the follow-up of pelvic brachytherapy and evaluations of the vaginal condition by professionals are considered relevant, with the objective of ensuring better education and health promotion.

The result of prospective studies with reduced biases would be important to assist in proving the

evidence to women. However, considering the nature of the investigation, researchers[3,6] state that they face difficulties in applying methodological rigor, considering the lack of absolute control over the applied and/or recommended intervention.

It can be evidenced, considering the barriers to the use of the dilator in the perception of women,[3] that: about two thirds of patients will develop vaginal stenosis in the first year after brachytherapy, sexual pleasure is substantially reduced by vaginal stenosis and, that vaginal dilation may not serve to prevent sexual deficiencies and vaginal stenosis itself, but for this confirmation, further studies are necessary.[1,20]

Lack of sexual desire can act as a limiter.[18] This aspect was not evidenced in the results presented in this article, as the few reports covering this theme showed that health concern is the majority in women, even in the absence of sexual desire.

As for health education, the Canadian study [18] records that some women had difficulty remembering the guidelines given by professionals, which impaired the onset of dilation. The authors argue that the avalanche of emotions and thoughts makes it difficult for women to pay attention and understand when the intervention is explained.[18-]

In this study, considering the narratives related to not receiving information, the importance of health education for vaginal dilation after brachytherapy is emphasized so that, at the time of discharge, the woman has had time to resolve all possible doubts. Thus, professionals will have enough time to verify whether the patient fully understood the intervention to be carried out at home or whether she still needs additional health education.

Educational technologies such as simulators can be created to promote health education during treatment. Prior evaluation of the vaginal canal [21] is also essential, as it allows comparison of the vaginal condition and reduces the risk of study bias when evaluating occurrences of vaginal stenosis, in addition to allowing better gynecological evaluation after treatment.

Professional follow-up over time for individualized attention to women was revealed as a contributing factor to the performance of the intervention. In this perspective, it constitutes a positive meaning, but not described in the Canadian study.[18] Thus, it is observed that this type of care and the standardization of attention to women, with emphasis on the role of nurses and physical therapists, is essential for the care of women in pelvic brachytherapy.

Finally, the findings in Canada[18] reveal that despite the invasive nature and the non-preference for the use of the dilator by women, the association of the intervention with treatment and rehabilitation motivates the woman to use and adhesion, which is facilitated when the women established a routine use of the dilator. In relation to these contents, there is similarity with this research. Regarding the definition of a routine, this finding is perceived as an essential condition. This relevance was only really perceived by analyzing the inferences of the study that supported the discussion in this article,[18] because the women's

narratives did not emphasize this aspect, that is, they cited it, but in a discreet way. Considering its positive character, it is recommended to include it in the guidelines for women.

With regard to adherence to the use of vaginal dilator, the scientific literature points out varied percentages with decrease over time, as already described in the introduction of this article. In this study, good adherence was identified, although fragile, because the quantification of the data in the clinical characterization and correlated with the practice of dilation presented in the subcategories Vaginal dilation exercise and Difficulties in using the vaginal dilator shows this fragility.

The fragility is manifested in the resistance to start the use of the silicone penile prosthesis, maintaining the recommended frequency, regardless of the maintenance of sexual intercourse. The quality of penetration and dilation provided by the prosthesis is superior to the maintenance of sexual intercourse, which should or can be maintained, but cannot be seen as a preventive strategy for vaginal stenosis by women. This context becomes a challenge for professionals, requiring time, clinical evaluation, health education and an adequate psychological approach for the effective understanding of health, in the short and long term.

The sociodemographic characterization obtained in the search for medical records does not mean the use of the penile prosthesis in vaginal dilation after brachytherapy. However, it allows us to recognize that the approach of women should provide, as a priority, adults, in the reproductive range and maturity of sexual activity, with a low level of education and with partners.

The level of education of these women still contributes negatively to coping with treatment and its follow-up, because given the low level of education found in most of the participants, this condition can be linked to less access to health, information and low socioeconomic status that disadvantages quality of life.[22]

The incidence of cervical cancers (604,000 estimated cases/year) and endometrial cancers (417,000 estimated cases/year) deserve to be highlighted in this discussion,[23] because the high incidence, associated with advanced staging, portray the need for attention to women's health.[24] Thus, it is reinforced that the prevention of cervical cancer and the early detection of endometrial cancer need urgent attention from health systems and health information, and can be offered by various means of communication and education. As for the meaning investigated, the relation of the disease to an advanced staging is affirmed, which if treated early would not result in the meaning discussed here.

Scientifically, surgery, radiotherapy and chemotherapy show their effectiveness in controlling gynecological cancers; however, in addition to curing cancer, they leave marks and meanings difficult to cope with. Some women deal with sequelae with greater coping skills, but most face them with many difficulties, such as those revealed in the RU and CU presented and discussed in this article. Pelvic radiotherapy for gynecological cancer increases women's survival by five years, but has a negative impact on women's quality of life,[25] resulting in conflicting and challenging experiences and meanings.[26-27]

Among the side effects, vaginal stenosis stands out, found in one third of the participants in this study and in the long term there is a risk of increasing this percentage and the degrees of stenosis in each woman, as this side effect has late implications and is due to brachytherapy and the diversity of factors that interfere with the condition of the vaginal canal. This sum of factors implies the condition of the vagina and justifies complaints of pain, discomfort, bleeding, as well as emotional complaints.[28]

The incidence of vaginal stenosis resulting from radiotherapy ranges from 2.5% to 88% and its impact is multidimensional. If stenosis develops it may limit post-treatment and the pelvic exam becomes uncomfortable or painful. Psychologically, pain with physical examinations or sexual intercourse triggers distressing or even traumatic memories linked to cancer and treatments,[7] contributing to the construction of negative meanings during vaginal dilation.

It is pointed out as a limitation, the inclusion of women under follow-up in the physical therapy service. The inclusion of women without physical therapy follow-up could result in other meanings. Empirically, it is assumed that women without follow-up by nurses and physical therapists have lower adherence to the use of the prosthesis, and in the long term the meaning may reveal that non-use means total stenosis of the vaginal canal, sexual and psychological problems more serious than those found in this study.

However, considering that more than half of the women undergo follow-up after the end of brachytherapy with the oncologist in their regions of origin, this selection criterion was defined to ensure the inclusion of women from the state of Santa Catarina who return to CEPON, regardless of whether the follow-up with oncologist is carried out in the institution or in its reference municipality for oncology care.

Finally, describing the significance of the use of silicone penile prosthesis for vaginal dilation in the follow-up of brachytherapy can contribute to the implementation of effective strategies for the maintenance of exercise, according to the particularity of each woman and the effective prevention of vaginal stenosis. However, given the psychological resistance associated with the use of vaginal dilators,[6] it is important to include strategies that make women aware of the emotional and psychological barriers they will encounter in the follow-up of pelvic brachytherapy, and the possible solutions to face these barriers.[29-30]

Conclusion

The significance of the use of the silicone penile prosthesis after brachytherapy includes the exercise of vaginal dilation, the difficulties and motivations for the use of the vaginal dilator, and allows professionals to plan, in a preventive way, strategies to face emotional, psychological, physical and social barriers to adherence to its use, which favors acceptance and minimizes constraints.

The individualized professional approach, during and after treatment, is essential, such as helping to establish a routine for dilation. The findings of this study compared with others that adopt cylindrical dilators

do not differ with regard to the embarrassment of women to use the device.

The theoretical support adopted endorsed the results, which expanded the scientific contributions to care for women in pelvic brachytherapy. Further studies are needed to identify the meanings in the different periods of cancer survival after pelvic brachytherapy, including women outside the physical therapy follow-up in the use of vaginal dilators.

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Financing/ Acknowledgements: To the Institutional Program for Scientific and Technological Initiation – PIICT scholarship, PIBIC/CNPq - PIBIC-Af/CNPq - BIPI/UFSC 2020/2021, Propesq Notice 01/2020, for the granting of a scientific initiation scholarship.

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Scientific Editor Head: Cristiane Cardoso de Paula

Associate Editor: Graciela Dutra Sehnem

How to cite this article

Rosa LM, Hames ME, Dias M, Souza AIJ, Santos MJ, Martinovski JS. Meaning of the use of silicone penile prosthesis in the follow-up of pelvic brachytherapy. Rev. Enferm. UFSM. 2023 [Access at: Year Month Day]; vol.13, e6:1-19. DOI: https://doi.org/10.5902/2179769271453