

Analysis of the Application Effect of Targeted Nursing Mode in Intracavitary Brachytherapy for Cervical Cancer Patients

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Abstract: Objective: To analyze the application effect of targeted nursing mode in intracavitary brachytherapy for cervical cancer patients. **Methods:** A total of 70 cervical cancer patients admitted to our hospital from October 2022 to October 2023 were selected for the study and divided into two groups. All patients received intracavitary brachytherapy, with the control group receiving routine nursing care and the observation group receiving targeted nursing care. The application situations were compared between the two groups. **Results:** The duration of intracavitary brachytherapy in the observation group was significantly shorter than that in the control group; the overall satisfaction rate of the control group was significantly lower than that of the observation group ($P < 0.05$). **Conclusion:** The application of targeted nursing can effectively reduce the duration of intracavitary brachytherapy for patients, and also plays a key role in improving the overall satisfaction of patients, which is beneficial to improve patient prognosis.

Keywords: Targeted nursing; Cervical cancer; Intracavitary brachytherapy

Cervical cancer is a malignant tumor that often presents symptoms such as constipation, urinary urgency, and vaginal bleeding, which can have an impact on the physical and mental health of patients. In recent years, intracavitary brachytherapy has become an important treatment modality for cervical cancer. This treatment modality can alleviate patient suffering and delay disease progression. It mainly involves the use of remote-controlled afterloading therapy machines to insert and retrieve radioactive sources through catheters. This helps alleviate pain and bleeding, shrink tumors, and increase patient survival rates by effectively inhibiting tumor growth and spread. However, during radiation

therapy, patients often experience adverse reactions such as cystitis and radiation enteritis, which can affect their daily lives. Although radiation therapy can effectively eliminate lesions, it can also lead to various complications, necessitating timely nursing interventions to reduce their occurrence. Targeted nursing interventions can address patient psychological needs, intervene based on communication with patients, and understand their practical needs, thereby providing them with more scientifically efficient services and ultimately improving their overall satisfaction. How to adopt nursing interventions to alleviate adverse reactions experienced by patients during radiotherapy has become an increasingly important focus of



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clinical attention. This study focuses on analyzing the application effectiveness of targeted nursing mode, particularly exploring its application value and significance in intracavitary brachytherapy for cervical cancer patients.

1. Materials and Methods

1.1 General Information

Seventy cases of cervical cancer patients admitted to our hospital from October 2022 to October 2023 were selected for this study and divided into two groups, with 35 cases in each group. Inclusion criteria: (1) All

patients met the relevant diagnostic criteria; (2) Patients demonstrated good compliance and tolerance; (3) No contraindications were present; (4) Informed consent forms were signed. Exclusion criteria: (1) Patients with cognitive, mental, and communication disorders; (2) Patients with severe organ dysfunction; (3) Patients with other major diseases; (4) Patients who withdrew from the study midway. There was no statistically significant difference in the general information of the patients between the two groups ($P > 0.05$), as shown in **Table 1**.

Table 1. Comparison of general information of patients in two groups [$n, \bar{x} + s$]

Group	Cases	Age	Mean Age	Course
Control	35	26~60	(37.58±3.22)	1~15 months
Study	35	27~61	(37.84±3.01)	1~14 months

1.2 Methods

1.2.1 Control Group

The control group received routine nursing care. Patients' vital signs were observed, and they received health education and psychological guidance to help them understand the disease, maintain a positive attitude, improve cooperation with clinical work, and ensure treatment and nursing effects.

1.2.2 Study Group

The study group received targeted nursing care as follows: (1).Psychological Nursing: Observing changes in patients' psychological states, individualized psychological nursing plans were formulated. If patients exhibited fear of radiotherapy, proactive communication, verbal encouragement, and support were provided, along with explanations of the principles of equipment operation and treatment effects to alleviate negative emotions effectively, boost confidence, and enhance cooperation and adherence to radiotherapy.(2).Dietary Nursing:Patients with cervical cancer undergoing radiotherapy often experience decreased appetite, nausea, and vomiting. Therefore, individualized dietary interventions were actively implemented based on patients' dietary preferences and actual conditions. Adjustments were made to dietary plans and schedules, and methods such as increasing vegetable intake were employed to stimulate appetite. Additionally, the importance of a balanced diet in reducing disease progression and the significance of

dietary therapy were explained to encourage patients' active participation in various activities.(3).Skin Care:Patients undergoing radiotherapy are prone to skin damage. Therefore, patients were advised not to scratch the affected skin area and were instructed on proper skin hygiene. Effective measures and solutions to prevent skin damage were formulated in collaboration with physicians.(4).Ward Nursing: Responsible nurses patiently received patients, informed them about proper hydration, encouraged increased urination to reduce the risk of urinary tract infections, cleaned the external genitalia daily, and advised wearing loose-fitting clothing (5).Complication Nursing: During treatment, patients often experience a high incidence of radiation proctitis. Nursing staff advised patients to consume more noodles, rice porridge, and other bland and easily digestible foods. Emphasis was placed on nutritional supplementation with vitamins and high-protein foods to ensure a balanced diet. Patients were monitored for bladder irritation symptoms such as dysuria and urgency, and vaginal irrigation was performed daily to reduce the incidence of radiation vaginitis. If necessary, anti-inflammatory analgesics were administered, and for vulvar inflammation, ice packs containing starch were applied externally to relieve itching and inflammation. Responsible nurses also assisted patients with skin cleansing. If symptoms such as epidermal peeling and erythema occurred during treatment, calamine lotion was applied, and if skin ulcers were present, moist burn cream was applied

externally .(6).Precautionary Measures:Patients were informed to empty their bladder and bowels 30 minutes before treatment and maintain the correct position. Deep breathing during treatment helped relax the perineum and abdomen, facilitating smooth operation. During treatment, technical staff observed patients for any discomfort for timely intervention. After treatment, patients were advised to rest adequately, increase nutrient intake, drink plenty of water, promote urination, avoid consuming highly irritating foods, and reduce irritation to the rectum and bladder caused by radiation. They were advised not to apply irritating substances such as alcohol to the external genitalia, avoid using highly alkaline soaps for local cleansing, maintain cleanliness in the perineal area to reduce infection risk, and use antibiotics rationally if necessary.

1.3 Observational Indicators

Monitoring the intracavitary brachytherapy duration in both groups. Recording the satisfaction levels of patients, categorized as follows:Very satisfied (90 points or above),Basically satisfied (60-90 points),Dissatisfied (below 60 points).

1.4 Statistical Analysis

The data for this study were entered and analyzed using SPSS 18.0 statistical software.

2. Results

2.1 Comparison of Intracavitary Brachytherapy Duration between the Two Groups

The duration of intracavitary brachytherapy in the observation group was significantly lower compared to the control group ($P < 0.05$). See **Table 2**

Table 2: Comparison of Intracavitary Brachytherapy Duration between the Two Groups [$n, \bar{x} \pm s$]

Group	Number of Cases	Intracavitary Brachytherapy Duration (days)
Control	35	22.71±5.30
Observation	35	19.62±3.62
<i>t</i>		2.848
<i>P</i>		0.005

2.2 Comparison of Nursing Satisfaction between the Two Groups

The overall satisfaction rate in the control group was

significantly lower than that in the observation group ($P < 0.05$). Refer to **Table 3** for details.

Table 3: Comparison of Satisfaction Rates between the Two Groups [$n(\%)$]

Group	Number of Cases	Very Satisfied	Basically Satisfied	Unsatisfied	Satisfaction Rate
Control	35	12	14	9	74.29
Observation	35	21	13	1	97.14
χ^2					7.466
<i>P</i>					0.006

3. Discussion

Cervical cancer is a gynecological malignancy commonly found in individuals aged 40 to 60 years, with a recent trend towards a younger age at diagnosis. In its early stages, cervical cancer may present with no significant symptoms, but as the disease progresses, symptoms such as pelvic pain and vaginal bleeding may appear. The deterioration of the condition may lead to symptoms such as leg pain and urinary urgency, and in severe cases, complications such as hydronephrosis, uremia, and ureteral obstruction may occur. This disease poses a threat to the health

of women and requires early screening and treatment to reduce mortality rates. In recent years, with the advancement of medical technology, cancer treatment modalities have become increasingly diversified, with radiation therapy being the most common. In particular, intracavitary irradiation combined with external beam radiation therapy has been widely used. However, radiation exposure can cause damage to the organs of the patient's body, leading to a series of adverse reactions such as radiation cystitis and radiation vaginitis. Improper nursing care or other factors can lead to radiation therapy complications in

some patients, increasing their suffering and treatment costs, affecting their quality of life, and even disrupting the orderly progress of radiotherapy work. Traditional nursing care lacks specificity and systematicity, and although it can achieve certain results, the overall effectiveness is not significant. It fails to meet the practical needs of patients to a great extent, and various problems may arise after nursing care, limiting its application in clinical practice.

In clinical practice, intracavitary brachytherapy is an important treatment modality for patients with advanced cervical cancer, effectively eradicating lesions. However, due to the relatively long duration of radiation therapy for patients, the radiation exposure they receive also increases, making them susceptible to various radiation-related complications, which can affect subsequent treatment and disease recovery. Some patients may even exhibit psychological resistance and non-compliance during treatment. To address this issue at its root, it is necessary to actively implement targeted nursing interventions to minimize the incidence of patient complications. Targeted nursing services cover various aspects, including skin care, diet, psychology, and complications, which can improve the quality and overall effectiveness of nursing care. In this way, through close cooperation between patients and healthcare providers, the incidence of medical disputes can be reduced while improving treatment outcomes and nursing satisfaction. Additionally, nursing staff need to inform patients of relevant precautions, adverse reaction management methods, and timely identify and address problems to alleviate patient suffering.

The advantage of targeted nursing lies in its ability to formulate nursing plans based on the patient's actual situation, meet individualized patient needs, and improve nursing effectiveness. Actively communicating with patients and understanding their inner feelings during nursing care can provide them with higher quality nursing services, achieving ideal results. Furthermore, formulating nursing plans based on the specific condition of the patient is conducive to shortening the patient's recovery time and reducing the incidence of complications. Finally, this nursing model requires relatively high levels of nursing skills and professional qualities. By providing comprehensive, professional, and meticulous nursing care services to patients, nursing quality and efficiency can be further

improved. This nursing model can compensate for the deficiencies of traditional nursing methods and play a crucial role in patient disease recovery and satisfaction.

In conclusion, compared with routine nursing care, targeted nursing interventions play an important role in shortening the duration of patient disease treatment and improving patient satisfaction, demonstrating high application value and significance.

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