

The Impact of Risk-Based Cancer Care Planning on the Complications and Self-Care Ability of Cervical Cancer Patients Undergoing Radiotherapy

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Abstract: *Objective:* To explore the impact of the application and implementation of risk-based cancer care planning in patients with cervical cancer radiotherapy on the complications and self-care ability of patients. *Method:* This study recruited selected patients who came for cervical cancer radiotherapy in a tertiary hospital in Xianyang City, Shaanxi Province from November 2020 to November 2021. One hundred patients were recruited. Nursing management was carried out, and cancer care planning under the concept of conventional care and risk were applied. The effects of different nursing methods on patients were compared and analyzed. *Results:* The patients in the experimental group had higher scores of self-care ability and lower complication rate. All data were significantly different from those of the control group ($P < 0.05$), and the nursing effect on the experimental group was better. *Conclusion:* The application and implementation of the risk-based cancer care planning in patients who received cervical cancer radiotherapy has significant clinical effects, which is beneficial to reduce the incidence of patients' adverse reactions and promote patient recovery.

Keywords: Risk concept; Cancer care planning; Patients on cervical cancer radiotherapy; Complication rate; Self-care ability

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1. Introduction

Clinically, cervical cancer has a high incidence, posing a serious threat to the health of female patients. Clinical treatments are usually in the form of surgery, radiotherapy or a combination of the two. This treatment approach can easily lead to various adverse reactions in patients, resulting in poor patient tolerance. In this process, giving patients a risk-based cancer care planning is conducive to promoting patient recovery, improving patient comfort, and reducing the incidence of adverse reactions^[1]. In this study, we investigated the impact of risk-based cancer care planning on the patients who received cervical cancer radiotherapy in a tertiary hospital in Xianyang City, Shaanxi Province. The analysis is as follows.

2. Patient data and research methods

2.1. General data analysis

A study was carried out in a tertiary hospital in Xianyang City, Shaanxi Province. We recruited and selected 100 patients from November 2020 to November 2021. All patients were diagnosed with cervical cancer. The patients received radiation therapy. Nursing care was carried out on this basis. The patients were divided into two groups, namely experimental group and the control group, based on the nursing measures

given. There are 50 cases in each group. In the experimental group, the maximum and minimum ages of patients were 77 years and 43 years, respectively, and the mean age of the patients is 56.44 ± 3.29 years. In the control group, the maximum age of patients was 78 years, the minimum age was 44 years, and the average age was 56.99 ± 3.20 years. The general data of the two groups of patients in this study were compared and analyzed using statistical means, and the results showed $P > 0.05$.

2.2. Research methods

The nursing method adopted on the patients in the control group was routine intervention, mainly involving the observation of the patient's condition, lectures on health education to the patients, and patient's compliance.

The nursing method adopted on the patients in the experimental group was risk-based cancer care planning. In the specific implementation process, the establishment of a risk assessment team was promoted. The team members include deputy chief nurses, rehabilitation physiotherapists, psychological counselors and supervisor nurses, etc., who carried out training on cervical cancer knowledge among the staff, and promoted special training in risk assessment to improve patients' awareness of cervical cancer. Subsequently, a brainstorming meeting was held in the group to analyze the complications that often occur in patients with cervical cancer and provide effective prevention. Second, carry out risk identification and assessment of patients. The group conducted data search, and combined the patient's own situation to clarify the psychological problems and complications that may occur during patient's radiotherapy. These complications might include radiation cystitis, local infection, bone marrow transplantation complication and radiation proctitis. The establishment of risk assessment matrix was carried out, its severity and the degree of risk were analyzed, and a summary analysis of related factors was made. Subsequently, the key content of improvement was clarified, and the possible complications of patients were sorted according to the magnitude of the risk value, from high to low, and the riskiest complications were the focus of improvement, and health education was given to patients to realize risk prevention and control. Finally, we implemented a cancer care planning based on risk prevention and control, carried out information dissemination and consultation, distributed education leaflets to patients, and carried out appropriate health education among patients based on the specific cultural background and family education of the patients. We explained the methods, clinical effects, etc., to improve the patient's understanding and ensure that the patients has a clearer understanding of the disease. Second, we gave patients psychological intervention, gave mindfulness training guidance during their hospitalization, played mindfulness audio such as paying attention to breathing for the patient, and performed demonstrations for the patients. Each patient was intervened 2–3 times a day, 10–15 min each time and required to write a gratitude diary so as to improve the patient's psychological mood. To prevent complications, (i) disinfection and isolation system as well as aseptic techniques were used; (ii) vaginal washing was done; and (iii) skin care was carried out to strengthen the hygiene of the patient's anus and perineum and reduce the occurrence of radiation proctitis and radiation cystitis. According to the actual physical signs of the patient, nutritional intervention was administered and the food enriched with vitamins was opted for most circumstances; protein and calories were supplemented to promote the recovery of the patient.

2.3. Observation indicators

The incidence of complications of the two groups of patients was observed and compared, including radiation proctitis, local infection, radiation cystitis, bone marrow suppression and vaginitis.

Self-care ability was used to compare the self-care ability of the two groups of patients, mainly including health knowledge level, self-concept, self-care skills, self-responsibility, etc. The higher the score, the better the patient's self-care ability.

2.4. Statistical methods

SPSS20.0 software was used to perform statistical analysis of data. Measurement data are expressed as mean±standard deviation, and analyzed using *t* test. Count data are expressed as frequency, and analyzed using Chi-square test. $P<0.05$ indicates that the difference is statistically significant.

3. Results

3.1. Complication rate

The complication rates of the two groups of patients were 18.00% and 50.00%, respectively. The gap between data was significant ($P<0.05$). The incidence of complications in patients of the experimental group was lower. See **Table 1** for details.

Table 1. Comparison of the incidence of complications between the two groups of patients

Group	Radiation proctitis	Local infection	Radiation cystitis	Bone marrow suppression	Vaginitis	Incidence
Experimental group (n=50)	1 (2.00)	2 (4.00)	2 (4.00)	1 (2.00)	3 (6.00)	9 (18.00)
Control group (n=50)	4 (8.00)	5 (10.00)	5 (10.00)	4 (8.00)	7 (14.00)	25 (50.00)
t						8.694
P						<0.05

Data expressed as n (%).

3.2. Self-care ability

The scores of the self-care ability of the experimental group were significantly higher than those of the control group, and were significantly different from the control group ($P<0.05$). See **Table 2** for details.

Table 2. Comparison of self-care ability of two groups of patients after nursing

Group	Sense of health knowledge	Self-concept	Self-care skills	Self-responsibility
Experimental group (n=50)	48.34±4.11	27.54±4.21	26.43±5.00	29.54±5.87
Control group (n=50)	44.02±3.54	24.03±3.22	20.03±4.11	20.93±3.00
t	5.403	6.002	5.982	6.184
P	<0.05	<0.05	<0.05	<0.05

Data expressed as mean±standard deviation.

4. Discussion

Cervical cancer is a malignant tumor with a high incidence rate. According to the results of relevant research data, the incidence of cervical cancer has shown a gradual increase trend in recent years. The clinical cause of the patient's disease is not yet clear, and it is believed to be related to factors such as a history of smoking, long-term immunity, and premature age of sexual intercourse [2]. Judging from the current clinical development, the treatment of diseases mainly uses radiotherapy and surgical methods. However, in the process of treatment, the patients are susceptible to depression and anxiety, which have a greater impact on

the health of patients, and certain nursing methods are needed to promote clinical effects ^[3].

The risk-based cancer care planning is a new type of care model that can judge the potential risks of patients based on the patient's disease pattern and clinical characteristics, so as to give targeted improvement opinions. It can improve the nursing effect and reduce the incidence of risk events ^[4]. In the specific implementation process, this nursing method requires the formation of a nursing team, improved training of team members, and brainstorming to analyze and clarify the common problems of cervical cancer patients during chemotherapy, grasp the reasons for their occurrence, and formulate targeted preventive measures. The nursing strategy was strictly implemented and it had a positive significance in improving the clinical nursing effect and reducing the complications of patients. At the same time, this nursing method promotes the implementation of health education among patients to improve their awareness and enhance their self-care ability ^[5].

In summary, the application of risk-based cancer care planning to patients on cervical cancer radiotherapy has significant clinical effects, which is beneficial to reduce the incidence of patients' adverse reactions and improve the self-care ability of patients. It is worthy of clinical promotion.

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Pan S, 2019, The Effect of Continuous Nursing on the Complications and Self-Care Ability of Hemodialysis Patients [J]. *Digest of World Latest Medical Information*, 2019(25): 2.
- [2] Li L, 2020, The Influence of PICC Standard Nursing on Self-Care Ability and Nursing Quality of Intubated Patients [J]. *Guangming Traditional Chinese Medicine*, 2020(5): 3.
- [3] Cai X, 2019, Discuss the Impact of Self-Care Health Education on the Rehabilitation Process and Quality of Life of Patients with Cervical Cancer after Surgery [J]. *Diet Health*, 2009(50): 43–44.
- [4] Guo B, 2019, The effect of Cognitive Intervention Based on the Concept of KAP on the Self-Care Ability and Poor Mental State of Elderly Patients with Cervical Cancer Radiotherapy [J]. *Journal of Shandong Medical College*, 41(6): 2.
- [5] Su J, Li Y, 2021, The Impact of Risk-Based Tumor Care Planning on the Quality of Life and Hope Level of Patients with Nasopharyngeal Carcinoma Radiotherapy [J]. *Clinical Medical Research and Practice*, 6(5): 3.

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