Evidence-Based Nursing Practice of Reducing Immune-Related Skin Toxicity of Tumor Patients Guided by Sensitive Indicators

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Abstract

Purpose research on nursing sensitive indicators in tumor Patients application effect in immune-related skin toxicity management. Method select our hospital April to June, 202360 cases patients with immune therapy settings as the control group. August-October, 2023 60 cases the patients treated with immune therapy were the experimental group. The control group adopted regular nursing methods, while the experimental group sensitive Indicators, evidence-based give preventive care. The social situation, psychological state, physical function, quality of life score, incidence of skin toxicity caused by immune checkpoint inhibitors, moderate and above of the two groups of patients were compared. Incidence of skin toxicity. Result: experience group SAS score, SDS score higher than the control group, the difference was statistically significant (P < 0.05); The incidence of skin toxic reactions caused by immune checkpoint inhibitors and the incidence of moderate and above skin toxic reactions in the experimental group are lower than those in the control group, and the difference is statistically significant (P < 0.05). Conclusion: sensitive indicator guidance evidence-based preventive care can reduce the degree of immune-related skin toxicity, improve the psychological state and quality of life of tumor patients treated with immune therapy and reduce the incidence of adverse reactions, improve nursing quality and patient satisfaction.

Keywords

Sensitive Indicators, Immune-Related Skin Toxicity, Evidence-Based Practice, Tumor

1. Introduction

Nursing sensitive index is a quantitative index that can be measured, and is also

an important link and measurement method of nursing management. [1], can directly reflect the quality of nursing. Scientific and effective sensitive indicators can greatly improve the work efficiency and nursing quality of nurses [2]. Tumor therapy following traditional surgery, radiotherapy, chemotherapy and targeted therapy, new immune therapy represented by immune checkpoint inhibitors has changed the pattern of tumor therapy. At the same time of treatment, immune checkpoint inhibitors also induce "autoimmune-like" toxicity, namely immune-related toxic and side effects. [3], OK involving multiple organs of the whole body, it is usually long-term, chronic, and even has unpredictable fatal toxicity and other characteristics. Its immune skin toxicity reaction is the most common adverse event during the treatment of immune checkpoint inhibitors, with an incidence rate of 30% - 50% [4]. Immune skin toxicity affects the quality of life of patients to some extent. The purpose of this study is to guide sensitive indicators to explore reducing immune skin toxicity evidence-based nursing methods, reduce immune-related skin toxicity degree.

2. Objects and Methods

2.1. General Information

Selection oncology department of our hospital120 patients underwent immune drug therapy from March to October 2023. Inclusion criteria: 1) the patient does not have any contraindication of immune therapy; 2) the patient is receiving immune therapy for the first time and has not received any other nursing intervention before this study; 3) the expected survival time of the patient is more than 6 months; 4) the patient voluntarily agrees to participate in this study. Exclusion criteria: 1) patients complicated with liver, kidney, heart and other important organ failure; 2) patients who do not cooperate with treatment halfway. 3) patients with immune combined targeting and radiotherapy. From April to June, 2023 60 cases of patients with immune therapy settings as the control group. There were 28 males and 32 females, aged 20 - 67 (53.64 ± 6.00) years; The course of the disease was 1.5 - 5.0 (3.57 ± 1.00) years; Tumor types: 16 cases of liver cancer, 31 cases of lung cancer, 6 cases of cervical cancer and 7 cases of colorectal cancer. August-October, 2023 60 cases of the patients treated with immune therapy were in the experimental group. In the control group, there were 31 males and 29 females, aged 25 - 70 (54.00 ± 6.01) years. The course of disease was 1.0 - 6.0 (3.66 ± 0.92) years. Tumor types: 15 cases of liver cancer, 29 cases of lung cancer, 7 cases of cervical cancer and 6 cases of colorectal cancer. There was no significant difference in gender, age, course of disease and tumor type between the two groups (P < 0.05). This study was approved by the hospital medical ethics committee.

2.2. Methods

● Control Group

Using regular care, includes popularizing immune therapy-related knowledge

to patients, relieving their negative emotions by immune skin toxicity symptoms and self-management, guiding patients to eat and exercise reasonably, encouraging family members to give more understanding and companionship, and continuing nursing for 8 weeks.

● Experimental Group

1) establishment of a sensitive indicator monitoring team. The group consists of 6 people including head nurse, quality control nurse, teaching team leader, responsible nurse, etc. The titles include deputy director nurse, Supervisor nurse, nurse, etc. The work of the monitoring team duty including the control of nursing quality in this ward and the standardization of the nursing process, health education for patients undergoing immune therapy, and management training for immune skin toxicity reactions, master the method of index Collection.

2) refine 4 monitor indicators. Team members consult 36 articles of expert consensus in literature retrieval, analyze the causes of skin toxic reactions caused by immune checkpoint inhibitors, determine the causes, and refine them one level 1 indicator is the number of cases of immune skin toxicity reactions of hospitalized patients with Grade 2 and above in statistical cycle in number of cases of immune skin toxicity in hospitalized patients in statistical cycle proportion × 100% refine4 level 2 indicators, and develop a check table. Level 2 indicator: improve the knowledge related to skin toxicity of medical staff; improve the implementation of intervention measures to prevent skin toxic reactions of patients; improve the cognition of skin toxic reactions of patients; improve the implementation rate of quality inspection.

3) indicator collection: make a self-made check table according to the index elements. Level 1 indicator monitoring, Foreman nurse daily statistics immunity total number of people treated, responsible nurse records immunity skin reaction patient number of cases at the same time the Comprehensive Evaluation Scale of immune therapy toxicity management guidelines was used to collect the number of people of different reaction types., monthly statistical analysis of quality control nurses incidence of skin toxic reactions caused by immune checkpoint inhibitors. The monitoring of the second and third levels of indicators is completed by the sensitive indicator team, and 5 patients are examined every week, monthly Statistical Analysis of sensitive indicators skin toxicity caused by immune checkpoint inhibitors implementation of intervention measures.

4) dynamic monitoring and intervention of indicators

a) Manage high-risk patients according to receipt indicators: responsible nurse before treatment comprehensive Evaluation Scale using immune therapy toxicity management guidelines evaluate patients, screen out high-risk groups and drugs, and implement graded nursing. Score (0 - 5 points) intervention of low-risk patients once a week; Intervention of risk patients twice a week in score (6 - 10 points); Score (>10 points) daily intervention for high-risk patients. Patients with immune skin toxic reactions, supervision and evaluation links, medical care combined physical examination and evaluation. For patients with large area

rash, burn area 9 method is adopted for measurement and calculation; For patients with small area rash, Palm estimation method is adopted for measurement and calculation and recording. Responsible nurses passed skin symptom pair patients the impact of quality of life and the degree of rash control are classified [4].

b): Implementation phase interventions itch patients with symptoms of grade 1 - 2 use percussion plus finger abdomen massage method, choose clothes and shoes without chemical synthetic materials; Use moisturizer to moisten skin and reduce skin dryness, etc.; Integrate appropriate nursing technology of traditional Chinese medicine [5], for level 2 - 3 patient team members joint Medicine discipline, professor Po Bingkui was used to treat pruritus patients with rash. [6], the composition of Jiedu Xiaoxiao recipe is: white peony root, honeysuckle, skin skin and cicada are made into powder and applied to patients three times a day after it is mixed. For patients with facial rashes, use honeysuckle external application of boiled water three times a day [7], ease the patient's rash symptoms. Ok severe skin changes with pain patients, do a good job in pain management, 5% lidocaine patch to relieve pain [8], passed after 2 weeks of treatment skin symptom pair patient the impact of quality of life and the degree of rash control are classified re-evaluate.

2.3. Statistical Processing

Statistical analysis of data is completed by SPSS 20 .0, measurement data is expressed by mean ± standard deviation, t-test statistical analysis; Statistical analysis of counting data chi-square test. The test level was $a = 0.05$.

3. Results

Comparison of the Incidence of Moderate or above Skin Toxic Reactions between the Two Groups

The incidence rate of grade 2 skin toxic reaction caused by immune checkpoint inhibitor in the control group is 11%, that of grade 2 skin toxic reaction caused by immune checkpoint inhibitor in the experimental group is 3.8%; The incidence rate of grade 3 skin toxic reaction caused by immune checkpoint inhibitor in the control group is 1.32%, and that of grade 3 skin toxic reaction caused by immune checkpoint inhibitor in the experimental group is 0.33%; The incidence rate of the experimental group is significantly lower than that of the control. (Table 1, Table 2)

Table 1. Comparison of SAS score and SDS score between the two groups.

Group	Number of cases	SAS score		SDS score	
		Before nursing	After nursing	Before nursing	After nursing
Observation Group	60	60.77±7.85	64.63 ± 6.32	56.37 ± 7.67	62.27 ± 5.85
Control Group	60	71.33 ± 4.94	76.10 ± 7.32	70.10 ± 4.43	75.60 ± 6.58
T value		−6.730	−6.500	−8.491	−8.289
P value		1.662e-09	2.036e-08	9.243e-12	2.011e-11

Table 2. Two groups patient's social situation, mental state, body function, quality of life score comparison.

Group	Number of cases	Social networking		Mentality		Somatic function		Quality of Life	
		Before nursing	After nursing	Before nursing	After nursing	Before nursing	After nursing	Before nursing	After nursing
Observation Group	60	59.27 ± 5.84	61.67 ± 6.22	56.23 ± 7.29	62.63 ± 6.38	56.57 ± 6.79	62.37 ± 6.23	59.63 ± 6.30	61.73 ± 6.52
Control Group	60	71.63 ± 4.49	75.80 ± 8.40	71.83 ± 4.98	76.43 ± 6.91	72.67 ± 5.20	76.93 ± 7.26	71.23 ± 4.78	74.70 ± 7.06
T value		−9.192	−7.410	−9.684	−8.035	−10.314	−8.312	−8.033	−7.390
P value		6.411e-13	6.01 e-10	1.005e-13	5.352e-11	9.758e-15	1.641e-11	5.4 e-11	6.469e-10

4. Discussion

4.1. Adopt Nursing Sensitive Indicators Monitor OK Timely Dynamic Monitoring Occurrence of Skin Toxic Reactions Caused by Epidemic Checkpoint Inhibitors Take Timely Intervention Measures

On the basis of regular nursing, the nursing team formulated a standardized nursing process and system for the use of immune checkpoint inhibitors by referring to clinical data and consulting relevant documents, and selected scientific sensitive indicators for evaluation. The results showed that the incidence of skin toxic reactions caused by immune checkpoint inhibitors decreased. Sensitive indicators in this study include process indicators to describe the quantitative results of sensitive indicators, find and solve problems in time.

4.2. Adopting Evidence-Based Guidance of Nursing Sensitive Indicators Can Standardize Nursing Behavior, Evaluate Nursing Measures, Adjust Nursing Plans, and Effectively Reduce the Degree of Skin Toxicity Reaction

The establishment of sensitive index system can prevent or reduce the occurrence of skin toxic reaction degree in advance, and nurses can find out the nursing problems existing in patients in time, propose specific and targeted solutions and nursing measures, establish standardized nursing process, improve the current situation of patients, and finally evaluate the nursing quality in a measurable and quantifiable way. Therefore, the use of nursing sensitive indicators can reduce the occurrence of skin toxic reactions and promote recovery.

5. Summary

In the new era of immune therapy, the degree of skin damage caused by side effects of immune drugs seriously affects the quality of life of patients, which should arouse the height of nursing staff. Pay attention to the application of nursing sensitive indicators in our hospital in order to guide, accurately carry out data receipts, timely find out the existing nursing problems, carry out stage analysis, and carry out the implementation of nursing measures for the standard guidelines, evidence-based preventive nursing valid reduce the degree of immune-related skin toxicity, goose OK psychological state and quality of life of

tumor patients treated with immune therapy to reduce the incidence of adverse reactions, goose OK nursing quality and patient satisfaction.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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