Study on the Effect of Comprehensive Nursing Intervention on Bone Marrow Suppression after Gynecologic Oncology Chemotherapy

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***Abstract*—*Objective:*To explore the effect of comprehensive nursing intervention on bone marrow suppression after gynecologic oncology chemotherapy, in order to promote the healthy recovery of patients. *Methods:* A total of 50 patients were enrolled in this study. Comprehensive nursing interventions were conducted with psychological counseling, medication guidance, diet care, skin treatment, oral cleansing and complication. Then, the anxiety (SAS)) and depression(SDS) self-rating depression scale to assess the psychological state of the patients before and after the intervention, and make statistics of clinical effects and complications. *Results:* The SAS and SDS scores of the 50 patients were significantly lower than those before intervention (P <0.05). The total effective rate was 96.00%. Only 3 patients had infection symptoms after treatment, accounting for 6.00 %; but no abnormality in liver and kidney function tests. *Conclusions:* For bone marrow suppression after gynecologic oncology chemotherapy and other phenomena, the patients should be given to emotional, life-based comprehensive nursing intervention in priority, thereby reducing the risk of treatment and improve clinical outcomes.**

***Keywords*—gynecologic oncology; chemotherapy; marrow suppression; SAS; SDS**

I. INTRODUCTION

The most common gynecologic oncology includes endometrial cancer and ovarian cancer, and chemotherapy is the dominant treatment method, but it is reportedly that there is relatively great possibility of bone marrow suppression after chemotherapy, ranging from infection which will be interfering with chemotherapy to risk of death [1][2]. To this end, 50 patients were studied in this paper to explore the effect of comprehensive nursing intervention on bone marrow suppression after gynecologic oncology chemotherapy, to promote the healthy recovery of patients.

II. INFORMATION AND METHODS

A.General information

A total of 50 patients with bone marrow suppression who underwent tumor chemotherapy in the hospital from August 2014 to August 2016 were enrolled in this study. The age was between 25 and 75 years with the mean age of (48.5 ± 3.8) years old. Disease type: 5 cases of endometrial carcinoma, 6 cases of cell nourishing tumor, 18 cases of cervical cancer, 21 cases of ovarian cancer; bone marrow suppression degree (WHO classification): Degree III of 15 cases, Degree IV of 35 cases.

B.Methods

For 50 cases of patients who have been through bone marrow suppression after gynecological oncology chemotherapy were taken comprehensive nursing intervention, and the specific content and steps are as follows:

(1) Psychological counseling: anxiety (SAS) and depression (SDS) were used to self-rating scale to assess the psychological state of patients before the intervention, psychological counseling was taken according to the evaluation results, such as turning the patients' attention in the way of listening to music and reading, at the same time posting warm and optimistic pictures in the sick room to encourage patients' family members to have spiritual dialogue with patients, giving spiritual help and support; when communicating with patients, matched with health education, to help patients out of cognitive errors, establishing a positive outlook on life to enhance treatment compliance [3]. (2) Medication guidance: according to different blood, have subcutaneous injection of recombinant human granulocyte colony stimulating factor (G-CSF), 1 / d, if the patient's peripheral white blood cells> 4.0 * 109 / L, immediately withdraw; for the infected ones, apply antibiotic for symptomatic treatment [4]. (3) Diet care: each patient was matched with the diet consistent with its own characteristics, choose high vitamin, high calorie, digestible liquid or semi-liquid non-irritating food to reduce nausea, vomiting symptoms. (4) Skin treatment: skin and mucous membrane infection is caused by the rapid reduction of granulocyte content; disinfection of all items closely contact the patient skin can effectively control the infection; In addition, for the prevention of infection, all stuff that contact closely the patients were disinfected; after cleaning the skin with warm water, talcum powder was used to smear skin folds, and soft, loose underwear was worn. (5) Oral cleaning:

before and after meals the teeth brushing or mouthwash must be done in order to avoid food residue caused by oral erosion, or cause oral ulcers and other symptoms. In the event of oral ulcers, immediately use 500mL saline + 5ml lidocaine (2%) + 10mg dexamethasone +161 million u gentamicin for mouthwash, use cotton swab to clean the teeth to prevent damage to the oral mucosa. (6) complications prevention: use soft teethbrush to prevent bleeding; by observing the skin and mucous membrane ecchymosis and stool color to identify signs of bleeding; through physical cooling treatment to handle high fever symptoms [5].

C. Efficacy evaluation criterion

SAS and SDS scores were used to evaluate the psychological status after intervention and compared with the status before intervention. Full score is 100 points. The higher the score, the worse the psychological status, if > 52 points, the psychological status is poor, and there is anxiety and depression; Collect complications; evaluate clinical effects with recovery, improvement and invalid. Effectual: peripheral white blood cell content was> 4.0 * 109 / L; improved: the peripheral white blood cell content was on the rise, but still <4.0 * 109 / L; invalid: no Variety.

D.Statistical method

Clinical data are expressed in%, and the data are expressed as SPSS19.0 software. The significant test method was $\chi 2$ and t test, P <0.05, indicating that the difference between the groups was statistically significant.

III. Results

The SAS and SDS scores of 50 patients were significantly lower than those before intervention, the difference was statistically significant (P <0.05). Among them, 48 cases of bone marrow hematopoietic function was basically restored, of which 20 cases (40.00%) were cured, 28 cases improved (56.00%), 2 cases (4.00%) were not efficacy, the total effective rate was 96.00%; only 3 patients after intervention Infection symptoms, accounting for 6.00%, but no abnormal liver and kidney function tests.

TABLE 1
SAS AND SDS SCORES COMPARISON BEFORE AND AFTER TREATMENT($\bar{x} \pm s$)

Group	Case number(n)	SAS score(points)	SDS score(points)
Before the intervention	50	75.8±6.5	74.1±5.6
After intervention	50	32.1±5.7	33.5±5.2
t	-	8.094	16.155
P	-	＜0.05	＜0.05

IV. Discussion

For bone marrow suppression after gynecological oncology chemotherapy, the clinical practice believes that taking a scientific and reasonable care intervention can control it. Therefore, in this study, the comprehensive nursing intervention has been introduced. First, in view of the negative impact of the disease on the psychological impact of patients, then the psychological counseling was introduced to improve the mental state to enhance compliance; secondly, on the basis of psychological counseling, added with medication and diet care, which on the one hand can control the disease, on the other hand can improve clinical symptoms by adjusting lifestyle. Oral cleaning can effectively prevent oral ulcers and other diseases [6-8]. For the prevention of infection, all stuff that contact closely the patients were disinfected; after cleaning the skin with warm water, talcum powder was used to smear skin folds, and soft, loose underwear was worn[9][10]. After a series of nursing intervention, the SAS and SDS scores were significantly lower than those before intervention, and the data were statistically significant (P<0.05). The hematopoietic function of 48 patients was basically restored, and the total effective rate was 96.00%.

In summary, for bone marrow suppression phenomenon after gynecological oncology chemotherapy, the patients should be given to emotional, life-based comprehensive nursing intervention in priority, thereby reducing the risk of treatment and improve clinical outcomes.

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