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Original Article

Effect of the intensive psychological nursing on adverse mood and quality of life in patients with cervical cancer

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Abstract: Objective: To evaluate the effect of intensive psychological nursing on the adverse mood and quality of life in patients with cervical cancer (CC). Methods: 100 CC patients admitted to our hospital from January 2019 to January 2020 were enrolled and randomly allocated into two groups, namely the control group (n=50) and the experimental group (n=50). Patients in the control group and experimental group were given general nursing and intensive psychological nursing, respectively. The two groups were compared with respect to self-rating anxiety scale (SAS), self-rating depressive scale (SDS) scores, quality of life index (QLI) scores and mental status scale in non-psychiatric settings (MSSNS) scores, effective rate of nursing and the incidence of adverse reactions. Results: The experimental group displayed a statistically significant increase in the QLI scores as compared with the control group ($P < 0.05$); The SAS, SDS scores, and MSSNS scores were found to be markedly lower in the experimental group than in the control group ($P < 0.05$); The effective rate of nursing was notably higher in the experimental group ($P < 0.05$); Regarding adverse reactions, the experimental group was markedly lower compared with the control group ($P < 0.05$). Conclusion: Intensive psychological nursing significantly improves the psychological state and quality of life for CC patients.

Keywords: Intensive psychological nursing, cervical cancer, quality of life, psychological state, application effect

Introduction

Cervical cancer (CC) remains the leading cause of high mortality and morbidity in women [1-3]. Due to subtle onset, misdiagnosis and missed diagnosis of CC are common in early stage [4]. Currently, tumorectomy is predominantly the treatment option for CC. Although the lesions of CC patients has been removed, which further prevents the spread and metastasis of cancer cells, there still exists the possibility of recurrence after treatment [5-7]. Therefore, CC patients may experience a fairly negative psychological state during treatment. Long-term depression, anxiety, irritability, and fear greatly affect their mental health, which are not conducive to treatment and recovery of CC [8]. Nursing is an indispensable part for CC patients in the course of therapy, and the general nursing in hospitals traditionally emphasizes physiological rather than psychological state [9]. Intensive psychological care is, by definition, one that addresses the psychological problems of the patient. This study was conducted to evaluate the effect of intensive psychological nursing on the quality of life and psychological state of CC patients.

Materials and methods

Participants

100 CC patients admitted to our hospital from January 2019 to January 2020 were enrolled and allocated into two groups by lottery, namely the control group (n=50) and the experimental group (n=50). The experiment was ethically approved by the Institution Animal Ethics Committee of our hospital with the Approved No. of KT 2018-130-72.

Inclusion/exclusion criteria

Inclusion criteria: ① Those who were consistent with clinical manifestations of CC; ②

Patients aged ≥ 18 years; ③ No history of drug allergy and drug abuse, and unhealthy habits; ④ No other organic diseases; ⑤ All the patients took part in the study of their own accord and signed an informed consent form.

Exclusion criteria: ① With other tumor diseases; ② With disturbance of consciousness and were unable to cooperate with the study; ③ Those who underwent surgery other than the resection of CC.

Methods

All patients underwent tumorectomy, and the control group underwent general clinical care, namely, monitoring vital signs concerning body temperature, blood pressure, heart rate, and respiration [10-12]. If abnormal rise in their body temperature and increased blood pressure were observed, whether the tumor resection incision is infected should be considered, and abnormal symptoms should be reported to the attending physician promptly for relevant treatment.

Patients in the experimental group underwent intensive psychological nursing, namely, monitoring their vital signs after surgery, increasing the time nursing staff spent with patients, paying attention to their psycho-emotional changes, and communicating with patients or their families in a timely manner to inquire about their psychological conditions if adverse mood was found. The health-related knowledge was educated among patients and their families to enable them to be familiar with the etiology of CC and respective therapeutic methods, maintain good hygiene habits and living habits, alleviate their fear of cancer, and reduce the possibility of CC recurrence. The target psychological guidance was instructed to patients at fixed times every day under a ambience of light music and other ways to attract their attention.

Observation indicators

The SAS, SDS scores, QLI scores and MSSNS score, effective rate of nursing and the incidence of adverse reactions were compared between the two groups.

QLI includes physical function, role function, emotional function, cognitive function, social function, and comprehensive quality. The total score is 10 points, where higher score indicates better quality of life.

The cut-off value of MSSNS is 60 points. Less than 60 points signifies normal, 60-70 points signifies mild abnormality, and more than 70 points signifies abnormal.

The cut-off value of SAS is 50 points. Less than 50 indicates normal, 50-59 mild anxiety, 60-69 moderate anxiety, and more than 70 severe anxiety [13].

The reference value of SDS is 53 points, with a score below 53 being normal, 53-62 being mildly depressed, 63-72 being moderately depressed, and over 72 being severely depressed.

Markedly effective: the patients recovered well after surgery, no adverse reactions occurred in the nursing process, and the psychological state was good; effective: the patients recovered well after surgery, no adverse reactions occurred but they occasionally experienced irritability and depression; ineffective: the patients recovered after operation, adverse reactions occurred, and they were prone to develop adverse mood.

Statistical analysis

In this paper, the relevant materials and data were processed and analyzed by statistical software SPSS 21.0, the figures were drawn by GraphPad prism 8.0. The measurement data were represented as ($\bar{x}\pm s$), and t-test was performed. The enumeration data were represented as [n (%)], and X^2 test was performed. A p-value < 0.05 indicated statistical significance.

Results

General data

The patients in the experimental group aged 22~67 years, and the patients in the control group aged 25-65 years. No marked difference was observed with regard to their age, duration of disease and other information between the two groups, as shown in **Table 1**.

QLI scores

Table 2 displays that the physical function, role function, emotional function, cognitive function, social function and comprehensive quality

Table 1. Statistics of general data ($\bar{x}$±s)

Group	Experimental group	Control group	t/χ^2	P
Age (year)	47.35±8.37	47.29±8.09	0.04	0.97
Height (cm)	167.08±6.49	167.55±6.61	0.36	0.72
Weight (kg)	62.11±10.71	61.84±9.94	0.13	0.90
Course of disease (M)	5.33±1.64	5.84±1.08	1.84	0.07
Hyperlipidemia (case)	3	2	0.21	0.64
Hypertension (case)	3	4	0.15	0.70
Diabetes mellitus (case)	5	4	0.12	0.72
Tobacco use (case)	7	8	0.08	0.78
Alcohol use (case)	11	10	0.06	0.81

Table 2. Comparison of QLI quality of life scores between the two groups ($\bar{x}$±s)

Group	Experimental group	Control group	t	P
Physical function	8.37±1.00	6.41±0.87	10.46	< 0.001
Role function	9.28±0.66	7.04±0.55	18.43	< 0.001
Emotional function	8.46±1.10	6.09±1.11	8.16	< 0.001
Cognitive function	9.73±0.17	7.71±0.29	42.49	< 0.001
Social function	9.00±0.34	7.35±0.16	31.05	< 0.001
Comprehensive quality score	8.88±1.04	6.01±0.96	14.34	< 0.001

scores were markedly higher in the experimental group when compared to the control group (P < 0.05).

SAS and SDS scores

The SAS and SDS scores were found to be markedly lower in favor of the experimental group when compared to the control group (P < 0.05). See **Figure 1**.

MSSNS scores

The comparison of MSSNS score showed that the experimental group had remarkably lower MSSNS score than the control group (P < 0.05). See **Figure 2**.

Effective rate of nursing

The effective rate of nursing was observed to be notably higher in favor of the experimental group (90%) versus the control group (66%)/(P < 0.05), as shown in **Table 3**.

Incidence of adverse reactions

In this study, adverse reactions of CC patients during postoperative nursing included incisional infection, fever, insomnia, and decreased appetite. Regarding adverse reactions, the experimental group's incidence was markedly lower (12%) than the control group's (36%), (P < 0.05). See **Table 4**.

Discussion

Normally, inpatients suffer from more or less emotional disturbance, and their fear of the disease and burden of hospitalization costs negatively impact their prognosis [14, 15]. As a result, many patients experience more severe adverse mood during hospitalization, and adverse mood indeed increases the risk of psychological diseases [16]. Caregivers are a group of people who offer psychological guidance to patients to reduce their psychological burden and eliminate negative emotions [17]. Intensive psychological nursing is a type of care that addresses their psychological mood and state. In this study, we attempted to study the effect of intensive psychological nursing on CC patients.

We have demonstrated that intensive psychological nursing markedly improved the quality of life of hospitalized patients and improved their psychological state. The long-term physical and psychological pain resulted in cervical cancer patients gradually lose hope for the future life. Active and effective psychological intervention can help patients regain their sense of mission in life and relieve their despair and pain [18]. Our findings were in agreement with the study by Lingling Wu et al. [19] who stated that intensive psychological nursing plays a significant role in mitigating the psychological distress of thyroid cancer patients and greatly improving their quality of life.

We also found that the SAS, SDS scores and MSSNS scores of CC patients using intensive psychological nursing were markedly lower in the experimental group compared with the control group using the conventional nursing care. Previous studies have shown that intensive

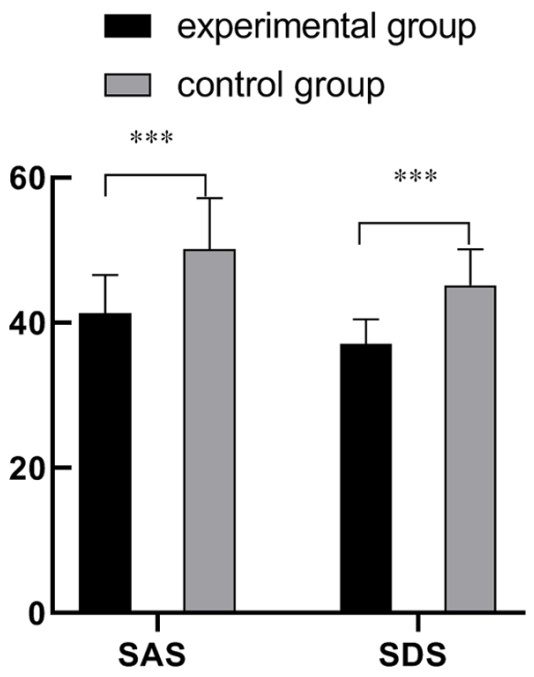

Figure 1. Comparison of SAS and SDS scores between the two groups. Notes: The abscissa indicates the SAS, SDS anxiety and depression scores of patients in the experimental group and the control group from left to right, and the ordinate indicates the SAS, SDS anxiety and depression scores (points). The SAS score was (41.33±5.27) points in the experimental group and (50.14±7.02) points in the control group; The SDS score was (37.06±3.39) points in the experimental group and (45.16±4.99) points in the control group; *** suggests P < 0.001.

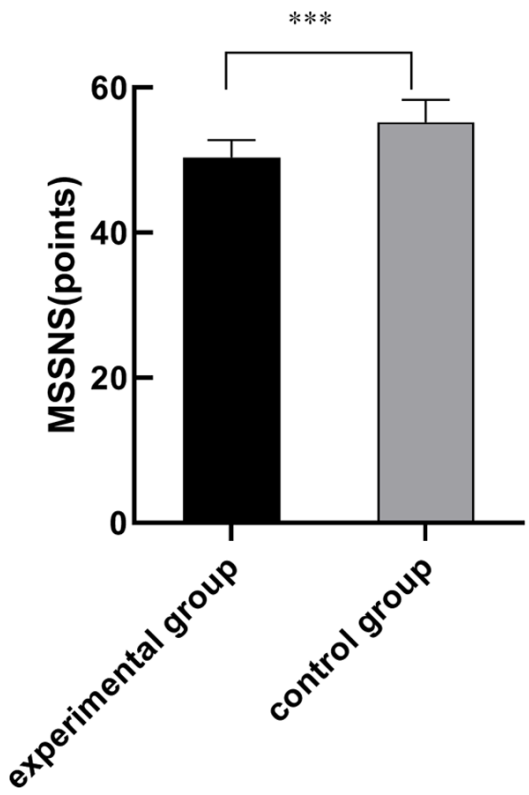

Figure 2. Comparison of MSSNS psychological state scores between the two groups. Notes: The abscissa indicates the experimental group and the control group from left to right, and the ordinate indicates the MSSNS psychological state score (points). *** suggests P < 0.001.

psychological interventions can reduce anxiety and fear, and can actively cooperate with treatment and nursing care. In addition, intensive care can significantly improve the anxiety and depression of cervical cancer patients during the postoperative community rehabilitation period. The overall quality of life and social awareness are also significantly improved, and the outcome was more robust than conventional nursing [20], which is consistent with the our results. Moreover, the adverse reactions of the experimental group was notably lower than the control group. Complications are inevitable after the operation, and will have a greater negative impact on the prognosis of the disease. The patients in the experimental group receiving psychological nursing care had less adverse mood and could maintain a positive mentality during the recovery process. Consequently, adverse reactions such as insomnia and decreased appetite were less reported in these patients.

As is known, the effectiveness is associated with both adverse reactions and emotional state. Our study observed higher effective rate of nursing in the experimental group (90%) versus the control group (66%), suggesting that the former psychological state was relatively positive, with fewer adverse reactions. Intensive psychological intervention has been widely used in clinical practice, but not much reports on CC patients. In this study, we adopted the nursing method of intensive psychological care on CC patients and provided a scientific basis for the development of nursing work. There were still some shortcomings in this study. (1) It was a monocentric study with a small number of participants and short follow-up; (2) The implementation and effect evaluation of nursing intervention measures were greatly influenced by subjective factors. Thus, more rigorously designed research with large sample is needed to further confirm the conclusions obtained in this study.

Table 3. Comparison of the effective rate of nursing between the two groups

Group	Significant	Effective	Ineffective	Overall effective rate (%)
Experimental group	30	15	5	90%
Control group	18	15	17	66%
X^2				8.39
P				0.004

Table 4. Comparison of the incidence of adverse reactions between the two groups

Group	Incisional infection	Fever	Insomnia	Decreased appetite	Incidence rate (%)
Experimental group	1	1	3	1	12%
Control group	3	5	6	4	36%
X^2					7.89
P					0.005

In summary, intensive psychological nursing can remarkably improve the psychological state and quality of life for CC patients, which deserves extensive clinical application.

Disclosure of conflict of interest

None.

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