

Original Article

The effect of emotional nursing on the HAMA and HAMD scores and the self-care abilities of bladder cancer patients

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Abstract: Objective: To investigate the effect of emotional nursing on the anxiety, depression, and self-care abilities of patients with bladder cancer. Methods: 60 patients with bladder cancer admitted to our hospital were randomly divided into a study group and a control group, with 30 patients in each group. The patients in the control group received conventional nursing for bladder cancer, and the patients in the study group received emotional nursing combined with the conventional nursing as specified for the control group. The Hamilton Anxiety Scale (HAMA), Hamilton Depression Scale (HAMD), Self-Care Ability Scale (ESCA), and WHO Quality of Life Scale-BREF (WHOQOL-BREF) scores were recorded before and after the intervention. Results: Little difference was found in the HAMA, HAMD, ESCA and WHOQOL-BREF scores in the two groups before the intervention ($P > 0.05$). After the intervention, the HAMA and HAMD scores in the study group were lower than the corresponding scores in the control group ($P < 0.05$), but the ESCA and WHOQOL-BREF scores were higher than the corresponding scores in the control group ($P < 0.05$). Conclusion: Emotional nursing may notably reduce bladder cancer patients' anxiety and depression, and it may also improve their self-care abilities and quality of life. It significantly contributed to a positive prognosis for these patients and is worthy of being widely popularized in clinical practice.

Keywords: Emotional nursing, bladder cancer, HAMA, HAMD, self-care abilities

Introduction

The development of the global economy and science and technology in recent years has witnessed great changes in people's living standards, diets, and lifestyles, as well as the spectrum of diseases. Studies have confirmed that about 50% of modern human diseases are closely related to behavior and lifestyle. Surveys in recent years in China found an increasing incidence of cardiovascular and cerebrovascular diseases, malignant tumors, hypertension, etc. that have considerable impacts on patients' lives [1-3]. Bladder cancer is defined as a malignant tumor occurring on the bladder mucosa, and, among urogenital system cancers, it is the most common and has the highest mortality. It is also one of the top ten most common tumors [4, 5]. Epidemiological studies indicate that the incidence of bladder cancer ranks 8th among malignant tumors worldwide, with 12 million new cases each year. The preva-

lence of bladder cancer in China is 6.69/100,000. And the prevalence in males is about 3 times that of females [6, 7]. Bladder cancer may occur at any age, but men aged 50-70 years are more likely to be affected. Recently, studies have pointed out that the prevalence of bladder cancer in China is increasing year by year.

The clinical symptoms of patients with bladder cancer include hematuria, painful urination, urgent urination, dysuria, etc. The most commonly used treatment now is a surgical operation, such as bladder tumor electrocision or radical cystectomy. Clinical practice has found that patients with bladder cancer often develop a regulated urinary tract after surgical treatment, and some may even need to use a urine drainage bag for life [8, 9]. With the impact of pain, image change, decreased social function, and many other influencing factors, most experience significant anxiety and depression. The

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results of a survey of 131 patients with bladder cancer showed that 66.41% of the patients had anxiety scores significantly higher than the norm, and 54.20% of patients had higher depression scores, suggesting that patients with bladder cancer have a high incidence of adverse emotions [10, 11]. One's self-care ability also has a great impact on the prognosis of patients with bladder cancer. Out-of-hospital nursing for patients with bladder cancer is an important part of their clinical treatment, and the development of one's self-care ability is a critical step on the path to improving one's quality of life.

Emotional nursing, also known as psychological nursing of TCM, generally refers to the intervention measures such as the language, expressions, posture, attitude, and behavior taken by nursing staff in order to intervene and affect the patient, reduce bad moods, help establish confidence in the treatment, and ultimately achieve the goal of early recovery [12, 13]. Emotional nursing is widely used in clinical practice and has been confirmed to be of positive significance in improving the quality of life of breast cancer patients, reducing the negative emotions of stroke patients, and accelerating the rehabilitation of limb function. The aim of this study was to investigate the effect of emotional nursing on the adverse emotions and self-care abilities of patients with bladder cancer, so as to implement the theory of emotional nursing of TCM in the nursing intervention of patients with bladder cancer and provide a theoretical basis for improving the prognosis of patients with bladder cancer.

Material and methods

Material

A total of 60 patients with bladder cancer admitted in our hospital from June 2018 to February 2020 were randomly divided into a study group and a control group with 30 cases in each group.

Inclusion criteria: Patients who (1) were diagnosed with bladder cancer through imaging and histopathological examination and showed related clinical symptoms, (2) patients who had complete medical records, (3) patients who had a clear consciousness to cooperate with the investigation, (4) patients (5) or their families on their behalf who submitted a signed

informed consent, and patients who (6) showed a definite self-care ability.

Exclusion criteria: Patients (1) with severe mental illness, (2) patients in a confused state who could not support the investigation, (3) patients with other malignant tumors, (4) patients with bladder cancer metastases, (5) patients with an expected survival of ≤ 6 months, (6) patients with a systemic infection, (7) patients who demonstrated a poor compliance with the treatment, (8) and patients with autoimmune system disease or (9) with severe liver and kidney dysfunction, were excluded.

Removal criteria: Cases of (1) death during the intervention, (2) voluntary withdrawal during the intervention, and (3) loss to follow-up during the investigation were removed.

Methods

The patients in the control group received conventional clinical nursing for bladder cancer, including nursing for body position, diet and nutrition, pain, drainage tube care, and health education.

The patients in the study group were given emotional care nursing combined with the conventional clinical nursing above: (1) An emotional nursing group was established to discuss the patients' conditions and develop emotional nursing plans, i.e. a complete emotional nursing program with time as the horizontal axis, and with music therapy, dispersal of stagnated liver energy and blood to relieve depression, acupressure, emotional support, environmental health-care, and other measures as the vertical axis. (2) Music therapy: Light music was played every day according to the patient's needs. Easy and bright listening was played in the morning, while slow and mild music was in the afternoon, and quiet and warm music was played in the evening, with 30 minutes for each. (3) Dispersal of stagnated liver energy and blood to relieve depression by psychologists who were aware of each patient's psychological state and who gave psychological interventions in a specific way such as emotional catharsis, heart-to-heart talks, or communication between patients. (4) Acupressure for the patients by the nursing staff every day with techniques including massage or pressing at the acupoints such as Baihui, Yintang, Neiguan, Hegu, Taichong, etc.,

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30 min for each acupuncture, once a day. (5) Emotional support refers to patient meetings where the patients' emotional support, confidence in the treatment, self-perception and social support can be elevated.

The intervention continued for 15 days in both groups. After discharge, the medical staff instructed the patients' family members to continue the nursing intervention by telephone or any other methods.

Outcome measures and evaluation

Anxiety before and after intervention: We used the HAMA scale, which was originally developed by Hamilton in 1959 and has been a commonly-used scale for anxiety assessment in psychiatry, before, and at 15 days, 30 days, and 60 days after the intervention. With a total of 14 items, one may get a total possible score of 56 derived from the sum of the scores for each item (scored 0-4). Scores of 29 and above indicate severe anxiety, 21-28 indicate significant anxiety, 14-20 indicate the presence of anxiety, 7-13 indicate possible anxiety, and 6 or below indicate without anxiety [14].

Depression before and after intervention: We used the HAMD scale, developed by Hamilton in 1960 for the clinical evaluation of depression, to evaluate the depression of patients in the two groups before and at 15 days, 30 days, and 60 days after the intervention. The scale includes a total of 17 items. A total score of 36 and above indicates a severe depressive mood, 20-35 indicates the presence of depression, 8-19 indicates a the possible depressive mood, and less than 8 indicates the absence of a depressive mood [15].

Changes in self-care ability after the intervention: We used the ESCA scale to evaluate the self-care abilities of the two groups of patients before and at 60 days after the intervention. The ESCA scale was revised based on the Orem scale. With 43 items, it covers four dimensions: health knowledge, sense of self-care, self-care skills and self-concept. The total possible score is 172. A higher score represents better self-care abilities.

Changes in quality of life after the intervention: We used the WHOQOL-BREF scale to assess patients' quality of life before and at 60 days after the intervention. It contains 6 items (scored 0-4) covering physical, psychological,

environmental, and social dimensions. A higher score indicates a better quality of life [16].

Statistical analysis

SPSS 20.0 software was used for the statistical analysis. The measurement data were expressed as ($\bar{x} \pm s$). The comparisons between groups were subject to Student's t test. The enumeration data were expressed as [n (%)]. Chi-square tests were for the differences between groups. Student's t test was used for the statistical analysis of continuous variables at different time points. The inter-group comparisons were subject to F tests. $P < 0.05$ indicated statistical significance [17].

Results

Clinical parameters compared between the two groups of patients

There was no significant difference in the general clinical parameters such as gender, average age, average weight, education, household income, marital status, or underlying diseases between the two groups ($P > 0.05$) (**Table 1**).

Changes in anxious emotions after the intervention in the two groups of patients

Little difference was found in the HAMA scores between the two groups before the intervention ($P > 0.05$). On the 15th day, 30th day, and 60th day of the intervention, the HAMA scores of the study group were significantly reduced ($P < 0.05$) and were lower than those of the control group ($P < 0.05$) (**Table 2; Figure 1**).

Changes in depression after the intervention in the two groups of patients

Similarly, little difference was found in the HAMD scores between the two groups before the intervention ($P > 0.05$). On the 15th day, 30th day, and 60th day of the intervention, HAMD scores of the study group were significantly reduced ($P < 0.05$) and were lower than those of the control group ($P < 0.05$) (**Table 3; Figure 2**).

Changes in self-care ability after intervention in the two groups of patients

Although the self-care ability scores in the two groups showed only slight differences before the intervention ($P > 0.05$), on the 60th day of

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Table 1. Clinical parameters of the two groups of patients ($\bar{x} \pm s$)/[n (%)]

Item		Study group (n=30)	Control group (n=30)	t/ χ^2	P
Sex	M	17	18	0.069	0.793
	F	13	12		
Average age (yr)		51.29±3.22	51.17±3.41	0.14	0.889
Average weight (kg)		60.59±3.44	61.08±3.12	0.578	0.565
Education	Illiterate	2	3	0.122	0.890
	Primary school	8	7		
	Junior high school	9	10		
	Senior high school or above	11	10		
Marital Status	Married	27	26	0.162	0.688
	Unmarried	3	4		
Household income	< 1000	2	1	0.332	0.571
	1000-3000	8	8		
	Above 3000	20	21		
Hypertension	Y	11	10	0.073	0.787
	N	19	20		
Diabetes	Y	10	12	0.287	0.592
	N	20	18		

Table 2. Anxiety before and after the intervention in the two groups of patients ($\bar{x} \pm s$)

Group	n	Before intervention	15 d after intervention	30 d after intervention	60 d after intervention
Study	30	23.01±2.32	17.21±2.11	12.31±2.14	11.29±2.15
Group	30	22.98±2.41	20.28±2.31	14.89±1.98	14.19±2.31
t	-	0.049	5.375	4.847	5.033
P	-	0.961	< 0.001	< 0.001	< 0.001

the 15th day, 30th day, and 60th day of the intervention, the HAMA scores in the study group were significantly lower than those of the control group ($P < 0.05$); * There was a statistically significant difference in the specified indicator.

the intervention, the ESCA scores regarding each dimension in the study group were significantly

increased ($P < 0.05$) and were higher than the scores in the control group ($P < 0.05$) (Table 4; Figure 3).

The quality of life scores before and after the intervention in the two groups of patients

There was hardly any difference in the WHO-QOL-BREF scale scores before the intervention in the two groups ($P > 0.05$). After 60 days of the intervention, the test showed that the WHOQOL-BREF scores in the study group were significantly improved ($P < 0.05$) and were superior to those in the control group ($P < 0.05$) (Table 5; Figure 4).

Discussion

Bladder cancer has the highest incidence among the cancers of the reproductive system. The data showed that with the changes in the lifestyles and diets of Chinese residents in

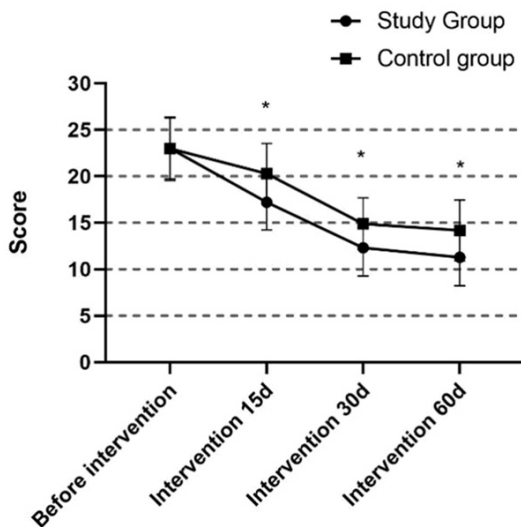


Figure 1. Changes in anxiety before and after the intervention in the two groups of patients. The data showed that there was little difference in the HAMA scores in the two groups before the intervention. On

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Table 3. Depression before and after the intervention in the two groups of patients ($\bar{x} \pm s$)

Group	n	Before intervention	15 d after intervention	30 d after intervention	60 d after intervention
Study	30	23.22±3.21	17.28±2.39	14.19±2.51	8.19±2.11
Group	30	23.19±3.41	19.28±2.44	16.29±2.39	12.10±2.09
t	-	0.035	3.207	3.319	7.211
P	-	0.972	0.002	0.002	< 0.001

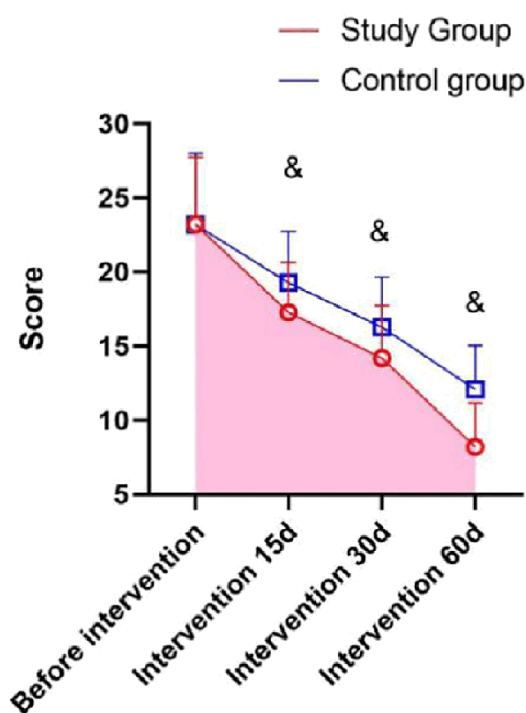


Figure 2. Changes in depression before and after the intervention in the two groups of patients. The data showed that there was little difference in the HAMD scores between the two groups before the intervention. On the 15th day, 30th day, and 60th day of the intervention, the HAMD scores in the study group were significantly lower than the scores in the control group ($P < 0.05$); and there was a statistically significant difference in the specified indicator.

recent years, the prevalence of bladder cancer has increased year by year. Clinical practice has shown that the rapidly-progressing conditions of bladder cancer lead to mortality as high as 85% in 2 years without treatment [18]. The results of a questionnaire administered to 78 patients with bladder cancer showed that 38 patients expressed a sharp decline in their living ability after surgery, which easily induced adverse emotions. Also, 20 patients experienced a decline in their cognitive function such

that they could not keep up with their work and lives, and 51 patients expressed concern about a recurrence of the disease [19].

The emerging practice of emotional nursing in recent years means that, guided by the theory of traditional Chinese medicine, the establishment of a good doctor-patient relationship plus scientific nursing care can improve and eliminate the adverse emotions of patients so as to achieve the purpose of preventing and treating diseases [20].

Emotional nursing has been widely used in clinical practice. A survey of 68 patients with rectal cancer showed that compared with the patients in the control group who received simple clinical nursing, the anxiety and depression of the patients in the observation group who received emotional nursing were significantly improved, and the compliance with treatment as well as the cooperation with the medical staff were better [21]. Emotional nursing is of positive significance in improving the quality of life of patients with breast cancer after surgery. It may remarkably reduce the incidence of various adverse emotions in patients during chemoradiotherapy, and even improve clinical efficiency [22]. In this study, the results showed that compared with the control group, the HAMA and HAMD scores in the study group decreased significantly after the intervention, suggesting that emotional nursing has a significant effect in improving the anxiety and depression of patients with bladder cancer. A survey of 66 patients with bladder cancer showed that 49 patients had SAS scores higher than 50, accounting for 74.24%. On average, the patients had a SAS score of (54.73 ± 9.48) , significantly higher than the norm (29.78 ± 0.46) [23].

The emotional nursing applied in this study is a model of nursing intervention based on the theory of traditional Chinese medicine, which believes that emotion is an external manifestation of human mental activity. When the individual's emotion is excessively affected by various external factors, the body will be over-excited or depressed. The emotional nursing applied in this paper may comfort the patient's disordered emotions in many ways [24]. The acupuncture applied in this study can alleviate the adverse emotions of patients by

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Table 4. Self-care abilities before and after the intervention in the two groups of patients ($\bar{x} \pm s$)

Period	n	Self-concept	Sense of self-care	Function of self-care	Health knowledge	Total
Study group	30					
Before intervention	-	20.87±2.31	18.28±2.11	23.39±3.41	30.31±3.21	87.19±4.33
After intervention	-	28.39±3.01*	27.18±3.22*	38.18±3.22*	44.28±3.22*	107.28±6.31*
t	-	10.856	12.805	17.272	16.829	14.307
P	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Control group	30					
Before intervention	-	21.01±2.23	18.31±2.31	23.41±3.50	29.98±3.33	88.01±3.91
After intervention	-	26.18±2.39	22.38±2.69	30.87±2.33	38.81±2.44	93.98±4.23
t	-	8.663	6.287	9.718	11.715	5.677
P	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Note: *P < 0.05, compared with the control group after the intervention.

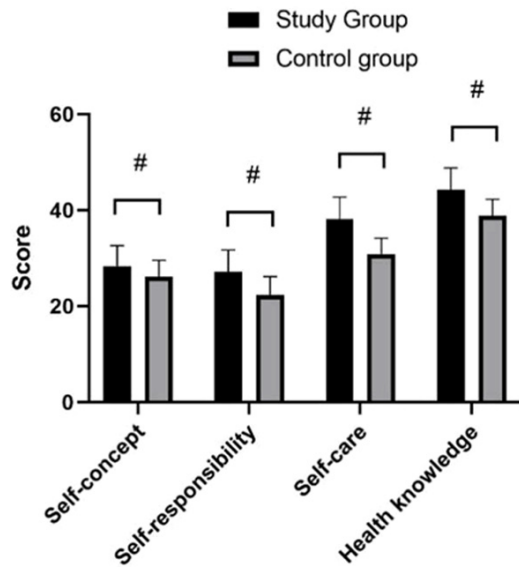


Figure 3. Changes in the self-care abilities after the intervention in the two groups of patients. The self-concept, sense of self-care, self-care function, and health knowledge scores in the study group were significantly higher than the corresponding scores in the control group, with statistically significant differences ($P < 0.05$). # There was a statistically significant difference in the specified indicator.

regulating qi and dispersing the liver. The baihui point, where the arteries and veins come together, can regulate the qi of middle-jiao energy and strengthen the brain and nourish the mind, thereby improving the adverse emotions of patients [25]. The emotional support method mainly employs the concept of contemporary social support. From the perspective of patients with bladder cancer, they often feel guilty before their families due to

their decreased self-care abilities after surgery. Appropriate emotional support can improve their confidence in the treatment and enable them to establish good self-values so as to reduce their anxiety and depression [26]. This study also showed that the application of emotional nursing significantly improved the patients' self-care abilities. After the intervention, the self-concept, sense of self-care, function of self-care, and health knowledge scores of the patients in the study group were increased, suggesting that emotional nursing effectively established their confidence in the treatment and developed the concept and behaviors of self-care. These are positive influences on patient prognosis. The quality of life scores in the two groups support this point of view, indicating that the self-care behavior developed by emotional nursing is an important basis for improving the quality of life of patients with bladder cancer.

In summary, emotional nursing can notably reduce the anxiety and depression of patients with bladder cancer, and it can also improve their self-care abilities and quality of life, significantly influencing a positive prognosis. The innovation of this study is to introduce the concept of "emotion" into modern nursing workers, to explore the application effect of integrated nursing measures of Chinese and western medicine in patients with bladder cancer, and to provide theoretical support for the application of TCM theory in clinical practice. However, (1) the small sample size may have affected the comprehensiveness of the obtained results; (2) the absence of a long-term follow-up made the

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Table 5. Quality of life scores before and after the intervention in the two groups of patients ($\bar{x} \pm s$)

Period	n	Physiology	Psychology	Society	Surroundings	Total
Study group						
Before intervention	-	10.28±2.11	10.33±1.98	11.02±1.43	10.87±2.34	40.28±5.41
After intervention	-	15.32±2.31*	14.87±2.03*	13.89±2.04*	13.71±2.31*	53.28±4.92*
t	-	8.823	8.769	6.31	4.731	9.737
P	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Control group						
Before intervention	-	10.29±2.09	10.28±2.01	10.98±1.51	10.88±2.11	40.22±5.23
After intervention	-	13.11±2.34	12.19±1.98	11.99±2.21	11.99±2.01	49.19±3.29
t	-	4.923	3.708	2.067	2.086	7.952
P	-	< 0.001	< 0.001	0.043	0.041	< 0.001

Note: *P < 0.05, compared with the control group after the intervention.

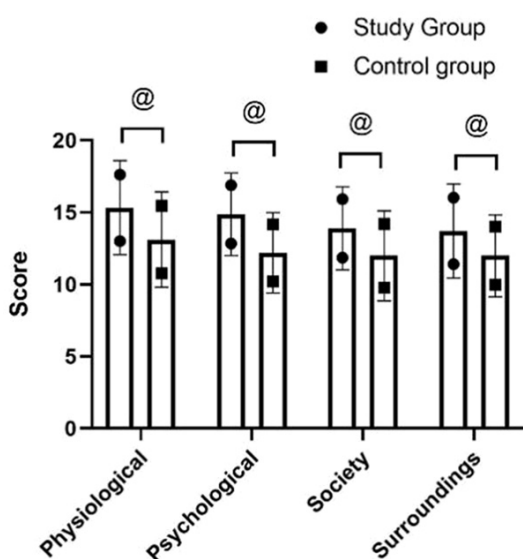


Figure 4. Changes in the quality of life scores after the intervention in the two groups of patients. The physical, psychological, social and environmental dimension scores in the study group were significantly higher than of the corresponding scores in the control group ($P < 0.05$). @ There was a statistically significant difference in the specified indicator.

study of the effect of emotional nursing on the personality of patients with bladder cancer incomplete. In view of this, the authors of this paper intend to carry out surveys with large sample sizes and long-term follow-ups in the hopes of finding a more theoretical basis for the application of emotional nursing in the clinical treatment of patients with bladder cancer.

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Disclosure of conflict of interest

None.

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