

Analysis of the Effect of Individualized Nursing Combined with Humanistic Care on Elderly Patients with Gastric Ulcer

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Abstract

Objective: To investigate the effect of individualized nursing on elderly patients with gastric ulcer. **Methods:** 105 elderly patients with chronic gastric ulcer were randomly divided into controlled group and observation group. Both two groups received routine treatment for gastric ulcer. The control group was given traditional nursing, while the observation group was given individualized nursing combined with humanistic care. After the discharge, the clinical curative effect was evaluated. During the following 6 months, psychological status was assessed by using the self-rating anxiety scale (SAS) and self-rating depression scale (SDS), and the quality of life was evaluated by using the Nottingham health questionnaire (NHP). **Results:** The total effective rate of observation group was significantly higher than that of control group (90.38% vs 69.81%, $P < 0.01$). SAS and SDS scores of the two groups at 3 m and 6 m were significantly higher than that without treatment, besides, SAS and SDS decreased in a time-dependent manner. Moreover, NHP scored obviously lower at 3 m and 6m compared to that at the admission, which increased in a time-dependent manner. In addition, the observation group treated with individualized nursing scored higher than the control on SAS and SDS assessment, but scored lower on NHP scale. **Conclusion:** Individualized nursing combined with humanistic care could significantly improve the clinic outcomes, improve the quality of life, and reduce the adverse psychological status in patients with gastric ulcer.

Keywords

Individualized nursing, gastric ulcer, elderly patients, humanistic care, quality of life

1. Introduction

Gastric ulcer is one of the most common and serious chronic diseases of the upper gastrointestinal tract with the characteristics of slow onset, long course, stubbornness and high recurrence rate [1, 2]. The imbalance between the protective mechanisms of the gastrointestinal mucosa and the harming impact of gastric acid and pepsin might result in gastric ulcer [3]. The risk factors for the development of gastric ulcer include gastric acid hypersecretion, psychological stress, nicotine consumption, alcohol consumption, immunosuppressive medication, and age-related decline in prostaglandin levels [4]. If gastric ulcer is not treated adequately, it might lead to serious complications,

such as perforation and bleeding, or may progress toward gastric cancer with substantial morbidity and mortality rates [5].

In recent decades, with the development of society and the changes of people's living habits, the incidence rate of gastric ulcer has increased gradually, which brings a huge burden to the family and seriously affects quality of life of patients with gastric ulcer [6]. Gastroenterology of drugs for the treatment of gastritis and ulcer agents include acid restrain drugs (H₂ receptor antagonists, cholinergic drugs, proton pump inhibitors, etc.), anti-*Helicobacter pylori* drugs, gastric mucosal protective agent, and so on [7]. Though the effect of drug treatment is remarkable, studies showed that special nursing might improve the clinic outcome as well as the quality of life of patients [8]. As reported in another study, comprehensive nursing intervention combined with routine nursing care could significantly improve the nursing effect and increased epidermal growth factor level of gallstone patients with gastric ulcer [9]. However, limited reaches illustrated the effect of individualized nursing on the patients with gastric ulcer.

Since the biomedical model gradually transformed into biological-psychological-social model, great changes have taken place in field of medical association mode and nursing discipline. The concept of people-oriented was established to promote nurses to take more attention on professional ethics, humanistic care, humanistic spirit. Humanistic care makes the nature of nursing work extend from the nursing for diseases to the holistic physical and mental care of patients; the scope of work has changed from focusing on the exquisite nursing technology to the comprehensive care for the psychosomatic and social relations of patients, and even the improvement of living environment, prevention of diseases, and improvement of life quality.

In the present study, we performed a randomized controlled trial to investigate the effect of individualized nursing for patient with gastric ulcer, and then retrospectively analyzed the clinical data of 105 patients with gastric ulcer in XXX hospital and discussed the nursing plan of gastric ulcer. We found that individualized nursing for gastric ulcer could effectively improve the clinical efficacy, reduce anxiety and depression, and improve the quality of life of patients.

2. Materials and Methods

2.1. Patients

The present randomized controlled study enrolled 105 cases of elderly patients with gastric ulcer admitted to the First Affiliated Hospital of Anhui University of Science and Technology (Huainan First People's Hospital) during October 2017 to October 2019. The 105 patients with gastric ulcer were randomly divided into control group and observation group, 53 cases and 52 cases respectively. All these patients were diagnosed as chronic gastric ulcer by gastroscopy, and those with other physical or mental diseases, gastric perforation, bleeding, canceration, etc., were excluded. The 105 patients were all taking anti-ulcer drugs or neuropsychiatric drugs, such as gastric mucosal protective drugs and proton pump inhibitor. The present study was approved by the Ethic committee of XXX hospital and written informed consent was obtained from all parents involved in the study.

2.2. Humanistic care

Humanistic care consisted of five-faceted socio-humanistic approach as follows: 1) understanding patients' social context; 2) taking time and showing empathy; 3) avoiding moralistic attitudes; 4) overcoming social distances; 5) favoring direct contact with patients.

2.3. Mental nursing

Chronic gastric ulcer has a slow onset and a long course. Patients with gastric ulcer often lose confidence in the treatment. In addition, chronic abdominal pain often leads to poor appetite and emotional instability. Some patients even worry about whether the lesions will develop into cancer, which leads to anxiety, depression and other adverse emotions. Therefore, more attention should be paid to communicate with patients to understand the psychological changes and give appropriate psychological intervention. Before treatment, SAS and SDS were used to evaluate the psychological status of patients, and then appropriate psychotherapy was given to patients on different conditions. All these were designed to encourage the patients to face the disease with a positive attitude, build patients' self-confidence to overcome the disease, and ensure that the patients receive treatment in a good psychological state.

2.4. Medication guidance

Patients and their families should be given detailed medication guidance according to different medication conditions. Specifically, patients with gastric ulcer should be clearly informed of the medication methods and possible adverse reactions. For example, the patients who use “triple therapy” to eradicate *Helicobacter pylori* should be informed that they must take it before breakfast and bedtime every day, and should not discontinue the medication. Another example is that the patients who take bismuth therapy need to take it before meals, and record the adverse reactions. Acid food and dairy products were not allowed to patients during medication.

2.5. Lifestyle guidance

Firstly, the daily living habits of patients should be investigated and evaluated since the bad living habits might be a risk factor for chronic gastric ulcer. Some appropriate suggestions could be given to the patients to have better and healthier diet, including eating regularly and quantitatively with less high protein, high fat, high calorie and high cholesterol foods, and avoiding spicy and irritant food, acid food, supercooled and overheated food. Besides, appropriate aerobic exercise like jogging, walking, swimming, etc., could be chosen for patients after meals, which will help relieve mental stress and improve sleep quality.

2.6. Assessment of the curative effect

The curative effect was classified as effective, valid and invalid. The criteria is as follows: 1) effective: after treatment, the clinical symptoms of the patients disappear, and the healing of the original ulcer reach the stage of white scar by gastroscopy; 2) valid: after treatment, the clinical symptoms of the patients are attenuated, and the original ulcer surface is reduced at different levels according to gastroscopy, which means it enters the healing period; 3) invalid: after treatment, the clinical symptoms of gastric ulcer and the ulcer surface does not change or become worsen.

2.7. Follow-up up

All patients were followed up for 6 months after discharge. In the control group, patients only need to come to the hospital regularly for reexamination. In the observation group, patients received individualized follow-up through regular phone calls and out-patient review, so as to understand patients' medication, urge the patients to take medicine on time, answer the patients' questions, eliminate the patients' tension and anxiety, and adjust the treatment plan according to the patients' treatment.

2.8. Data collection

The patients in the two groups were followed up for 6 months after discharge to observe the clinical efficacy. SAS and SDS were used to evaluate the psychological status at the admission, 3 m and 6 m. The quality of life was evaluated using the NHP.

2.9. Statistical analysis

Continuous data were expressed as the mean \pm SD. The difference between two groups was compared by Student's t-test. Rates were compared by Chi square test. $P < 0.05$ was considered significant. All calculations were made using SPSS 20.0 (IBM, Chicago, IL, USA).

3. Results

3.1. Basic characteristics of all elderly patients with gastric ulcer

Both the control group and the observation group received routine treatment for gastric ulcer, including diet guidance and environmental care, while the observation group was given individualized nursing combined with humanistic care, including mental nursing, medication guidance, lifestyle guidance and follow-up care. During the study period, no case quit or lost follow-up. The basic characteristics of all elderly patients were shown in Table 1. Patients with individualized nursing had shorter the hospital duration compared to the control, and no significant difference was found for the other characteristics between two groups.

Table 1. Characteristics at baseline of elderly patients with gastric ulcer

Variables	Classification	Conventional nursing n = 53	Individualized nursing n=52	P
Age, year		72.5 ± 8.7	72.3 ± 8.1	0.732
Sex, female (%)		20 (37.74)	19(36.54)	0.899
Course of gastric ulcer		5.3 ± 1.4	5.2 ± 1.6	0.7338
Education				0.885
	junior high school and below	16 (30.19)	18 (34.62)	
	senior high school or technical secondary school	20 (37.74)	18 (34.61)	
	college and above	17 (32.08)	16 (30.77)	
BMI, kg/m ²		28.71 ± 5.65	30.32 ± 6.13	0.1646
Married		32 (60.37)	33 (63.46)	0.745
Hospital stay, d		8.51 ± 2.43	7.68 ± 1.49	0.0377**

3.2. Comparison of clinical effects between the two groups

The total effectiveness (effective + valid) rate of the observation group was 90.38%, while in the control group it was 69.81%. The total effective rate of the observation group was significantly higher than that of the control group ($P < 0.01$) (Table 2).

Table 2. Comparison of clinical outcome between the observation group and control group

Group	Effective	Valid	Effective + Valid	Invalid	Total
Observation group	25 (48.08)	22 (43.31)	47 (90.38)	5 (9.62)	52
Control group	20 (37.74)	17 (32.08)	37 (69.81)	16 (30.19)	53

3.3. Comparison of SAS score and SDS score between the two groups before and after treatment

As shown in Table 3, there was no significant difference between SAS scale and SDS scale of the two groups before treatment ($P > 0.05$). After the treatment, patients with individualized nursing care scored higher than patient received conventional nursing for the evaluation of SAS and SDS at 3 m and 6 m, respectively. Moreover, the level of SAS and SDS increased in a time-dependent manner. Besides, patients with individualized nursing scored lower on NHP scale after the therapy compared to the control, which also decreased in a time-dependent manner (Table 4). All the results indicated that elderly patients receiving individualized nursing combined with humanistic care might attenuate the anxiety and depression, and improve the quality of life.

Table 3. Dynamic changes of SAS score and SDS score between the two groups

Group	Classification	SAS	SDS
Observation group	before therapy	66.2±4.3	62.3±4.5
	3 mo after therapy	52.9±4.5	53.1±4.2
	6 mo after therapy	42.1±4.3	41.3±4.3
Control group	before therapy	65.3±4.4	62.8±4.3
	3 mo after therapy	58.2±5.1	57.9±5.3
	6 mo after therapy	54.4±4.7	56.1±4.8

Table 4. Dynamic changes of NHP score between the two groups

Group	Classification	Energy	Pain	Emotional reaction	Sleep	Social loneliness	Activity ability
Observation	before treatment	33.1±16.1	14.8±5.6	13.1±7.2	28.1±16.8	8.7±3.2	14.8±6.1
	3 mo after therapy	23.9±16.3 ^{ac}	8.2±4.2 ^{ac}	8.5±4.1 ^{ac}	17.2±5.3 ^{ac}	4.5±2.7 ^{ac}	10.2±5.2 ^{ac}
	6 mo after therapy	21.8±13.2 ^{bc}	6.1±3.2 ^{bc}	8.2±5.1 ^{bc}	12.3±4.5 ^{bc}	4.1±2.6 ^{bc}	7.1±4.3 ^{bc}
Control group	before therapy	31.8±15.9	14.6±5.4	12.8±7.2	27.6±14.8	8.7±3.5	15.2±6.6
	3 mo after therapy	27.9±13.9 ^a	10.3±5.2 ^a	9.1±6.3 ^a	21.8±11.1 ^a	6.8±2.7 ^a	11.9±5.9 ^a
	6 mo after therapy	25.6±13.3 ^b	8.7±4.8 ^b	8.9±5.1 ^b	19.8±7.7 ^b	6.2±2.5 ^b	10.3±5.1 ^b

a P<0.05, compared to before treatment; b P<0.05, compared to before treatment; c P<0.05, comparison between NHP scores in two groups at 6 m.

4. Discussion

Gastric ulcer is a common and frequently occurring disease in clinic, which can occur at all ages. It has the characteristics of slow onset, long course, difficult to cure and easy to relapse [10]. In addition to chronic abdominal pain, the complications such as bleeding, perforation, pyloric obstruction and canceration, seriously affect the quality of life of patients [11]. A large number of scholars had studied the etiology and pathogenesis of gastric ulcer. At present, it is believed that the main cause of gastric ulcer is related to *Helicobacter pylori* infection, imbalance of secretion of gastric acid and pepsin, imbalance of secretion of gastrin, production of oxygen free radicals, etc. [12]. In particular, the discovery of *Helicobacter pylori* and the application of “triple therapy” had significantly improved the cure rate of gastric ulcer [13]. However, it is difficult to cure gastric ulcer only by drug treatment in clinical.

In recent years, with the transformation of medical model from traditional biomedical model to bio-psycho-social-medical model, more and more attention had been paid to psychological and social factors in the treatment of gastric ulcer [14]. It showed that mental stimulation and bad emotions play an important role in the pathogenesis of gastric ulcer [15]. On the other hand, since gastric ulcer is a chronic disease, some patients didn't have a high level of cognition about the disease. They stop taking the medicine when the clinical symptoms were relieved after taking the medicine, which made the disease attack again and affected the clinical effect [16]. Therefore, patients on different conditions could be given individualized nursing. Through the investigation and evaluation of the patient's condition, medication, personality characteristics and living habits, the specific nursing plan was performed in this study.

As is known to all, patients had lower levels of awareness and perception about nursing actions designed to support patients' individuality in their personal life situations. Nursing care should be wholly individualized, and nurses should not overlook patients' individuality in their personal life situations [17]. As stated in the study of Ying H et al., individualized nursing significantly improved mental status in patients with advanced lung cancer, it can also improve life quality and rise survival rates with a high clinical value [18]. Another report found that individualized nursing could shorten the hospitalization time, fever subsided time, reduce seizure recurrence, promote the rehabilitation of children, improve the satisfaction of patients and their families [19]. In addition, individualized nursing was reported to effectively reduce incidence of cerebral hemorrhage concurrent with hypostatic pneumonia which is conducive to physical rehabilitation of patients and means significant implications in clinical practice [20]. Moreover, nursing and humanistic care was recommended for mothers of newborn infants under phototherapy [21], and humanistic care was proven to promote the quality of life of patient under dental care in deprived areas [22]. However, there is no researches illustrated the effect of individualized nursing combined with humanistic care on patients with gastric ulcer. In the present study, we for the first time demonstrated that individualized nursing combined with humanistic care could significantly shorten the hospital duration, improve mental state, attenuate anxiety and depression, and improve the quality of life for elderly patients with gastric ulcer.

5. Conclusion

In summary, we conducted a randomized controlled study to investigate the effect of individualized nursing for gastric ulcer. We found that individualized nursing combined with humanistic care for gastric ulcer could effectively improve the clinical efficacy, attenuate anxiety and depression, improve the quality of life of patients, and it had positive significance for the treatment of gastric ulcer.

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