

Original Article

Effect of humanistic nursing on treatment and prognosis of patients with severe pneumonia

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Received January 8, 2018; Accepted February 20, 2018; Epub May 15, 2018; Published May 30, 2018

Abstract: Objective: To investigate the effect of humanistic nursing on the treatment and prognosis of patients with severe pneumonia. Methods: A total of 80 patients were enrolled with severe pneumonia, who were admitted to our hospital during the period between December 2015 and May 2017, and were divided into control group (n=40) and observation group (n=40) by random number table. The control group was given in-hospital routine nursing while the observation group, on the basis of that of the control group, was given humanistic nursing. The two groups were compared in regarding to treatment objective response rate (ORR), complication occurrence rate, time for medical signs to disappear and nursing satisfaction. Results: Treatment ORR of the observation group (80.00%) was obviously higher than that of the control group (62.50%, $P<0.001$); after the nursing, the time it took the observation group for the medical signs (coughing, rales and fever) to disappear was much shorter than that of the control group (all $P<0.001$); overall occurrence of complications such as infection, cardiac failure and disseminated intravascular coagulation among the observation group (10.00%) was lower than that those of the control group (42.50%, $P<0.001$). The observation group's satisfaction with nursing (97.50%) was also higher than that of the control group's (75.00%, $P<0.001$). Conclusion: Humanistic nursing can distinctly improve patients' treatment ORR, accelerate the disappearing medical signs, reduce complications and enhance therapeutic safety. Therefore, it's worth widening clinical application.

Keywords: Humanistic nursing, severe pneumonia, treatment, prognosis quality, complications

Introduction

Severe pneumonia is a common and frequently-occurring respiratory disease mainly among the young, the elderly and the bedridden [1]. Bacterial infections of lung could easily cause inflammatory cell exudation and then severe pneumonia [2]. Though severe pneumonia is characterized by sudden onset, severity and causes a variety of complications, however, effective post-operative care can help boost patients' recovery [3]. Since patients with such diseases have poor resistance, severe pneumonia is very likely to cause complications such as infections and cardiac failure [4]. Besides, due to bad experience of severe pneumonia such as shortness of breath and expectoration, it is likely to cause dysphoria and psychological disorder, thereby reducing patients' compliance and initiative towards treatment and care [5]. Research shows that enhanced

post-operative care for patients with severe pneumonia is the key to improving patients' conditions as well as reduce complications [6]. Considering the complexity of severe pneumonia and specialty of patients, patients received routine care plus humanistic nursing service which covers more aspects and is good for recovery [7]. At present, humanistic nursing is widely used in treatment of cervical cancer, test tube baby and hypertension and proves to be effective [8]. The aim of the study is to investigate the effect of humanistic nursing on recovery from severe pneumonia in order to provide theoretical foundation for the clinical.

Materials and methods

General data

This study has been approved by the Ethics Committee of Yantai Yuhuangding Hospital and

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all the participants have signed informed consent. Participants are 80 patients with severe pneumonia hospitalized during the time between December 2015 and May 2017.

Inclusion criteria: 1) Patients with severe pneumonia (diagnosis: chest X-ray film showed bilateral or multiple lung lobe involvement or lesion increased in size $\geq 50\%$ within 48 hours after hospital admission); 2) patients without other inflammations; 3) patients without nerve injury or psychosis; 4) patients were volunteered to participate in this study [9].

Exclusion criteria: 1) Patients with other severe inflammations; 2) severe psychiatric patients; 3) patients with endocrine dysfunction; 4) depressed patients; 5) patients quit during the nursing process [10].

Methods

The two groups were both treated with routine care which included introduction of the basic information of this hospital and knowledge of severe pneumonia at first, then medication and transfusion guidance, routine guidance and strict adherence to doctors' advice of resting on bed. The observation group, on the other hand, was given humanistic nursing after the surgery till discharged. The nursing interventions are detailed as follows.

Psychological nursing

Professional nurses gave psychological nursing to patients in accordance with their conditions. They first communicated with the patients to strengthen their trust and eliminate their antipathic feelings, then explained pathogenesis and solutions to increase their confidence of recovery, thereby making them comply with the treatment and nursing. Meanwhile, light music was also played in wards to improve ward environment. Notwithstanding, nurse also paid attention to care of patients' families by explaining knowledge of the disease and comforting to increase compliance and understanding, thereby lowering the possibility of medical disputes to a large extent.

Dietary guidance

During the hospitalization, nurses kept an eye on patients' conditions and made customized dietary planning to keep them nutritionally bal-

anced, accelerate recovery and monitor on their body nutritive indexes. Nurses made customized dietary plan for their patients after discharged including the food, eating methods and taboos in diet.

Respiratory care

Nurses also paid close attention to breath of patients. When there're shortness of breath, nurses would change patients' pose to adjust their breathing or give artificial sputum excretion. At the same time, nurse could give antibiotics treatment for anti-infection in accordance with doctors' advice.

Observation indicators

The main observation indicator is the treatment objective response rate (ORR) of the two groups; others are time it took for medical signs (coughing, rales, fever) to disappear, complication occurrence rate during hospitalization and nursing satisfaction of patients after the nursing.

Evaluation criteria of effect in data

X-ray film was taken on patients' lungs two weeks after treatment to evaluate effect of treatment which were categorized as effective, obviously effective and not effective. If pulmonary inflammation area did not change, then it is not effective; if the area decreased, then it is effective; if the area disappeared, then it is obviously effective. $ORR = \text{rate of obviously effective} + \text{rate of effective}$; patients evaluate their satisfaction towards nursing they received by taking the evaluation poll when they were about to be discharged. The total score was 100, classified into very satisfied (scores 90-100), satisfied (scores 75-90), OK (scores 60-75), dissatisfied (scores lower than 60). Total satisfaction rate = $(\text{rate of very satisfied} + \text{rate of satisfied} + \text{rate of OK}) * 100.0\%$ [11, 12].

Statistical analysis

All the statistical data were analyzed by SPSS21.0. Measurement data was represented by mean \pm standard deviation and tested by independent sample t, while all the enumeration data was represented by occurrence rate (n, %) and tested by χ^2 . $P < 0.05$ was considered as statistical significance.

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Table 1. Comparison of general data between the two groups

Group	Gender (male/female)	Average age
Control group (n=40)	23/17	40.21±7.34
Observation group (n=40)	22/18	41.12±8.23

Table 2. Comparison of treatment ORR between the two groups (n, %)

Group	Obviously effective	Effective	Not effective	ORR
Control group (n=40)	13 (32.50)	12 (30.00)	15 (37.50)	25 (62.50)
Observation group (n=40)	22 (55.00)	10 (25.00)	8 (20.00)	32 (80.00)
χ^2				10.45
P				<0.001

Note: ORR, objective response rate.

Table 3. Comparison of time it took for medical signs to disappear between the two groups after the nursing ($\bar{x}\pm SD$)

Group	Coughing (day)	Rales (day)	Fever (day)
Control group (n=40)	6.87±1.56	6.67±1.31	4.76±1.76
Observation group (n=40)	3.64±1.54	4.76±1.12	3.87±1.54
χ^2	9.32	7.01	2.41
P	<0.001	<0.001	<0.001

Table 4. Comparison of complication occurrence rate between the two groups after the nursing (n, %)

Group	Infection	Cardiac failure	DIC	Total occurrence rate
Control group (n=40)	6 (15.00)	5 (12.50)	6 (15.00)	17 (42.50)
Observation group (n=40)	1 (2.50)	1 (2.50)	2 (5.00)	4 (10.00)
χ^2	4.91	5.88	5.22	10.91
P	0.027	0.019	0.016	<0.001

Note: DIC, disseminated intravascular coagulation.

Results

Comparison of basic data of the two groups

Eighty patients were randomly divided into two groups: the control group and the observation group which both consisted of 40 patients. Differences of general data of the two groups such as gender and age were of no significance (all $P>0.05$) and were of comparability (**Table 1**).

Comparison of treatment ORR of the two groups

Treatment ORR of the observation group was 80.00% after the nursing while that of the con-

trol group was only 62.50%. The observation group showed obvious better effect than that of the control group ($\chi^2=10.45$, $P<0.001$). See **Table 2**.

Comparison of time it took for medical signs to disappear of the two groups after the nursing

Times they took for medical signs (coughing, rales, fever) to disappear of the observation group after the nursing were distinctly shorter than those of the control group (all $P<0.001$). The differences were of statistical significance. See **Table 3**.

Comparison of complication occurrence rate of the two groups after the nursing

The total complication occurrence rate of the observation group was 10.00% while that of the control group was as high as 42.50%. Complication occurrence rate of the observation group such as infection, cardiac failure and disseminated intravascular coagulation (DIC) was prominently lower than those of the control group ($\chi^2=10.91$, $P<0.001$). See **Table 4**.

Comparison of nursing satisfaction of the two groups after the nursing

Nursing satisfaction of the observation group was 97.50% taking the nursing while that of the control group was only 75.00%, obviously lower than the former ($\chi^2=8.53$, $P<0.001$). See **Table 5**.

Discussion

Severe pneumonia is a common multi-system dysfunction which occurs to a wide range of people who have poor resistance [13]. It is caused by poisonous anoxia and pathogen's releasing toxin into blood. At early stage, the symptoms are fever, coughing and running

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Table 5. Comparison of nursing satisfaction between the two groups after the nursing (n, %)

Group	Very satisfied	Satisfied	OK	Dissatisfied	Total satisfaction rate
Control group (n=40)	22 (55.00)	5 (12.50)	3 (7.50)	10 (25.00)	30 (75.00)
Observation group (n=40)	28 (70.00)	9 (22.50)	2 (5.00)	1 (2.50)	39 (97.50)
χ^2					8.53
P					<0.001

nose and feeling unwell. Or even worse, patients might feel flustered and dyspnea to a varied extent. It can also result in complications like DIC and cardiac failure, which jeopardizes patients' life and health and prognosis [14]. Research shows that, effective nursing can help improve prognosis of patients with severe pneumonia [15]. Patients are likely to be infected by bacteria during treatment, as they have poor resistance. Therefore, they require high quality nursing [16]. At present, the routine nursing mode widely used in clinical application is somewhat monotonous and covers a limited area, thus it is less effective. Multiple researches show that, applying a more widely-ranged and innovative effective nursing mode in severe pneumonia can distinctly improve the treating effect and prognosis quality and reduce occurrence of complications [17].

As modern medical nursing develops, and people are increasingly requiring higher quality of life, routine nursing has been out of date for clinical care. Therefore, a series of new nursing modes like custom nursing, continuous nursing and comprehensive nursing, have been created and proven to have good clinical effects [18]. Stabilizing patients' psychological and physical conditions by comforting them to improve their initiatives and compliance in receiving nursing is nurses' critical job [19]. According to report authored by Dang, application of humanistic nursing on stroke patient evidently improved effect of treatment, patients' limb function and motion, which means that motions play a significant role in prognosis [20]. In this study, humanistic nursing intervention was applied on patients with severe pneumonia. Including psychological nursing, dietary guidance and respiratory care, the nursing was more meticulous, professional and comprehensive with effective improvement in patients' motion and recovery. At first, we gave psychological nursing to patients, let them know about pathogenesis, the disease and the changes of body function, so as to eliminate their psychological disorder,

increase their initiatives and compliance, thereby improving effect of treatment and post-operation recovery; secondly, we gave dietary guidance to patients to make them diet scientifically, let them know the best way and the best food for them, refuse any food that is bad for recovery; meanwhile, we gave respiratory care to patients: clean respiratory secretions to avoid ill symptoms caused by airway obstruction. This not only relieved patients a lot but also improved their recovery. Results of this study showed that treatment ORR of the observation group was obviously higher than that of the control group. The time it took for medical signs to disappear of the former group was shorter than the latter. Complication occurrence rate of the former was lower than the latter. What's more, nursing satisfaction of the former was much higher than the latter. All of these showed that humanistic nursing could effectively relieve patients' pain and had good effect on recovery. It improved patients' emotions as well as doctor-patient relationship. However, nursing mode in this study towards patients' complications care is limited to infection, cardiac failure and DIC and is in defect of care for other complications that reflect recovery from severe pneumonia such as encephaledema and intoxication enteroparalysis, which worth further study with more indicators.

Overall, humanistic nursing can prominently enhance treating effect of severe inflammation and accelerate patients' recovery. It is safe and helps reduce complication occurrence rate, thus it is worth widening clinical application.

Disclosure of conflict of interest

None.

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