

# Analysis on the Effects of Application of Clinical Nursing Protocols on Patients with Bronchial Asthma

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**ABSTRACT Objective:** To observe and analyze the clinical application effects of clinical nursing protocols during the treatment of bronchial asthma. **Methods:** 98 cases of bronchial asthma patients' clinical data were analyzed retrospectively and they were divided into the research group (49 cases) and the control group (49 cases) randomly. Patients in both groups received regular nursing. Meanwhile, the research group was given clinical nursing protocols in addition to regular nursing whereas the control group received the regular nursing only. Clinical application effects, cognitive rate of the disease, duration of hospitalization and the satisfaction degree of nursing in the two groups were compared. **Results:** The clinical application effects, cognitive rate of the disease, duration of hospitalization and satisfaction degree of nursing of the research group were all superior to the control group and the differences were significant statistically ( $p < 0.05$ ). **Conclusion:** The application of clinical nursing protocols in the nursing of bronchial asthma patients Results in good clinical application effects, whereby it can effectively enhance the patients' cognitive rate and satisfactory degree of nursing, and reduce the duration of hospitalization.

## KEYWORDS

Bronchial asthma  
Clinical nursing protocols  
Regular nursing  
Application effects

## 1. Introduction

Bronchial asthma is a common disease of respiratory system. Inhalation therapy is primary prevention and treatment for this disease, which provide long term disease control. However, there are some limitations, encompass the patients' therapy dependence that associated with the patients' knowledge and the disease severity [1]. Clinical nursing is a brand-new clinical service mode which provides patients with comprehensive and systematic nursing service. It improves the nursing quality as well as the patients' therapy dependence. This study selected 98 cases of bronchial asthma patients and the clinical application effects of clinical nursing protocols in the bronchial asthma

nursing were analyzed and reported as follows.

## 2. General Data and Method

### 2.1. General Data

98 cases of bronchial asthma patients in the hospital between June 2012 and June 2013 were selected as the research objects (61 males and 37 females; age ranged from 19 to 75; disease history ranged from 1 to 21 years). After diagnosis, all the patients met the diagnosed criteria stipulated by 2006 Global Asthma Prevention and Treatment Promotion, with no hepatitis, nephritis and other infectious diseases and serious heart, liver, kidney or lung diseases. They were divided into the research group and the control group randomly. Each group consists of 49 cases. 30 males and 19 females in the research group, age range from 19 to 72 years old, disease history ranged from 1 to 20 years; 31 males and 18 females in the control group, age range from 21 to 75 years old, disease history ranged from 1 to 21 years. There was no difference in gender, age, disease history and other aspects of general data statistically ( $p > 0.05$ ), so, it was comparable.

### 2.2. Method

For the nursing of bronchial asthma, the clinical nursing

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protocols mainly included: (1) Reasonable arrangement of the wards. Patients with bronchial asthma were well arranged in quiet and clean wards to avoid the occurrence of bronchial asthma. Grass and flowers are prohibited in the room and ventilation is maintained regularly to keep the air circulation. Appropriate temperature in the room should be maintained and anaphylactogens should be avoided in the room [2]. Besides, due to the high risk of bronchial asthma, the wards should be far away from those of other patients to prevent the virus and bacterial cross infection. (2) Nursing care. When the disease manifested, there will be difficulty in breathing, so the nurses should help the patients to get a comfortable posture, such as lying, sitting, half sitting, etc. This can help to reduce the blood volume and cardiac load and promote the discharge of secretions in the respiratory tract. In general situation, patients are advised to sit or half-sit, which can lower the bronchial asthma patients' diaphragms and enlarge the chest that enhances breathing. In fact, this posture is the most comfortable body posture for patients when bronchial asthma attacks. (3) Diet nursing. Adjust the patients' diet combination reasonably, supply high calories, high protein, liquid or semi liquid food with high vitamin according to the patients' body constitution and have more fresh fruits and vegetable. Fast irritating, sour and spicy food, and fish, shrimp and crab should be avoided to prevent the occurrence of asthma [3]. Further details are as follows: Firstly, the nursing staffs should advise the bronchial asthma patients to drink more water, prevent the loss of moisture by replenishing water timely, which can help in dilution of sputum and promoting the discharge of the viscous sputum in the respiratory tract. If the patients are unable to drink water through mouths, intravenous infusion can be done. Secondly, in respect of long-term existence of bronchial asthma in patients with airway hyperactivity, cigarettes, wine and high salt intake, negative bronchial reactions are readily occurred. Therefore, this is a patient taboo. (4) Medicine application nursing. Aminophylline, dihydroxy diprophylline and other theophylline drugs are the preferred medicines for the treatment of bronchial asthma but the particular therapeutic dose of these medicines are very close to the fatal dose. Therefore, nurses should control the infusion speed reasonably and closely observe the patients' reactions. If there are any adverse reactions such as nausea, vomiting, convulsions and arrhythmia, the nurses should promptly stop the infusion and handle according to the patients' concrete symptoms. (5) Psychological and health education. There will be chest tightness, shortness of breath and other symptoms when the bronchial asthma attacks. This could lead to the patients' anxiety, nervousness, upset, and other adverse psychological reactions, which will increase the difficulty in breathing. Therefore, the nursing staff should communicate with patients in a gentle manner and introduce the relevant knowledge, clinical symptoms and preventions to ensure the patients' understanding. This

can effectively relieve the adverse psychological reactions that allow well cooperation with the nurses. This positive mental attitude would shorten the disease history and enhance the clinical curative effects and nursing quality [4].

### 2.3. Observation Index

The observation indexes of the patients in the groups include clinical application effects, the cognitive rate, duration of hospitalization and the satisfactory degree of the nursing. The satisfactory degree is measured based on the questionnaire, whereby patients' satisfactory degree towards the hospital and the total score is 100 points. Higher scores imply more ideal of the nursing.

### 2.4. Assess Criteria of the Application Effects

Application effects of clinical nursing protocols were expressed as significantly effective, effective and ineffective. "Significantly effective" denotes the symptoms of difficulty in breathing, cough, asthma, etc. disappear and the breathing rate is normal. Also, the noises of lung crackles disappear. "Effective" denotes the symptoms of difficulty in breathing, cough and asthma has improved. The breathing rate slows down, and the noises of lung crackles basically disappear. "Ineffective" denotes the symptoms of difficulty in breathing, cough and asthma do not improve or deteriorate. Significantly effective and effective were taken as the patient's total effective situations [5].

### 2.5. Statistics Method

All data in this study were processed by SPSS17.0 statistics software. The measured data were expressed by the mean  $\pm$  standard deviation ( $\bar{x} \pm s$ ) and tested by *t*-test, the measured data were indicated by percentage (%), tested by chi-square,  $p < 0.05$  meant the differences were statistically significant.

## 3. Results

### 3.1. The Comparisons of Clinical Application Effects and Cognitive Rate of the Disease of the Patients in the Groups

After the corresponding clinical nursing protocols were practiced, none of the research group was ineffective and 49 cases were total effective, which accounted for 100%. Among the group, 33 cases were significantly effective (67.35%), 16 cases were effective (32.65%); 43 cases were total effective in the control group, which accounted for 87.86%, 12 cases were significantly effective (24.46%), 31 cases were effective (63.27%), 6 cases were ineffective (12.24%). As compared with the total effective rate of these two groups, the research group was significantly higher than the control group, the clinical application effects of the two groups were statistically significant ( $p < 0.05$ ). As compared the cognitive rate of the disease with the control group, the differences were statistically significant ( $p < 0.05$ ). The details are shown in Table 1.

**Table 1.** Comparison between the clinical application effects and disease cognitive rate of the patients in the two groups.

Group	n	Clinical Application Effects				Disease cognitive rate (%)
		Significantly effective	Effective	Ineffective	Total effective Rate (%)	
The control group	49	12 (24.49)	31 (63.27)	6 (12.24)	87.86	61.22
The research group	49	3 (6.735)	16 (32.65)	0 (0)	100	87.86
$\chi^2$	/	18.121	9.199	6.391	12.766	19.187
$p$	/	<0.05	<0.05	<0.05	<0.05	<0.05

### 3.2. The Comparisons of the Length of Hospital Stay and the Satisfactory Degree of the Nursing of the Patients in the Groups

Based on the duration of hospitalization and the satisfactory degree of nursing of the two groups, the research group was superior to the control group and the differences were statistically significant ( $p < 0.05$ ), which is shown as Table 2.

**Table 2.** The comparison of the length of the hospital stay, the satisfactory degree of nursing of the patients between the two groups.

Group	The length of hospital stay (d)	The satisfactory degree of nursing (points)
The control group	5.91 ± 0.72	82.50 ± 1.50
The research group	3.77 ± 0.48	95.25 ± 3.25
$t$	8.451	8.557
$p$	<0.05	<0.05

## 4. Discussion

Nowadays, there is no concurring opinions about the pathogenesis of bronchial asthma in the medical circle, but vast majority of scholars believe that the occurrence of this disease is directly related to the following causes: allergic reaction, airway chronic inflammation, airway hyper responsiveness, airway disorders, genetic mechanisms, respiratory tract virus infection, nerve signal transduction mechanisms and airway remodeling and their interaction. In addition, patients with bronchial asthma are seriously suffered and the symptoms are not improved fundamentally after long-term clinical treatment. Furthermore, such condition would intensify the psychological burden. This common psychological imbalance would further increase the pressure of clinical work. The conducts of effective nursing project that enhance the patients' clinical dependence and eliminate the torture of disease within a short period is an important aspect of clinical research.

Although the regular nursing for bronchial asthma patients can obtain certain nursing effects, it does not focus on the psychological states of the patients, while it focuses mainly on the nursing effects and physical mechanism indexes. This causes noncompliance of patients and affects the nursing work seriously. Therefore, enriched clinical nursing can control the patients' disease to some extent and enhance the clinical curative effects [6]. Clinical nursing protocol is a standardized diagnosis and treatment.

With the integration of nursing mode, nursing programs are formulated according to the patients' specific diseases conditions. In fact, patient is the core of the entire nursing process that provides the patients with high quality of nursing service. Implementation of clinical nursing protocols focuses more on the patients' psychological experience as well as the patients' disease. It highlights humanistic care by providing full range of care, which relieves the patients' physical and mental pressure throughout the treatment that subsequently could achieve the purpose and target of treatment [6]. Therefore, this nursing program has a higher clinical application value, which has drawn high attention of clinical staffs.

In this study, the clinical application effects, disease cognitive rate, duration of hospitalization and satisfactory degree of nursing of the research group are superior to the control group and the differences are significant. Based on the result, clinical nursing protocols result in excellent nursing effects and are preferred for clinical nursing.

In conclusion, the implementation of the clinical nursing protocols can improve the patients' clinical symptoms, reduce the duration of hospitalization, avoid dispute between doctors and patients, enhance patients' disease cognitive rate and satisfactory degree of nursing, promote the patients' recovery and ultimately obtain excellent clinical application effects.

## References

- Xin H. The application of clinical nursing pathway in patients (critical) with bronchial asthma. *Medl Inf.* 2013;26(6):252-253.
- Zhang Y, Liu X. The effect of clinical nursing path on of the treatment adherence and satisfaction for patients with bronchial asthma. *Nurs Pract Res.* 2012;9(17):29-30.
- Bai M. The application of clinical nursing path in the bronchus asthma patient care. *J Qilu Nurs.* 2009;15(15):30-31.
- Tang J. The applied research of clinical nursing path in bronchial asthma car. *Health Must-read Mag.* 2013;12(9):485-486.
- Xu W. The application of clinical nursing path in the bronchus asthma care. *J Henan Med Coll Staff Work.* 2012;24(5):661-662.
- Zhang X, Chen X, Chen S. Observation of the effect of clinical nursing pathway on severe bronchial asthma. *China Foreign Med Treat.* 2015;15(10):144-145.