Discussion on the comprehensive effect of PDCA nursing model in children bronchopneumonia

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Abstract: Objective: To discuss the comprehensive effect of PDCA nursing model in children bronchopneumonia. **Methods:** Selected our hospital of 100 patients with infantile bronchopneumonia, randomly divided into the observation group and the control group, 50 cases in each group. PDCA nursing model was used in the observation group and conventional nursing model was used in the control group, compared with the content of the care of children with fever, cough, shortness of breath during clinical manifestations appeared probability, statistics of two groups of children in care disease outcome during the period of validity, collecting the opinions of the parents, parents statistics to the satisfaction of nursing. **Results:** The clinical manifestations of fever, cough and shortness of breath in the observation group were not high on the whole, the disease prognosis and adverse feelings in the observation group were better alleviated during the nursing period, the effectiveness of nursing was higher, and the overall satisfaction rate of the parents of the children in the later nursing period was higher. There was significant difference between the two groups ($P<0.05$). **Conclusion:** PDCA nursing model has a strong comprehensive effect in children's bronchial pneumonia. Under the routine nursing form, all clinical examination results have been confirmed. The feedback from children and their families is more positive, and the nursing form is more recognized, which can be promoted in clinical practice.

1. Introduction

PDCA cycle is also known as "deming circle", deming is American quality management expert, the theory put forward by himself, and the meaning of the ring can be regarded as circulation, nursing is a cyclic process, should have a clear plan of care, careful check after execution, and deal with the issue of check out, and then discuss the problem correction after correction plan, be care of the whole continuous quality improvement, infantile bronchopneumonia easily cured, recurrent, clinical more common, easy to cross infection, based on the triggers of bacteria and virus infection in children with problems, adopt PDCA nursing mode, all-round care inspection and intervention, Can realize the comprehensive effect of nursing.

2. Materials and Methods

2.1 General Materials

100 cases of pediatric bronchial pneumonia patients admitted to our hospital were randomly divided into the observation group and the control group, with 50 cases in each group. PDCA nursing model was adopted in the observation group, while conventional nursing model was adopted in the control group. The patients in the observation group were at least 9 months old and at most 11 years old, and their disease duration ranged from 5 days to 3 months. The age of the patients in the control group ranged from 9 months to 12 years old, and the duration of disease ranged from 4 days to 3 months. All patients had the following characteristics: cough, shortness of breath, signs or possibility of fever, and respiratory tract inflammation. Children with severe malnutrition, low body weight, and a history of other major diseases were excluded.

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2.2 Methods

2.2.1 Routine care

Check the status of children and help children to do the inspection and record, understand the patient's medical history, check the ventilation and air temperature and humidity in the room, if the climate is relatively dry, environment is relatively dry, attention should be paid to increase the humidity, such as sprinkling water on the ground appropriate increase humidity, pay attention to replenish water, observe the patient's condition, clean of the respiratory tract secretion promptly, cases with atomization inhalation of respiratory difficulty, and corresponding advantages of families that atomization inhalation and treatment basis for observing children in after a series of reactions.

2.2.2 PDCA nursing model

(1) P (PLAN): To investigate and closely observe the patient's characterization, the fever, vomiting, irritability, and so on and so forth, analysis of children is a dry cough, cough with phlegm, understand the status of the children with breathing, is there a moan, difficulty breathing, breathing, cyanosis, incite, respiratory symptoms such as prolonged breathing nose, observe the patient's mouth week with nail color, shape, ask parents about the details of the item. Children will record the situation down, formulate personalized nursing plan, preliminary analysis of the possibility of adverse symptoms in children with, to be prepared for all the care, and remind family members to observe children and nursing personnel timely communication, carries on the preliminary psychological comfort for neonates and a touch on the rub hot hands, gently pat children on the back, the children made faces and other ways to relieve the patient's pressure, reduce the children to the hospital under the strangeness of anxiety.

(2) D (DO): Often improve the patient's respiratory function, change the patient's position, children in breathing difficulties, can take half supine position, combined with the treatment to observe the doctor's advice, and communicate with their families, have time to pat on the back, pushing infants in cough, sputum, aerosol inhalation and sputum suction process should observe the patient's reaction, should immediately stop when children crying, feeding should be careful, avoid to produce choking cough, children with fever take physical cooling, at the same time pay attention to keep the children with oral and skin clean, wash a face to brush one's teeth in daily, ready to infants and young children wet paper towel to wipe the nose and mouth secretions, monitoring the patient's heart beat, Heart acceleration greater than 160-180 times/min, liver in a short time of rapid increase in the performance of heart failure, timely report to the doctor, give oxygen inhalation and slow down the speed of infusion, according to the doctor's advice to give strong heart, diuretic drugs, in order to enhance the contraction force, reduce the heart load. During the treatment, children are likely to be irritable, so we should pay attention to the psychological guidance of children, reduce their pressure in combination with their age and other factors, shift their attention, carry sterilized toys to alleviate the bad feeling of their condition, and improve their psychological enthusiasm and compliance. Explain the inducement of the disease and matters needing attention to the family members of the sick child simply, and ask the family members to observe the situation of the sick child at any time during the contact time with the sick child, feed reasonably, and fundamentally improve the environmental health around the sick child, pay attention to keep warm, etc.

(3) C (CHECK): Macroscopic observation, communication, ask, clinical examination, etc., to understand children in a series of nursing after the reaction, a detailed communication with their families, to understand the patient's feelings and disease characterization, analysis of the patient's individual demands, will be needed for children, not included in the nursing record condition, discussed in nursing link sharing, at the same time CHECK care in place or not, the nursing staff, should be graded warning wasn't up to standards of care, the key point of nursing knowledge and skills, training nursing on a regular basis.

(4) A (ACTION) : Summarize the nursing deficiencies found, and focus on the inspection of this part in the following nursing. Reward should be given to nursing staff who are more active and recognized by their families, set up A nursing example, and encourage nursing staff to form A

passion for work. The nursing plan should be revised and the content of the plan should be reformulated according to the opinions of the family members and the actual performance of the children.

2.3 Observation Indicators

The comparison included the incidence of clinical manifestations of fever, cough and shortness of breath in the children during nursing care. The effectiveness of disease transition in the two groups was statistically analyzed. The children had no symptoms of fever, vomiting, irritability and shortness of breath. The original symptoms of the children were obviously relieved, with occasional fever, vomiting, irritability and shortness of breath, and no moaning, cyanosis or other problems during breathing. The children were more compliant, and less crying was considered as an obvious effect. The patient still had a series of symptoms at admission, including increased cough, sputum, nasal wing agitation during breathing, and prolonged exhalation, which was considered invalid. Collect the opinions of parents of children, and statistics the satisfaction rate of parents to nursing.

2.4 Statistical Methods

Excel software such as medical office under the discrete data statistics and classified count (X^2 test, is used to infer that two or forming than there is difference between the overall rate), matching measurement data comparison between samples or groups (t test, observe the differences of this group of samples with overall), x (average) ±s (Standard Deviation) said mean add and subtract Standard Deviation, the small probability event of statistical quality control ($P < 0.05$ said have significant difference (one hundred trials, the frequency is less than 5 times).

3. Results

Children bronchopneumonia is clinically common fever, cough, shortness of breath, the symptoms of children in the nursing still have no relief of the corresponding data for comparison, the observation group only 1 child fever, 1 child cough symptoms repeated; There were 3 cases of fever, 5 cases of cough and 1 case of shortness of breath in the control group, and all kinds of adverse clinical symptoms in the control group accounted for 18%, more than 4% in the observation group.

Table 1 comparison of the incidence of adverse reactions between the two groups

group	n	fever	cough	Shortness of breath	Total rate
the observation group	50	1	1	0	4%
the control group	50	3	5	1	18%
X^2	-	3.265	4.125	2.526	3.596
P	-	<0.05	<0.05	<0.05	<0.05

Effective in clinical care, compared with invalid number of cases were markedly effective, observation group total effective rate was 98%, including 2 cases not seen obviously improve clinical symptoms and characterization of still have a cough, fever, control the overall nursing effective rate was 88%, among them 6 cases of clinical symptoms appeared again and again, characterization of fever, cough, shortness of breath.

Table 2 comparison of the effective rate of each clinical examination between the two groups

group	effective	apparent	no effects	total effective rate
the observation group	36	12	2	96%
the control group	35	9	6	88%
X^2	2.956	2.745	2.459	2.639
P	< 0.05	< 0.05	< 0.05	< 0.05

At the later stage of nursing care, questionnaires were issued, or parents of children were

interviewed directly, opinions were collected and scoring statistics were conducted. The scores of parents of children in the observation group were higher, and the overall scores of the control group were also higher, but slightly lower than those of the observation group.

Table 3 satisfaction scores of patients in the two groups during nursing [n(%)]

group	n	satisfaction	general satisfaction	dissatisfaction	total satisfaction rate
the observation group	50	36	13	1	49(98%)
the control group	50	35	10	5	45(90%)
X^2	-	4.529	4.758	3.369	3.745
P	-	<0.05	<0.05	<0.05	<0.05

4. Discussion

Bronchopneumonia is one of the most common infectious diseases of children's lower respiratory tract, which mainly affects the alveoli of children's respiratory tract and the interstitium between alveoli, causing the occurrence of bronchopneumonia, and is a common infectious disease in children, especially infants. Main clinical manifestations: fever, cough, shortness of breath, vomiting, irritability, shortness of breath, etc. Children's resistance is weak, in a poorly ventilated environment, it is easy to be invaded by bacteria or viruses, and cause infection, accidentally see widespread infection situation of local children number is more, is difficult to take care of considerate care, adopt PDCA mode of nursing can plan according to the number of children's hospitals, coordinate distribution of nursing staff, make every hospitalized children are able to obtain reasonable nursing, the widespread infection cases, more to the patient's individual representation, has targeted the comprehensive nursing care, care to take care of children in all kinds of situation, and listen to the opinions of the family, Recorded in the ask family members understand the ins and outs of the sick children, understand children with individual situation, formulate plans, in the execution of the plan stage, consideration should be given to each problem, making nursing a more comprehensive, follow-up communication with their families, pay attention to the children, and to reflect on the deficiency of nursing, correct nursing plan, at the same time pay attention to the score of rewards and punishments for nursing staff take care PDCA circulation nursing mode, continuously summarize experience, continuously improve the quality of nursing. To sum up, in this nursing survey, after PDCA nursing mode intervention in the observation group, all adverse conditions of the children were contained, the children recovered faster, and their families were satisfied. PDCA nursing mode was applicable to pediatric bronchitis.

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