

# *On Application Effect of Predictive Nursing Procedure on Patients with Cerebral Hemorrhage*

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**Abstract:** Objective: To explore the clinical application effect of predictive nursing procedure on the patients with cerebral hemorrhage. Method: The author collated nursing data of 60 cerebral hemorrhage patients who were received and treated in the hospital from April 2017 to April 2019, and they were classified into control group (30 cases) (conventional nursing) and observation group (30 cases) (predictive nursing procedure). Life quality score, nursing satisfaction rate, incidence rate of complications and length of hospital stay of both groups were retrospectively analyzed. Results: Compared with the control group, life quality score and nursing satisfaction rate of observation group were higher, while the incidence rate of complications and length of hospital stay were lower,  $P < 0.05$ . Conclusion: The application of predictive nursing procedure for cerebral hemorrhage patients can accelerate patients' recovery, promote service quality, improve patients' life quality and prevent relevant complications, so it deserves to be promoted and applied.

## **1. Introduction**

Cerebral hemorrhage is one of common diseases with high incidence rate, fatality rate and disability rate. It has large harm. The most common sequelae include hemiplegia and aphasia, thus leading to low life quality. Besides, some patients also have negative psychological states such as self-abasement, dysphoria and anxiety [1]. Paying attention to the nursing study in the treatment period of cerebral hemorrhage patients contributes to helping patients accelerate recovery and improve life quality through nursing measures. Predictive nursing procedure as a new nursing mode has the advantage of foreseeability. It not just attaches importance to treatment and nursing of current disease, but also pays more attention to predictive nursing. It depends on the advantage of foreseeability to improve nursing service quality [2]. In this study, the nursing data of 60 cerebral hemorrhage patients who were received and treated in the hospital from April 2017 to April 2019 were combined to retrospectively analyze the application value of predictive nursing procedure in nursing.

## 2. Data and method

### 2.1. General data

The objects of this study are 60 cerebral hemorrhage patients who were received and treated in the hospital from April 2017 to April 2019, and they were classified into observation group and control group according to the nursing methods. Control group: 30 cases, 16 male cases, 14 female cases, age 48-77 years old, average age ( $63.84\pm 3.75$ ) years old, amount of cerebral hemorrhage 30-70ml, average amount of cerebral hemorrhage ( $45.85\pm 5.72$ )ml. Observation group: 30 cases, 18 male cases, 12 female cases, age 45-78 years old, average age ( $63.81\pm 3.78$ ) years old, amount of cerebral hemorrhage 30-72ml, average amount of cerebral hemorrhage ( $45.88\pm 5.70$ )ml. The relevant data of both groups meet comparability requirement,  $P > 0.05$ .

### 2.2. Method

Control group: conventional nursing method was adopted for cerebral hemorrhage patients, including disease observation, inpatient ward environment nursing, medication nursing, health education, and diet instruction, etc.

Observation group: based on conventional group, predictive nursing procedure was applied. The intervention measures include the following: (1) disease observation nursing intervention. The rehaemorrhagia risk was predicted according to blood pressure changes, and nursing measures were taken according to the bleeding amount changes of cerebral hemorrhage patients. For example, for the patients with large amount of bleeding, patient's head can be raised properly, and effectively fixed to prevent rehaemorrhagia. Electrocardiograph monitoring was conducted for patients, and electrocardiograph monitoring data were fully applied. The existing studies indicate that abnormal change of initial electrocardiograph of cerebral hemorrhage patients is correlated with the prognosis. If ST-T change, U wave abnormality, ventricular premature beat and other electrocardiographic abnormal changes happen to the patients, patients' death risk is large. Thus, the attending doctor was contacted in time according to electrocardiographic changes to effectively treat patients and avoid exacerbation [3]. (2) Respiratory tract nursing intervention. Respiratory secretions of patients were cleaned at a regular interval to ensure unobstructed respiratory tract. If the patients do not undergo endotracheal intubation, it is necessary to turn over the patients and pat the back at a regular interval, such as once per 2h. Antitussive and expectorant medicines can be taken by following the doctor's advice to help patients expel phlegm smoothly. If patient's sputum is viscous, aerosol inhalation can be used to dilute sputum to guarantee sputum elimination [4]. (3) Pressure ulcer prevention nursing. The nursing personnel assisted the patients in turning over at a regular interval to avoid long-time pressing of the same part. For the patients who can sweat easily, they should be enjoined to change clothes in time. The bed sheet and quilt cover should be changed for patients to ensure bed dryness and comfort. It necessary, the cotton-padded mattress can be used to protect the pressed part. Besides, the pressed part can be massaged [5]. (4) Urinary system nursing. The nursing personnel evaluated whether the patients suffered urinary system infection according to patients' daily liquid intake and discharge volume, urine color and urine volume change, informed them of the symptoms of urinary system infection and asked patients about the symptoms [6]. (5) Early functional rehabilitation training. The patients with cerebral hemorrhage may have many

obstacles after treatment. At this time, early functional training is required according to different patients, such as facial paralysis function training, linguistic function training and hemiplegia function training.

### 2.3. Observation index

(1) Life quality score after nursing; (2) nursing satisfaction rate; (3) incidence rate of complications; (4) length of hospital stay

### 2.4. Evaluation index

Ability of Daily Life scale (ADL) score was used to evaluate patients' life quality after nursing. The full score is 100. The higher score corresponds to the better life quality[7]. The nursing satisfaction rate was acquired by Questionnaire of Nursing Service Satisfaction Rate. The survey results include satisfied, general and dissatisfied.

### 2.5. Statistical method

SPSS22.0 software was applied to process research data. Measurement data:  $\bar{x} \pm s$ ,  $t$  test; enumeration data: [n (%)],  $\chi^2$  test,  $P < 0.05$ : the difference has statistical significance.

## 3. Results

### 3.1. Life quality score after nursing

Compared with the control group, life quality score of observation group after nursing was higher,  $P < 0.05$ , as shown in Table 1.

Table 1 Life quality score after nursing ( $\bar{x} \pm s$ , score)

Group	No.	ADL score
Observation group	30	78.53±4.71
Control group	30	56.74±6.82
t	/	14.399
P	/	0.000

### 3.2. Nursing satisfaction rate

Observation group: 29 cases were satisfied (96.67%); 1 case felt general (3.33%). Control group: 24 cases were satisfied (80.00%); 5 cases were dissatisfied (16.67%). The nursing satisfaction rate of observation group was higher than that of control group, and the difference was obvious ( $\chi^2=4.043$ ,  $P=0.044$ ).

### 3.3. Incidence rate of complications

The incidence rate of complications in the observation group during the nursing period lowered obviously, compared with the control group, and the data analysis had statistical significance,  $P < 0.05$ , as shown in Table 2.

Table 2 Comparison of incidence rates of complications [n (%)]

Group	No.	Pulmonary infection	Pressure ulcer	Urinary system infection	Total incidence rate
Observation group	30	1 (3.33)	0 (0)	0 (0)	1 (3.33)
Control group	30	2 (6.67)	3 (10.00)	1 (3.33)	6 (20.00)
$\chi^2$	/	/	/	/	4.043
P	/	/	/	/	0.044

### 3.4. Length of hospital stay

The length of hospital stay of observation group was  $(19.83 \pm 1.47)$ d, while it was  $(24.46 \pm 1.78)$ d for the control group. Compared with the control group, the length of hospital stay of observation group decreased,  $t=10.985$ ,  $P=0.000$ .

## 4. Discussion

Many reasons can cause cerebral hemorrhage, such as intracranial tumor and hypertension. Based on symptomatic and supportive treatment, cerebral hemorrhage patients also need to pay attention

to effective nursing to help them complete treatment smoothly, avoid complications and dysfunctions in the treatment period and help patients recover normal life quality[8].

During conventional nursing of cerebral hemorrhage patients, nursing measures are single, and individual differences of different patients are ignored. Besides, the nursing method is general, and relevant nursing obviously lags behind. Most adopt nursing measures after nursing problems occur, which not just extends the length of hospital stay, but also affects the rehabilitation effect.

In this study, the predictive nursing procedure was adopted for the observation group. This nursing method has procedural nursing advantage. The nursing personnel nurse patients according to the procedure, thus improving nursing normalization. Meanwhile, the predictive nursing can focus on individual differences of different patients and value beforehand prevention and control[9]. Through enhancing disease observation and applying various monitoring data, mortality risk, rehaemorrhagia risk and sequela risk can be conveniently predicted. By depending on predictive nursing intervention in typical complications such as respiratory tract, urinary system and pressure ulcer, prevention and nursing can be considered at the same time to minimize relevant complications. For the possible complications, functional training can be applied to lower the sequela risk.

Based on the analysis of research results, ADL score of observation group was higher than that of control group, verifying that the overall life ability of observation group after nursing is superior to that of control group. The incidence rate of complications of observation group (3.33%) was lower than that of control group (20.00%), indicating that the predictive nursing procedure can prevent complications. The satisfaction rate of observation group (96.67%) was higher than that of control group (80.00%), and the length of hospital stay of observation group was shortened obviously, comprehensively verifying the high application value of predictive nursing procedure. This result is consistent with the research conclusion of Ma Caixia et al.[10].

In conclusion, the application of predictive nursing procedure for cerebral hemorrhage patients can accelerate patients' recovery, promote service quality, improve patients' life quality and prevent relevant complications, so it deserves to be promoted and applied.

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