

# Analysis of the Effects of Perioperative Nursing Intervention for Patients with Cerebrovascular Intervention

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**Abstract: Objective:** To explore the clinical application effects of perioperative nursing intervention in the treatment of patients with cerebrovascular intervention. **Methods:** 176 patients with cerebrovascular intervention in our hospital from October 2018 to March 2020 were selected and randomly divided into 2 groups, with 88 cases in the control group and 88 cases in the observation group. Comparative analysis of blood pressure and incidence of complications was performed. **Results:** During the operation, the systolic blood pressure of the observation group increased by  $(11.85\pm 1.66)$  mmHg, and the diastolic blood pressure was  $(4.63\pm 0.45)$  mmHg. The control group patients' systolic blood pressure increased by  $(22.12\pm 1.98)$  mmHg and the diastolic blood pressure was  $(8.36\pm 3.69)$  mmHg, the two results were significantly different. The blood pressure of the patients in the control group fluctuated more; and the incidence of complications in the observation group is lower than that of the control group. The observation group's incidence of hematoma, low back discomfort, dysuria, and insomnia and dreaminess was 2.27%, 2.27%, 1.14%, 0%, respectively, with total incidence of 5.68%; in the control group, the incidence of hematoma, low back discomfort, dysuria, insomnia and dreaminess were 6.81%, 5.68%, 3.41%, 4.55% respectively, total incidence being 20.45%. The difference between observation group and control group is obvious. **Conclusion:** Through perioperative nursing intervention, the recovery speed of patients can be improved, and the incidence of postoperative complications can be reduced. The mental state of the patient before the operation was adjusted, the

emotions were calmed, the patient's compliance was improved, and the patient's resistive emotions were reduced. At the same time, if patients can get good nursing care after surgery, the probability of postoperative complications is reduced, so that patients have better results in surgery, and its clinical application is worthy of promotion.

**Keywords:** Cerebrovascular patients; Perioperative nursing; Nursing effect

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Cerebrovascular disease is the second most threatening disease to human health after malignant tumor disease, and its disability rate and mortality rate are higher. The treatment of cerebrovascular interventional surgery is systemic heparinization and interventional treatment using digital subtraction technology. One method is very effective in treating intracranial vascular stenosis and intracranial and extracranial artery plaques<sup>[1]</sup>. However, because the patient knows little about the disease and the operation, negative emotions may arise before and after the operation. On this basis, this paper started the research on the effects of postoperative nursing intervention for patients with cerebrovascular intervention, details as follow.

## 1 Information and Methods

### 1.1 General Information

176 cerebrovascular interventional patients in our

hospital from October 2018 to March 2020 were selected and randomly divided into 2 groups, with 88 cases in the control group and 88 cases in the observation group. The researchers had informed the patients and met the requirements of the ethics committee. There is no significant difference in the basic information of the two groups of patients ( $P > 0.05$ ), and they are comparable.

## 1.2 Methods

The control group received routine care in the operating room. In other words, the nurse helped the patient to make various preparations before the operation, cooperated with the doctor during the operation, sent the patient back to the ward after the operation, and completed the handover with the nurse in charge.

Each patient in the observation group was equipped with a professional intervention nurse to provide preoperative and postoperative nursing guidance. (1) The selection criteria for nursing staffs are as follows. Participated in the above-mentioned supervising nurses and nurse titles, with at least 3 years of clinical work experience, excellent communication skills, cerebrovascular intervention and nursing-related training, and after passing the assessment.

(2) Preoperative treatment: Perform individual condition and cognitive assessment of the patient, understand the basic situation and progress of the treatment and understand the patient's mental health in this way, and treat patients who feel unhealthy. Strengthen by providing psychological intervention guidance. Psychological counseling. Some patients have insufficient knowledge of the disease; in this case, one-on-one personal education, health education, and introduction to the cerebrovascular interventional treatment environment should be provided. Patients should be instructed to conduct trauma and defecation training before surgery, and they should be encouraged to do appropriate physical training. Carry out exercise training to recover from the operation.

(3) Intraoperative treatment: During the operation, the patient is accompanied by a professional interventional nurse to the operating room, and

he chooses a comfortable posture with the nurse's help. The nurse accompanies you throughout the process, observe your feelings at any time, provide psychological counseling and help you relax. It can prevent patients from being overly nervous, causing obvious changes in blood pressure, and preparing for emergency treatment for unexpected problems during surgery so that they can respond quickly.

(4) Postoperative care: observe the patient's puncture hole, if the suture device has no puncture hole, press it in with a salt bag. Instruct patients to adjust their daily drinking water between 800ml and 1200ml as soon as possible to eliminate contrast. Observe local bleeding and infection after surgery to avoid bedsores.

## 1.3 Observation Indicators

(1) Compare changes in blood pressure of patients during surgery.

(2) Compare the incidence of postoperative complications in patients, mainly including hematoma, lower back discomfort, dysuria, insomnia and dreaminess.

## 1.4 Statistical Methods

SPSS 20.0 statistics software was used for data analysis, measurement data was expressed as ( $\bar{x} \pm s$ ), t-test; count data was expressed as (%),  $\chi^2$  test.  $P < 0.05$  means that the difference is statistically significant.

## 2 Results

### 2.1 Comparative Analysis of the Changes in Patients' Blood Pressure

During the operation, the systolic blood pressure the observation group increased by ( $11.85 \pm 1.66$ ) mmHg, and the diastolic blood pressure was ( $4.63 \pm 0.45$ ) mmHg. The control group patients' systolic blood pressure increased by ( $22.12 \pm 1.98$ ) mmHg, and the diastolic blood pressure was ( $8.36 \pm 3.69$ ) mmHg, the two results are significantly different, and the blood pressure fluctuation range of the control group is greater ( $P < 0.05$ ).

**Table 1.** Comparison of intraoperative blood pressure changes between the two groups ( $\bar{x} \pm s$ )

Group	Systolic Blood Pressure (mmHg)	Diastolic Blood Pressure (mmHg)
Observation ( $n=88$ )	11.85±1.66	4.63±0.45
Control ( $n=88$ )	22.12±1.98	8.36±3.69
$\chi^2$	12.367	11.679
$P$	<0.001	<0.001

## 2.2 Comparative Analysis of the Incidence of Complications in Patients'

The incidence of complications in the observation group was lower than that in the control group. In the observation group, the incidence of hematoma, low back discomfort, dysuria, insomnia and dreaminess were 2.27%, 2.27%, 1.14%, 0% respectively, and

the total incidence was 5.68%; in the control group, the incidence of hematoma, low back discomfort, dysuria, dysuria, and insomnia and dreaminess were 6.81%, 5.68%, 3.41%, 4.55% respectively, and the total incidence was 20.45%. The difference between the observation group and the control group was significant ( $P < 0.05$ ), see Table 2 for details.

**Table 2.** Comparison table of the incidence of complications in patients [ $n(\%)$ ]

Group	Hematoma	Low Back Discomfort	Difficulty Urinating	Insomnia and Dreaminess	Total
Observation ( $n=88$ )	2 (2.27)	2 (2.27)	1 (1.14)	0	5 (5.68)
Control ( $n=88$ )	6 (6.81)	5 (5.68)	3 (3.41)	4 (4.55)	18 (20.45)
$P$			<0.05		

## 3 Discussion

Currently, the treatment of cerebrovascular diseases is mainly based on minimally invasive surgery. With the continuous advancement of technology, interventional surgery has become the first choice for clinical treatment, and its therapeutic effects have been proven through long-term clinical applications. Ensuring surgical safety in interventional surgery is the basis of surgical treatment. Conventional treatment usually completes the surgical process under the guidance of a doctor. However, the interventional operation was performed under local anesthesia, and the patient was fully awake. The tension and anxiety of the operation can easily cause changes in vital signs and cause side-effects. Different nursing interventions are carried out in the three phases: preoperative nursing, preoperative, intraoperative and postoperative. Psychological treatment and postoperative rehabilitation guidance are provided to complete the preoperative visit before the operation and stabilize the patient's preoperative mood. The patient is accompanied during the entire operation and provided with relaxation guidance to improve the patient's coordination ability, and reduce postoperative vital signs that are unstable due to emotional tension. Pay attention to signs of recovery and vitality after surgery to prevent complications and obtain better results.

In conclusion, through perioperative nursing

intervention, the recovery speed of patients can be improved, and the incidence of postoperative complications can be reduced. The mental state of the patients before the operation was adjusted, the mood was calmed, the compliance of the patient was improved, and the patient's resistive emotions were reduced. At the same time, if the patients can get good nursing care after surgery, the probability of postoperative complications is reduced, so that patients have better results in surgery, and its application in clinical practice is worthy of promotion.

## References

- [1] Ci XJ. Observation on the effect of systemic nursing intervention in patients with rectal cancer during perioperative period [J]. Heilongjiang Science, 2020, 11(20): 66-67.
- [2] Wu XM. Intervention effect of clinical nursing pathway in patients with basal ganglia cerebral hemorrhage during perioperative period and its influence on the quality of life of patients [J]. Today Nurse, 2020, 27(10): 73-75.
- [3] Zhu GH, Ma M, Kang L, et al. The Application of Perioperative Comprehensive Nursing in the Prevention of Postoperative Lower Extremity Deep Venous Thrombosis in Patients with Gynecological Malignant Tumor [J]. Chinese Journal of Thrombosis and Hemostasis, 2020, 26(05): 887-889.
- [4] Mo KF. Effect of nursing intervention of operating room on postoperative infection and psychological state of patients with cardiac bypass surgery in perioperative period [J]. Chinese

Community Doctors,2020,36(26):155-156.  
[5] Bai LH. Observation on the effect of comprehensive nursing  
intervention in interventional surgery for patients with acute

myocardial infarction [J]. Journal of Minimally Invasive  
Medicine,2020,15(04):553-556.