# Study on the Effect of Nursing Intervention on Perioperative Stress Response of Patients with Glioma

## **Haonan Jiang**

Affiliated Hospital of Beihua University, Jilin, China

**Keywords:** Brain Glioma, Nursing Intervention, Surgical Patients, Operative Period, Stress Response

**Abstract:** Study on the Nursing Intervention Effect of Perioperative Stress Response of Patients Undergoing Glioma Surgery from March 2017 to March 2018, 84 Cases of Glioma Were Admitted to Hospital. Control Group: Patients Were Given Daily Care. to Study the Group's Quality Management Service's Performance in and after the Operation, Compared with the Control Group, the Systolic Blood Pressure and Heart Rate Were Better, and the Group's Statistical Difference Was Recognized. as a Conclusion, the Occurrence of Periodic Stress Response of Surgical Patients to Nurse Intervention Can Effectively Reduce, Improve Mental State and Self-Care Awareness, and Stabilize the State, So It Can Be Confirmed.

#### 1. Introduction

In Order to Treat Gliomar, Surgery is the First Choice., Which is a Method to Deal with a Large Number of Data, Can Achieve Specific Clinical Effects, But Surgery Itself is a Traumatic Operation, So It is Peripheral Brain Injury, Causing Different Degrees of Simplicity, There Are Various Factors, in Order to Release the Stimulation of Brain Tissue, Causing Stress Response. Stress Response Refers to the Non-Specific Defense Response after the Body is Stimulated More Strongly. It is Obvious through the Different Excitability of Sympathetic Nerve, and the Function of Hypothalamus and Anterior Pituitary is Continuously Strengthened[1]. However, the Stress Response Must Be in a Reasonable State. the Reason is That Too High or Too Low a Stress Response Can Lead to a Morbid State of Stress in the Body. Symptoms Such as Increased Heart Rate and Increased Blood Pressure May Also Cause Arrhythmia in Severe Cases. Furthermore, the Physiological Function of Patients in the Process of Neuroglial Tumor Disease Not Only Affects the Various Kinds of Psychological Changes of Restlessness and Depression, But Also Causes Psychological Burden, Brings Many Methods, Fatigue Deterioration, Treatment Effect and Considerable Influence. Reduce the Quality of Life of Patients. in the Past, Nursing in Clinical Practice Can Only Meet the Basic Needs[2]. Therefore, on the Basis of the Existing Nursing, This Study Not Only Manages the Perioperative Stress Response Index, But Also Increases the Comprehensive Nursing Intervention to Improve and Improve the Technical Level of Nursing Service. Improve Postoperative Fatigue.

## 2. Data and Methods

General Information: 84 Cases of Neuroma in Our Hospital from March 2017 to March 2018 Were Selected. Patients Were Divided into Two Groups According to Different Nursing Methods[3]. Control Group: 22 Males and 20 Females, with an Average Age of  $47.79 \pm 1.45$  Years. Study Group: 24 Men and 18 Women with an Average Age of  $47.80 \pm 1.46$  Years and 24 to 67 Years. There Was No Significant Difference between the Two Groups (P > 0.05).

Table 1 Comparison of Treatment and Nursing Emotions between the Two Groups

Group	Number of cases	SAS		SAS	
		T0	T1	T0	T1
Control group	86	51.05±12.21	46.24±10.23	50.87±11.65	45.17±11.48
Observation group	86	51.12±11.79	40.28±9.15	50.51±11.82	39.05±9.04

DOI: 10.25236/acete.2019.053

## 2.1 Inclusion and Exclusion Conditions

Inclusion criteria: the patient is diagnosed as glioma by examination; the patient or family member voluntarily signs the consent. Approved by the hospital ethics committee. Exclusion criteria: organ dysfunction and contraindications in surgical treatment[4]; other tumors; midway discharge; mental disorders; language disorders; drug disorders; limb disability.

Table 2 Comparison of Ulcers between the Two Groups

Group	Number of cases	Yes	No	$x^2$	P
Control group	86	32(37.21)	54(62.79)	15.246	0.000
Observation group	86	10(11.63)	76(88.37)		

## 2.2 Method

Control group: patients received daily care. The nurses should strengthen the observation of blood pressure, oxygen saturation and other vital signs, inform the patients and their families of preventive measures and surgical treatment, and inform the patients of lifestyle and diet problems. For patients, the timely notification of patients is not fast[5]. The research group carried out comprehensive perioperative nursing. Before the operation, the patients underwent relaxation training, respiratory function training, deep breathing through the nose, and kept breathing for 1 to 2 seconds. Since then, exhale 3 times a day in the morning, evening and evening, and train every 20 minutes to improve their respiratory function. The nurses asked the patients to turn over and defecate properly, and prepare for the operation. Relevant health education and psychological consultation are to ensure that patients maintain a good attitude towards surgery[6]. During the operation: the nurse takes the patient to the operating room, adjusts the patient's position according to the doctor's requirements, and strengthens the monitoring of the patient's oxygen saturation, blood pressure and other related indicators. In case of any abnormality, please consult a doctor. After operation: the nurse pushes the patient back to the ward, strengthens the index of heart rate and blood pressure, if there is any abnormality, see a doctor in time. OUTCOME MEASURES[7]: heart rate, serum IL-6 and CRP were recorded before and after operation. Statistical methods: total data,  $x^2$  test used exchange rate as the expression, test data (x  $\pm$  s) - and performance, group to group comparison, using t test. P < 0.05 is considered statistically important.

## 3. Results

The heart rate and systolic blood pressure between the two groups were compared: the heart rate and systolic blood pressure in the patients group during and after operation were better than those in the control group, and the validity of the statistics between the two groups was confirmed (P < 0.05). See Table 1[8]. The comparison of serum IL-6 and CRP concentration between the two groups in different periods: the serum IL-6 and CRP concentration in operation and after operation were better than that in the control group (P < 0.05). See Table 2.

## 4. Discussion

Guillain Omar is a common type of central nervous malignant tumor with high recurrence rate and mortality. Now, the treatment of this disease is usually the first choice for resection[9]. Tumor tissue may remain after operation. Moreover, it will have a great impact on the psychological state and behavior of patients. Surgical stress response is a relatively strong reaction of patients' symptoms in surgery. The effect and the quality of life of patients after surgery have a great impact. Moreover, the cause of lethal coronary heart disease, the life and health threat of patients with high blood pressure, neurasthenia and other symptoms[10]. Surgery is one of the factors that cause the psychological changes of patients, it will affect the psychological stability of patients, leading to different levels of anxiety and depression. At the same time, with the progress of surgical treatment, it will further worsen the fatigue state of the body, which may cause physiological disorders in all

aspects of the body. Other studies have shown that the body's stress response, as the adrenal medulla at the beginning of surgery, increases catecholamine secretion and sympathetic activity. If the patients are treated effectively, their physiological and psychological functions will be affected negatively. This requires not only more accurate surgery, but also active and effective care. However, in the past, routine nursing in clinical business generally had no effect and could only meet the basic nursing needs of patients. Therefore, our hospital began to implement comprehensive nursing intervention based on conventional nursing. Know the trust, promote the active participation of patients, promote the methods of active participation of patients, all aspects of use, strengthen nursing countermeasures, greatly improve the quality of nursing service, make patients in a healthy lifestyle, and form a functional nursing activity that can be corrected completely. In addition, comprehensive nursing intervention and active cooperation of patients can promote their thoughts, straightforwardness and uneasiness, depression, more fear to reduce negative feelings, positive and optimistic treatment methods and attitudes, and establish basic treatment to promote self-confidence. In this study, comprehensive nursing intervention, communication and exchange between patients before operation, strengthening the operation method and operation sequence, explaining the treatment of patients and establishing the correct concept, and then the surgical treatment and rehabilitation process can be followed. At the same time, psychological preparation can help patients better understand their own body and disease treatment, improve the attention and trust of medical staff, make patients' abnormal emotions more stable, enhance the trust of nursing staff to patients, and greatly improve the compliance of medical staff to treatment. At the same time, we focus on the privacy protection during the operation, functional training and diet guidance after the operation, in order to increase the physical and psychological comfort of patients, so as to effectively reduce the damage to brain tissue and maintain the follow-up treatment. In this study, there was no significant difference in HR, SBP and RPP before and after the total nursing intervention group (P > 0.05). HR, SBP and RPP in the daily nursing group increased after operation, which was significantly higher than that in the comprehensive nursing intervention group. The results show that no matter which operation method is used for treatment, it will cause stress response and change in various indicators. High, the symptoms are comprehensive nursing intervention, the patient's various physical signals are stable, in order to better the degree of blood pressure and heart rate, relieve the existing nurses, reduce the degree of stress response, and this clinical nursing method has unique clinical advantages to help confirm. Compared with the postoperative fatigue state, the patients' emotion, cognition, action severity, cognition score and total score were lower than those before nursing. The above indicators in the comprehensive nursing intervention group were effective, and the difference was statistically effective (P < 0.05). The above results show that comprehensive nursing intervention can make patients return to a more stable state than before, reduce the negative impact on patients' psychological state, promote the recovery of patients' physiological function, reduce fatigue and improve professional status.

## 5. Conclusion

To sum up: nursing intervention applied to patients with glioma surgery can effectively reduce the occurrence of perioperative stress response, improve mental state and self-care awareness, and ensure the basic life indicators in a stable state.

# Acknowledgement

Jilin Provincial Department of Education, Study on enhancing the sensitivity of glioma to temozolomide by tumor suppressor gene PDCD5, JJKH20180332KJ.

#### References

[1] Ana Pinto-Bastos, Eva M. Conceição, Paulo P. P. (2017). Machado. Reoperative Bariatric Surgery: a Systematic Review of the Reasons for Surgery, Medical and Weight Loss Outcomes,

- Relevant Behavioral Factors. Obesity Surgery, vol. 27, no. 10, pp. 1-4.
- [2] Scotté M, Mauvais F, Bubenheim M, et al. (2017). Use of water-soluble contrast medium (gastrografin) does not decrease the need for operative intervention nor the duration of hospital stay in uncomplicated acute adhesive small bowel obstruction? A multicenter, randomized, clinical trial (Adhesive Small B, vol. 161, no. 5, pp. 1315.
- [3] Süleyman Bilecen, Joris A. H. de Groot, Cor J. Kalkman,. (2017). Effect of Fibrinogen Concentrate on Intraoperative Blood Loss Among Patients With Intraoperative Bleeding During High-Risk Cardiac Surgery: A Randomized Clinical Trial. Jama, vol. 317, no. 7, pp. 738.
- [4] Martin Sebastian Winkler, Anne Rissiek, Marion Priefler,. (2017). Human leucocyte antigen (HLA-DR) gene expression is reduced in sepsis and correlates with impaired TNF $\alpha$  response: A diagnostic tool for immunosuppression?. Plos One, vol. 12, no. 8, pp. e0182427.
- [5] Schoenfeld, Andrew J, Jiang, Wei, Harris, Mitchel B,. (2017). Association Between Race and Postoperative Outcomes in a Universally Insured Population Versus Patients in the State of California. Annals of Surgery, vol. 266, no. 2, pp. 1.
- [6] Kuo B J, Vaca S D, Vissoci J R N, et al. (2017). A prospective neurosurgical registry evaluating the clinical care of traumatic brain injury patients presenting to Mulago National Referral Hospital in Uganda, vol. 12, no. 10, pp. e0182285.
- [7] Xiao-Qin Yu, Yun-Long Li, Jin-Yu Gao,. (2017). Klf10 silencing inhibited mechanical force induced osteogenic differentiation of human periodontal ligament cells. Shanghai kou qiang yi xue = Shanghai journal of stomatology, vol. 26, no. 6, pp. 599-604.
- [8] Christine M. Micheel, Debayani Chakravarty, Jiaojiong Gao,. (2017). Abstract LB-104: Clinical actionability and clinical trial matching for GENIE patient genotypes using My Cancer Genome, Personalized Cancer Therapy, and OncoKB. Cancer Research, vol. 77, no. 13 Supplement, pp. LB-104-LB-104.
- [9] Vinh Nguyen Du Le, John Provias, Naresh Murty,. (2017). Dual-modality optical biopsy of glioblastomas multiforme with diffuse reflectance and fluorescence: ex vivo retrieval of optical properties. Journal of Biomedical Optics, vol. 22.
- [10] Hugh Kearney, Jane Cryan, Alan Beausung,. (2018). Reactive gliosis mimicking tumor recurrence A case series documenting MRI abnormalities and neuropathological correlates. Clinical Neuropathology, vol. 37, no. 3.