

# Application of Comfortable Nursing in Perioperative Period of Adrenalectomy

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## Abstract

**Objective:** The purpose was to explore and analyze the clinical effect of comfortable nursing in perioperative period for patients undergoing adrenalectomy.

**Methods:** 82 patients who underwent adrenalectomy in our hospital from January 2018 to May 2019 were selected for study and analysis. They were randomly divided into two groups, nursing group and reference group, with 41 patients in each group. The reference group received routine nursing intervention, and the nursing group received comfortable nursing intervention on the basis of routine nursing to compare the surgical indexes, preoperative anxiety, postoperative pain score, complications and nursing satisfaction between the two groups of patients.

**Results:** After nursing, intraoperative blood loss, operation time, postoperative exhaust time, postoperative out of bed time and hospitalization time of the nursing group were significantly better than those of the reference group, with statistical difference ( $P < 0.05$ ). The postoperative SAS and VAS scores of the nursing group were significantly lower than those of the reference group, with statistical difference ( $P < 0.05$ ). The postoperative complication rate of the nursing group was significantly lower than that of the reference group, with statistical difference ( $P < 0.05$ ). The nursing satisfaction in the nursing group was significantly higher than that in the reference group, with statistical difference ( $P < 0.05$ ).

**Conclusion:** Compared with the routine nursing intervention applied to patients undergoing adrenalectomy in clinic, comfortable nursing has better quality nursing service, improves various surgical indexes, speeds up recovery, promotes the healing of incisions, shortens hospitalization time to the greatest extent, and reduces their physiological pain and economic pressure in patients. Comfortable psychological intervention can relieve anxiety and improve treatment compliance in patients. Besides, scientific and meticulous nursing measures can effectively reduce postoperative pain, prevent complications and improve nursing satisfaction, effectively easing the nurse-patient relationship and reducing nurse-patient disputes.

**Keywords:** comfortable nursing; adrenalectomy; perioperative period; application effect

## Introduction

Laparoscopic surgery is widely used in the clinical diagnosis and treatment of infertility, pelvic diseases, urinary system diseases and other diseases due to small incision, less blood loss, good curative effect and prognosis, etc., which has a positive significance in promoting the treatment and recovery of patients (Laguna, 2017). Laparoscopic adrenalectomy has become the gold standard for the diagnosis and treatment of benign

adrenal lesions abroad, with remarkable curative effect. Clinical studies have found that scientific and effective nursing mode has a positive significance in increasing the success rate and improving prognostic quality of laparoscopic adrenalectomy, which can effectively shorten operation time and wound healing time, playing an important role in promoting the recovery of patients (Reese et al., 2017; Rossi et al., 2018). Based on the concept of scientific nursing, comfortable nursing provides various nursing services for patients so as to eliminate their negative emotions, keep patients in a happy mental state to a great extent, reduce the possibility of adverse events such as overreaction

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and syncope, ensure successful operation as much as possible, and promote the recovery of patients (Rossi and Funder, 2017; Kevin et al., 2018). To explore and analyze the clinical effect of comfortable nursing in perioperative period for patients undergoing adrenalectomy, 82 patients who underwent adrenalectomy in our hospital from January 2018 to May 2019 were selected for comparative analysis, specified as follows.

## 1 Materials and Methods

### 1.1 General Information

82 patients who underwent adrenalectomy in our hospital from January 2018 to May 2019 were selected for as the study subject. This study was approved by the hospital ethics committee. The patients and their families were informed of the study, and the patients voluntarily participated in the study and signed the informed consent. All patients were randomly divided into two groups, nursing group and reference group, with 41 patients in each group. In the nursing group, the male to female ratio was 18:23, the age was 28-67 years old with an average age of (48.6±7.3) years old, and the tumor size was 1-6cm with an average size of (2.8±0.5) cm. Among the patients, there were 3 cases of adrenal cyst, 7 cases of cortisol adenoma, 9 cases of aldosterone adenoma, and 22 cases of pheochromocytoma. In the reference group, the male to female ratio was 22:19, the age was 30-69 years old with an average age of (48.9±6.8) years old, and the tumor size was 1-6cm with an average size of (3.1±0.7) cm. Among the patients, there were 4 cases of adrenal cyst, 6 cases of cortisol adenoma, 8 cases of aldosterone adenoma, and 23 cases of pheochromocytoma. There was no significant difference in general data between the two groups of patients ( $p > 0.05$ ), which was comparable.

### 1.2 Inclusion/Exclusion Criteria

**Inclusion criteria.** The patients were clinically diagnosed with adrenal adenocarcinoma (tumor). All of them had unilateral tumor, and no tumor metastasis was found. The patients understood the contents of this study, voluntarily participated in the study and signed the informed consent. Patients had no mental disorders.

**Exclusion criteria.** Elderly patients were over 75 years old. Patients had low treatment compliance. Patients had diabetes, hypertension and other chronic diseases.

### 1.3 Nursing Methods

The reference group received routine nursing intervention, and the main measures included preoperative health education, preoperative

guidance on fasting food, fasting water and enema of patients, vital signs monitoring, control of blood glucose and blood pressure, postoperative incision nursing, as well as prevention and treatment of postoperative complications, etc.

The nursing group received comfortable nursing intervention on the basis of routine nursing, mainly as follows. 1) Nursing staff received patients with a positive and enthusiastic attitude after admission, and guided patients to conduct clinical examination and comprehensive evaluation of vital signs, creating a positive nurse-patient relationship through good communication. The ward environment was introduced to the patients and appropriate adjustments were made according to their own needs. Patients and their families were informed of the disease-related knowledge, possible adverse reactions and treatment measures during treatment as well as the treatment effect and prognosis. 2) According to the patients' own psychological endurance, corresponding nursing plans were formulated, including personalized psychological counseling intervention for the patients and display of successful cases to them to eliminate their tension, anxiety and other negative emotions and improve their treatment compliance. 3) Patients took  $\alpha$ -receptor blocker after admission, and avoid rapid changes of body position during medication to avoid hypotension or syncope. Nursing staff closely monitored the patients' heart rate, blood and blood glucose, and notified the doctors if there were any abnormalities. Patients received intravenous drip of saline and dextran-40 7 days before operation, with 2L/d of infusion volume. The blood pressure changes during infusion were noted and infusion speed was adjusted in time. Before operation, fasting was performed for 24 hours, water was prohibited for 8 hours, and enema was performed to make routine preparations for the operation. 4) After operation, the patients' blood pressure, heart rate, body temperature and other vital signs were closely monitored, and the infusion volume and speed were adjusted in time. Doctors were notified if there were any abnormalities. 5) The patients were given dietary guidance according to their exhaust and recovery. Attention was paid to the placement and replacement of drainage tube. Besides, the incision of patients was closely monitored to check whether there was leakage and bleeding. The incision drainage tube was kept unblocked, and was removed in 2-3 days after operation. 6) The patients at discharge were instructed to maintain a positive attitude, reduce and avoid physical labor and check regularly

(Yuping and Hospital, 2017; Yang et al., 2017; Xu, 2017).

#### 1.4 Observation Indexes

Surgical indexes and occurrence of complications in the two groups of patients were recorded and statistically analyzed, indexes including intraoperative blood loss, operation time, postoperative exhaust time, postoperative out of bed time and hospitalization time.

SAS score (totally 80 points) was used to assess the anxiety level of patients before operation.

VAS score (totally 10 points) was used to evaluate the pain level of patients 3 days after operation.

A self-made nursing satisfaction questionnaire (totally 100 points) was used to assess the nursing satisfaction of the patients 1 day before discharge.

#### 1.5 Statistical Methods

The data were analyzed and processed by SPSS19.0 software package. The measurement data were measured by t test, expressed by ( $\bar{x} \pm s$ ), and the count data were tested by  $\chi^2$ , expressed by (%). The difference was statistically significant when  $p < 0.05$ .

## 2 Results

### 2.1 Comparison of Surgical Indexes Between Two Groups of Patients

The intraoperative blood loss, operation time, postoperative exhaust time, postoperative out of bed time and hospitalization time of the nursing group were significantly better than those of the reference group, with statistical difference ( $P < 0.05$ ), as shown in Figure 1.

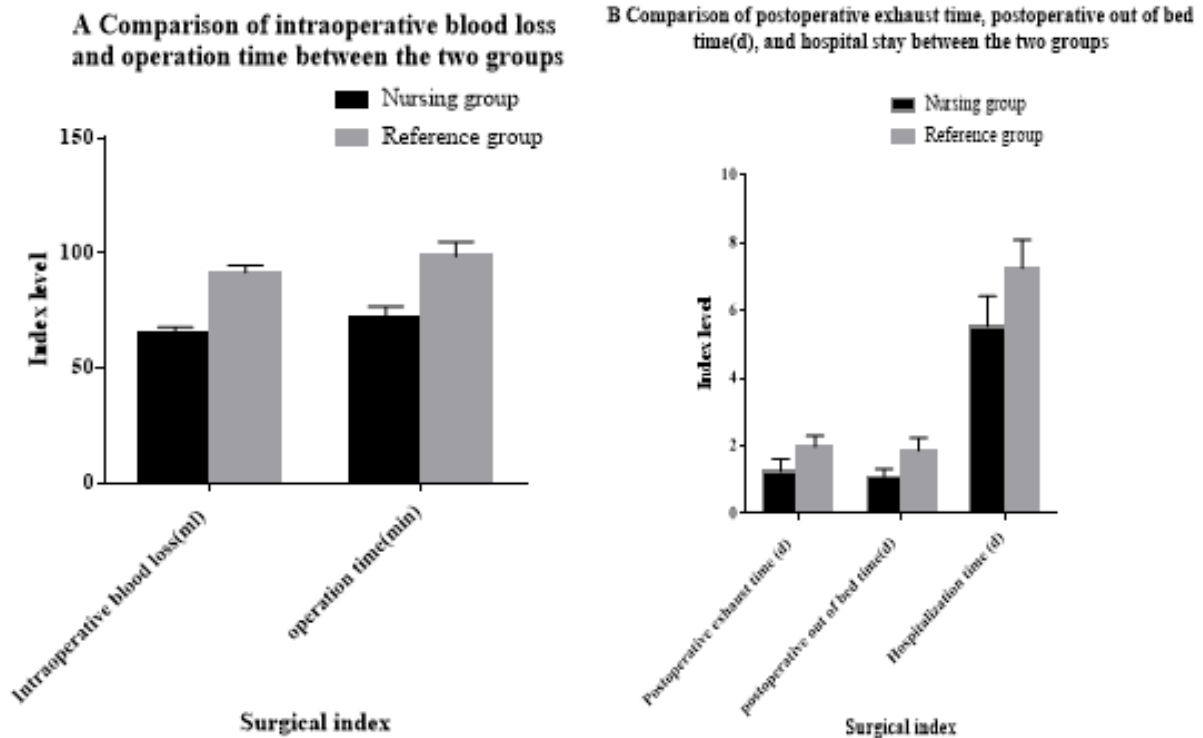


Figure 1. Comparison of Surgical Indexes Between Two Groups of Patients

A Comparison of intraoperative blood loss and operation time between two groups of patients. The abscissa represented surgical index, and the ordinate represented index level. As shown in Figure A, intraoperative blood loss of the nursing group was less than that of the reference group, and operation time of the nursing group was shorter than that of the reference group.

B Comparison of postoperative exhaust time, postoperative out of bed time and hospitalization time between two groups of patients. The abscissa represented surgical index, and the ordinate represented index level. As shown in Figure B, postoperative exhaust time, postoperative out of bed time and hospitalization time of the nursing group were shorter than those of the reference group.

**2.2 Comparison of SAS and VAS Scores Between Two Groups of patients**

The postoperative SAS and VAS scores of the nursing group were significantly lower than those of the reference group, with statistical difference ( $P < 0.05$ ), as shown in Figure 2.

A Comparison of SAS scores between two groups of patients. The abscissa represented group, and the ordinate represented SAS scores. As shown in Figure A, the SAS score of the nursing group was lower than that of the reference group.

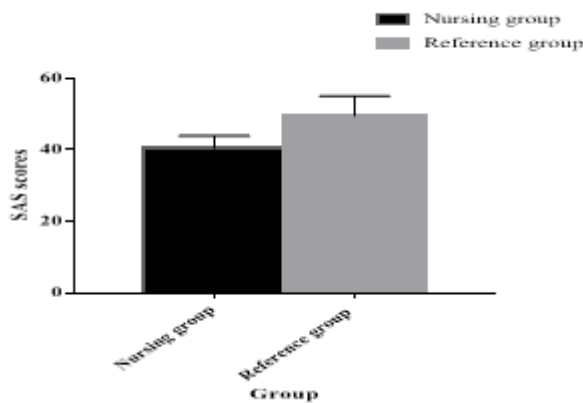
B Comparison of VAS scores between two

groups of patients. The abscissa represented group, and the ordinate represented VAS scores. As shown in Figure B, the VAS score of the nursing group was lower than that of the reference group.

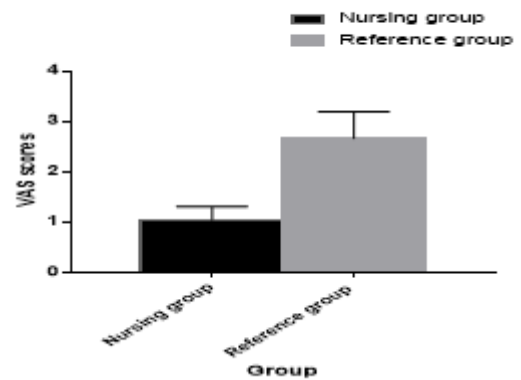
**2.3 Comparisons of complication rates between two groups**

The postoperative complication rate of the nursing group was significantly lower than that of the reference group, with statistical differences ( $p < 0.05$ ), as shown in Figure 3.

**A Comparison of SAS scores between the two groups**

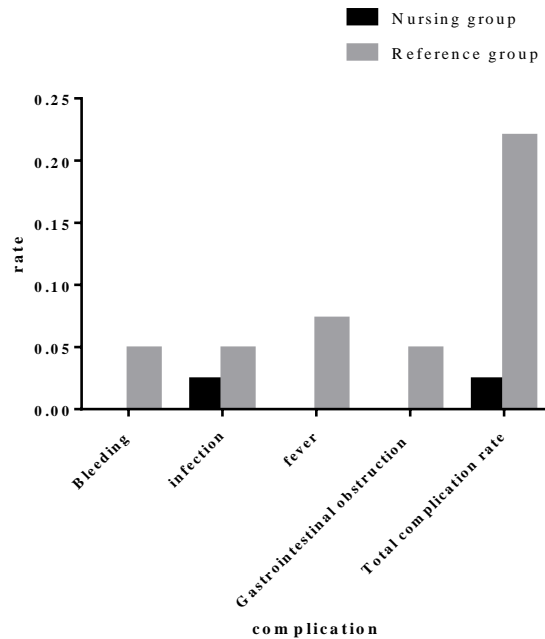


**B Comparison of VAS scores between two groups of patients**



**Figure 2. Comparison of SAS and VAS Scores Between Two Groups of Patients**

**Figure 3 Comparison of complication rates between two groups**



**Figure 3. Comparisons of complication rates between two groups of patients**

**Figure 4 Comparison of nursing satisfaction between two groups**

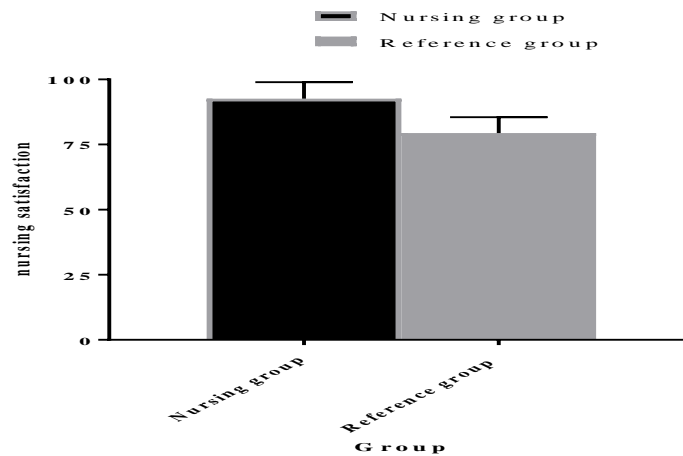


Figure 4. Comparison of nursing satisfaction between two groups of patients

The abscissa represented complications such as bleeding, infection, fever and gastrointestinal obstruction, and the ordinate represented rate. As shown in Figure 3, rates of complications such as bleeding, infection, fever and gastrointestinal obstruction in the nursing group were lower than those in the reference group, and the total complication rate was significantly lower than that in the reference group.

#### 2.4 Comparison of nursing satisfaction between two groups of patients

The nursing satisfaction of patients of the nursing group was significantly higher than that of the reference group, with statistical difference ( $P < 0.05$ ), as shown in Figure 4.

The abscissa represented group, and the ordinate represented nursing satisfaction. As shown in Figure 4, nursing satisfaction of the nursing group was better than that of the reference group.

#### Discussion

With the growing maturity of laparoscopic technology and the deepening of minimally invasive concept, laparoscopic surgery has gradually replaced the clinical routine open surgery and become the gold standard for the diagnosis and treatment of benign adrenal lesions. Studies (Luo, 2017; Chun-Yang, 2018; Fanghong, 2017; Hui-Fang et al., 2017) found that smooth operation and good prognosis are closely related to perioperative nursing intervention, and high-quality and effective nursing intervention can improve the efficacy, prevent complications and ensure prognostic quality. With the continuous accumulation of clinical experience, it is reported (Ojha and Sinha, 2017) that routine nursing intervention has many disadvantages with adverse effects on patients' recovery and prognosis. Due to their little knowledge of the disease and treatment methods,

as well as the long preoperative preparation time, the patients tend to distrust the new minimally invasive surgery technology which induces anxiety, panic and other negative emotions, having a negative impact on surgery and prognosis to some extent. Some data (Luz et al., 2017; Torner et al., 2017; de et al., 2017) show that based on the concept of scientific nursing, comfortable nursing provides various nursing services for patients and keep them in a happy mental state as far as possible to reduce their stress to operation, playing an important role in increasing the success rate of surgery and improving prognostic quality.

In order to improve or eliminate the negative emotions of patients and improve the curative effect of surgery, 82 patients who underwent adrenalectomy in our hospital from January 2018 to May 2019 were selected for analysis. By group comparison, the reference group received the clinical routine perioperative nursing intervention measures, and the nursing group received comfortable nursing mode on the basis of routine nursing, which obtained satisfactory application results in improving surgical indexes, preventing complications and improving prognostic quality of patients. A positive nurse-patient relationship was established through good communication to conduct personalized psychological intervention to patients, improve or eliminate negative emotions

such as anxiety and panic, and increase the success

rate of operation. Before operation, nursing staff guided the patients to complete preoperative preparations and ensured the stability of their vital signs such as blood pressure. During operation, they assisted doctors to closely observe patients' heart rate, blood pressure and other vital signs and to deal with emergencies in time. After operation, targeted nursing measures were taken to prevent complications and improve prognostic quality of patients. This study found that the perioperative nursing group was significantly better than the reference group in terms of intraoperative blood loss, operation time, postoperative exhaust time, postoperative out of bed time and hospitalization time, which was consistent with the results of many studies (Spies et al., 2017; Bradi et al., 2017; Guijin and department, 2017; Xin, 2018; Dongqin and Ronghua, 2018). The preoperative SAS score and nursing satisfaction of the nursing group were significantly better than those of the reference group, which was consistent with "Evaluation of the effect of comfortable nursing model on the recovery of patients with acute ischemic stroke" written by Cai-Xia H (Cai-Xia et al., 2017) who mentioned "After nursing, the SAS and SDS scores of the observation group were lower than those of the control group, and the satisfaction rate was higher than that of the control group, with statistical difference ( $P < 0.05$ )."

This fully demonstrated that compared with the clinical routine perioperative nursing intervention mode, comfortable nursing had better nursing effect on perioperative patients and can significantly alleviate the negative emotions such as anxiety, tension and panic of patients. It also ensured the success rate of surgery, accelerated wound healing, shortened their hospitalization time, prevent complications and improve prognostic quality, which has a positive impact on improving surgical indexes. According to a large number of studies (Celia et al., 2018; Heck and Handa, 2019; Faulkner et al., 2019; Wu et al., 2017), comfortable nursing model can not only improve the treatment effect, prognosis quality and nursing satisfaction of patients, but also have a positive effect on improving comfort, and physical and life function of patients.

In conclusion, the comfortable nursing mode in perioperative period for patients undergoing adrenalectomy has better application effect and nursing quality than routine perioperative nursing intervention. Through targeted psychological nursing intervention to patients, it can alleviate or remove preoperative anxiety and panic, carefully assist patients in various preoperative preparations, increase success rate of operation,

improve various surgical indexes, shorten operation time, accelerate wound healing, improve the efficacy and prognosis, prevent the occurrence of complications, and improve comfort and nursing satisfaction, which has a positive significance in improving the treatment effect of patients and the nurse-patient relationship.

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