

# Effect of Nursing Intervention in Operating Room for Patients with Gastric Cancer during Anesthesia Recovery Period

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## Abstract

**Objective:** To analyze the effect of nursing intervention in operating room for gastric cancer patients in anesthesia recovery period. **Methods:** From June 2021 to December 2021, 78 patients who underwent gastric cancer surgery in our hospital were selected for research. Combined with the random number table method, they were divided into the control group (providing routine nursing care in operating room) and the observation group (providing nursing intervention in operating room) with 39 patients in each group respectively. The body temperature of the two groups during operation, during abdominal closure and after operation, the time of leaving anesthesia room, extubation, postoperative wakefulness and hospitalization, degree of satisfaction with nursing work was compared. **Results:** Compared with the control group, the body temperature in the observation group tended to be more normal during operation, during abdominal closure and after operation ( $P < 0.05$ ). The time of leaving anesthesia room, extubation, postoperative wakefulness and hospitalization in the observation group were shorter than those in the control group ( $P < 0.05$ ). The satisfaction degree of the observation group with nursing work was higher than that of the control group ( $P < 0.05$ ). **Conclusion:** Nursing intervention in operating room is effective for gastric cancer patients in anesthesia recovery period, which can maintain their perioperative temperature stability, promote their postoperative recovery and enhance their satisfaction with nursing work. It is worth adopting.

## Keywords

Gastric Cancer, Surgery, Anesthesia Recovery Period, Nursing Intervention in Operating Room

## 1. Introduction

Gastric cancer is a common cancer in clinic and is closely related to many factors. According to relevant data [1], there are about 988,000 new cases of gastric cancer worldwide every year, about half of which take place in East Asian countries such as China, which directly threaten the life safety and quality of patients. At present, surgery is the first choice to treat gastric cancer, and the curative effect of radical gastrectomy has been fully confirmed clinically. However, all or most of the stomach, omentum and regional lymph nodes need to be removed during the operation, and the digestive tract needs to be re-established. The operation takes a long time, involves a wide range, and brings great impacts to patients [2]. Good anesthesia is an important prerequisite to favor the operation. General anesthesia drugs will cause a series of adverse reactions to patients in the anesthesia recovery period after operation, such as nausea and vomiting and respiratory depression, which will affect their postoperative recovery [3]. Therefore, it is necessary to well perform nursing in the operating room during the anesthesia recovery period. According to relevant researches [4], nursing intervention in the operating room for gastric cancer patients in anesthesia recovery period can reduce complications and shorten the recovery time of operation. Based on this, this paper studies a total of 78 patients who underwent gastric cancer surgery in our hospital from June 2021 to December 2021, and analyzes the effect of nursing intervention in the operating room during the anesthesia recovery period, to provide reference for the formulation of relevant clinical nursing plans. The specific contents are as follows.

## 2. Data and Methods

### 2.1. General Data

A total of 78 patients who underwent gastric cancer surgery from June 2021 to December 2021 in our hospital were selected for research. Combined with the random number table method, they were divided into the control group and the observation group, each with 39 patients. The ratio of male to female was 25:14 and 26:13 respectively; The patients in each group are 50 - 78 years old and 52 - 76 years old respectively, with the average of  $(64.86 \pm 4.12)$  years old and  $(65.10 \pm 4.38)$  years old; The diameters of tumors in each group were 3.4 - 6.8 cm and 3.5 - 7.0 cm respectively, with the average of  $(4.85 \pm 0.50)$  cm and  $(4.90 \pm 0.62)$  cm; Tumor site: The ratios of cardia, stomach and antrum in each group are 1:20:18 and 2:21:16 respectively. TNM stages: The ratios of Phase I, Phase II and Phase III in each group are 11:15:13 and 12:16:11 respectively. The data of the two groups have no difference ( $P > 0.05$ ) and can be compared. This study was approved by the medical ethics committee in the hospital, and the patients or their families were informed and agreed.

Inclusion criteria: 1) According to the pathological results, all cases were diagnosed as gastric cancer. 2) Radical gastrectomy was carried out in our hospital. 3) Clear consciousness and good cooperation.

Exclusion criteria: 1) Patients with severe diseases in other organs such as liver, kidney and heart. 2) People with consciousness disorder, cognitive disorder or communication disorder. 3) There are abnormalities in the coagulation system. 4) There are other malignant tumors. 5) There are contraindications to the operation. 6) Patients who refuse to participate in this research.

## 2.2. Methods

Radical gastrectomy was performed by the same medical staff in both groups. The control group received operating room nursing according to routine, mainly including monitoring the vital signs of patients, preoperative preparation, medication and nursing during operation, and the nurses strictly follow the doctor's advice and carry out nursing according to the actual situation of patients. The observation group received nursing intervention in the operating room, mainly including the following aspects: 1) Preoperative nursing: The nurses in the operating room need to know the overall situation of patients and their families in detail, and then communicate with them before operation based on their characteristics, explaining in detail the anesthesia methods and common side effects during the operation, to obtain the full understanding and cooperation of patients and their families; Create a good operating room environment and reasonably control the indoor temperature and humidity; Before anesthesia induction, the nurses need to check the patient's identity information and anesthesia methods, to ensure the smooth anesthesia. Place a thermal blanket on the operating bed to prevent hypothermia. 2) Intraoperative nursing: During the operation, it is necessary to actively cooperate with doctors, monitor patients' vital signs, and communicate with anesthesiologists in time when abnormalities are observed. During the operation, the infusion heating equipment is used to heat the fluid and blood to be infused, and the temperature of the fluid infused into the body is kept at about 38°C, which is close to the patient's body temperature, and attention should be paid to protecting the exposed skin of the patient. 3) Postoperative nursing: a) Extubation nursing: After the operation, when the patient is awake, it is necessary to tell him that the operation has been successfully completed, and inform him of the action to be performed, the cooperation matters during extubation, etc., to guide the patient to cough and expectorate correctly, keep the respiratory tract in an unobstructed state, and promote the discharge of oral secretions. b) Anesthesia recovery nursing: When the patient enters the anesthesia recovery room, he needs to take a proper posture, usually the supine position with the pillow removed and the head tilted to one side, which can be adjusted according to the patient's actual situation. The nurses carefully record and monitor the patient's vital signs to prevent anesthesia complications. If there is any abnormality, report to the doctor in time to carry out corresponding treatment. After the patient is sent back to the ward, it is necessary to explain the matters needing attention to the family members or accompanying persons, and ask the family members or accompanying persons to repeat the matters needing atten-

tion accurately. c) Respiratory nursing: Nurses need to closely monitor patients to prevent the respiratory tract from being blocked by falling tongue, well clean the oral cavity, and remove secretions in time to ensure the airway is unobstructed. d) Nursing of complications: Monitor the patients' body temperature in real-time. Carry out physical cooling to those with high fever in time and report to the chief surgeon, and carry out nursing strictly according to the doctor's advice; For patients with dehydration, provide rehydration treatment according to the doctor's advice. e) Psychological nursing: The nurses need to provide some psychological support, care and comfort to patients, to prevent them from having negative emotions after waking up. During the anesthesia recovery period, Sedation treatment can be provided according to the doctor's advice, to relieve the restlessness of patients after awakening. During nursing, patients' privacy should be fully respected to prevent psychological pressure on them.

### 2.3. Observation Index

The body temperature, postoperative recovery index and satisfaction degree of nursing of the two groups were observed. 1) Body Temperature: The body temperature of the two groups were measured at three time points: intraoperative, abdominal closure and postoperative. 2) Postoperative recovery index: Including the time of leaving the anesthesia room, extubation, postoperative wakefulness and hospitalization of the two groups. 3) Satisfaction Self-made satisfaction questionnaire was used in our hospital, which involved four items: nursing attitude, nurse-patient communication, nursing methods and nursing effect. Each item was based on 0 - 25 points, with a total score of 100 points. The total score > 90 points was classified as satisfactory, 80 - 90 points as average, and <80 points as unsatisfactory. The total satisfaction was counted. Total satisfaction = Satisfactory and average number/total number  $\times$  100%.

### 2.4. Statistical Method

After processing the data by SPSS23.0 statistical software, the counting data is represented by %, and the  $\chi^2$  test is performed; The measurement data are represented by ( $\bar{x} \pm s$ ), and *t* test is carried out, with  $P < 0.05$  as the standard for evaluating the differences.

## 3. Results

### 3.1. Comparison of Body Temperature between the Two Groups

Compared with the control group, the observation group's body temperature during operation, during abdominal closure and after operation tended to be more normal ( $P < 0.05$ ), as shown in **Table 1**.

### 3.2. Comparison of Postoperative Recovery Indexes between the Two Groups

The time of leaving the anesthesia room, extubation, postoperative wakefulness

**Table 1.** Comparison of body temperature levels between the two groups ( $\bar{x} \pm s$ , °C).

Group	Number of cases	Intraoperative	Abdominal closure	Postoperative
Observation group	39	36.62 ± 0.68	36.68 ± 0.58	36.50 ± 0.64
Control group	39	35.04 ± 0.96	35.22 ± 0.54	35.32 ± 0.65
<i>t</i>	-	7.356	10.091	7.085
<i>P</i>	-	0.001	0.001	0.001

**Table 2.** Comparison of postoperative recovery indexes between the two groups ( $\bar{x} \pm s$ ).

Group	Number of cases	Time of leaving the anesthesia room (min)	Time of extubation (min)	Postoperative waking time (min)	Length of stay (d)
Observation group	39	46.25 ± 10.65	16.55 ± 5.20	45.35 ± 6.48	8.36 ± 1.25
Control group	39	78.64 ± 10.48	24.48 ± 6.42	68.36 ± 8.25	12.24 ± 2.50
<i>t</i>	-	11.873	5.257	12.014	7.603
<i>P</i>	-	0.001	0.001	0.001	0.001

**Table 3.** Comparison of satisfaction between the two groups (for example, %).

Group	Number of cases	Satisfied	So-so	Dissatisfied	Satisfaction
Observation group	39	25 (64.10)	13 (33.33)	1 (2.56)	38 (97.44)
Control group	39	17 (43.59)	15 (38.46)	7 (17.95)	32 (82.05)
$\chi^2$	-	-	-	-	5.014
<i>P</i>	-	-	-	-	0.025

and hospitalization in the observation group were shorter than those in the control group ( $P < 0.05$ ). See **Table 2** for details.

### 3.3. Satisfaction Comparison between the Two Groups

The satisfaction degree of the observation group in nursing is far higher than that of the control group ( $P < 0.05$ ), as shown in **Table 3**.

## 4. Discussion

Gastric cancer is a malignant tumor with high incidence in the digestive tract. There are no obvious symptoms in the early stage. With the progress of the disease, symptoms such as weight loss, pain, anemia, malnutrition and cachexia can occur, which will directly affect patients' health and quality of life [5] [6]. At present, radical gastrectomy is a fundamental treatment for gastric cancer, and anesthesia is an essential measure during the operation. Most patients are operated under general anesthesia, but under the influence of anesthetics, patients in the anesthesia recovery period can have adverse reactions of varying degrees, bringing them great pain and affecting the recovery and prognosis [7] [8]. There-

fore, it is of great significance to do well in operating room nursing during the anesthesia recovery period.

Operating room nursing can effectively mobilize the working enthusiasm and self-confidence of the nurses, and ensure that the nurses can actively provide perioperative nursing, thus alleviating the pain of patients caused by surgery [9] [10]. Pre-operative health education and psychological intervention can obviously reduce the negative emotions of patients, ensure that patients make full preparations before the operation, and then prevent surgical accidents; monitoring the patient's signs during the operation and actively cooperating with the doctor's operation can alleviate the patient's fear of the operation and ensure the successful completion of the operation. Doing well in postoperative nursing during the anesthesia recovery period and giving targeted intervention according to the actual situation of the patients can make them recover quickly [11]. Zhu Chunlan [12] analyzed a total of 90 patients undergoing gastric cancer surgery, and they were given routine nursing, individualized nursing in the operating room as the control group and observation group. It was found that the postoperative awakening and hospitalization time of the observation group were shorter than those of the control group ( $P < 0.05$ ). This study concluded that: The observation group has shorter time of leaving the anesthesia room, extubation, postoperative wakefulness and hospitalization than the control group ( $P < 0.05$ ), which is consistent with the results obtained in Zhu Chunlan's study, showing that the nursing intervention in the operating room could promote the postoperative recovery of the patients. The reason is to combine the patient's reality, do well in preoperative communication and intraoperative cooperation, and bring good postoperative nursing to patients, including extubation nursing, anesthesia recovery nursing, respiratory nursing and psychological nursing, which can make the patients recover better. The body temperature of the observation group before, during and after the operation tended to be more normal than that of the control group ( $P < 0.05$ ), indicating that the nursing intervention in the operating room can maintain the patient's body temperature in a stable state throughout the perioperative period. The reason is that the observation group pays attention to heat preservation nursing during the operation, avoiding the temperature drop caused by exposure in the operation field and infusion of low-temperature liquid. The satisfaction degree of the observation group with nursing work is higher than that of the control group ( $P < 0.05$ ), indicating that the nursing intervention in the operating room can improve the patient's satisfaction. The reasons are related to factors such as the observation group's more comprehensive nursing work, more pertinence, faster postoperative recovery, better physical and psychological comfort, etc., which is helpful to obtain the patient's active cooperation and high recognition and improve their satisfaction.

In summary, the nursing intervention in the operating room for gastric cancer patients in the anesthesia recovery period is ideal, which can maintain their perioperative body temperature stability, promote their postoperative recovery, and enhance their satisfaction with the nursing work. It is worth adopting. However,

there are still some weaknesses in this study, for example, the total number of samples included is small, all samples are provided by only one hospital, and the long-term prognosis of the two groups is not analyzed. The results obtained are still limited and need to be improved in the future.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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