

# Observation on the Effect of Targeted Care on Patient Satisfaction During Perioperative Period of Holmium Laser Lithotripsy for Kidney Stones

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**Abstract:** Objective: To evaluate the impact of targeted nursing on patient satisfaction during the perioperative period of patients undergoing holmium laser lithotripsy for kidney stones. Methods: From February 2024 to January 2025, 70 patients with kidney stones who underwent holmium laser lithotripsy were selected and randomly divided into two groups using a random number table method. One group received targeted nursing (study group, n = 35), while the other group received routine nursing (control group, n = 35). The clinical effects of these different care approaches were compared. Results: After the nursing intervention, the complication rate in the study group was 2.86%, significantly lower than the 20.00% in the control group ( $P < 0.05$ ). Additionally, the nursing satisfaction in the study group was 97.14%, higher than the 82.86% in the control group ( $P < 0.05$ ). Conclusion: In the perioperative period of holmium laser lithotripsy for kidney stones, the targeted nursing approach demonstrated significant benefits and is recommended for reference and application.

**Keywords:** targeted nursing; kidney stones; holmium laser lithotripsy; perioperative period; satisfaction

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## 1. Introduction

Kidney stones are a common urinary system disease, characterized by high incidence and a tendency to recur. Once formed, they can cause symptoms such as painful urination and urinary tract obstruction. If left untreated, the condition can progress to serious complications like uremia, posing a threat to patients' lives<sup>[1]</sup>. Currently, holmium laser lithotripsy, known for its minimally invasive and highly effective nature, has proven to be effective in treating kidney stones. However, due to the adverse effects of the condition on patients and their lack of understanding about surgery and recovery, many patients experience anxiety and tension, which can affect their compliance with treatment and even the surgical outcome<sup>[2]</sup>. To promote efficient and safe patient recovery, it is crucial to enhance nursing interventions. Therefore, this study introduced a targeted nursing plan and observed its impact on the incidence of complications and patient satisfaction. A total of 70 patients were selected for the study, and the results are reported below.

## 2. Data and methods

### 2.1. General information

The study was conducted from February 2024 to January 2025, involving 70 patients with kidney stones who all underwent holmium laser lithotripsy. Different nursing interventions were applied, and the outcomes were recorded. In the study group, there were 19 males and 16 females, aged 35-64 years, with an average age of  $(48.37 \pm 3.16)$  years. In the control group, there were 20 males and 15 females, aged 32-68 years, with an average age of  $(48.62 \pm 3.08)$  years. The data showed no significant difference ( $P > 0.05$ ), indicating comparability.

### 2.2. Method

The control group only took routine care, conducted basic oral education for patients before surgery, assisted patients to complete various examinations, made preoperative preparations, monitored patients' vital signs during surgery, cooperated with attending physicians in surgical operations and instrument transmission, provided targeted pain relief for patients after surgery, and informed patients of postoperative recovery precautions.

Based on this, the research team implemented targeted nursing interventions: (1) Psychological intervention: Enhance communication and interaction with patients, inquire about their inner feelings, encourage them to express their emotions, provide emotional support from a professional perspective, and teach self-guidance techniques such as deep breathing and meditation to alleviate negative emotions. (2) Health guidance: Provide health education to patients using the latest knowledge about kidney stones, informing them of the causes, precautions, and emphasizing the safety and procedures of holmium laser lithotripsy, helping patients form a correct understanding and recognize the importance of actively cooperating with medical measures, thereby improving compliance. (3) Prevention of complications: During surgery, closely monitor the patient's vital signs, manage body temperature to prevent hypothermia, and avoid stress events; after surgery, pay attention to the patient's condition, especially any issues like nausea and vomiting, and monitor changes in blood pressure and oxygen saturation, addressing any abnormalities promptly; monitor catheter conditions and urine characteristics, clean the urethra in a timely manner, maintain the patency of drainage tubes, and remove them based on the patient's recovery progress. (4) Rehabilitation exercises: Guide patients in rehabilitation exercises based on their actual conditions, starting with bed activities, and gradually progressing to bedside activities and independent exercises.

### 2.3. Observation indicators

(1) Complication Rate: Record the occurrence of various complications during surgery, such as infections, bleeding, and urine extravasation, and calculate the overall incidence. (2) Nursing Satisfaction: At discharge, conduct a satisfaction survey with patients, completed on-site. The survey evaluates nursing attitude, timeliness, and professionalism, etc.,<sup>[3]</sup> and categorizes responses into very satisfied, basically satisfied, and unsatisfied, then calculates the overall satisfaction rate.

### 2.4. Statistical analysis

The project utilized the SPSS26.00 system for analysis. The data primarily consisted of two types: one was categorical data, including reference numbers (n), rates (%), and chi-square  $\bar{x} \pm s$  ( $\chi^2$ ) values; the other was quantitative data, which must meet the normal distribution requirement and were represented by parameters such as mean ( $\mu$ ) and standard deviation ( $\sigma$ ). If  $p < 0.05$ , it was deemed statistically significant.

## 3. Results

### 3.1. Complication incidence

There was a significant difference in the incidence of complications between the two groups ( $P < 0.05$ ). See Table 1 below:

**Table 1.** Statistics and comparison of complication incidence (case,%)

group	Example	infect	haemorrhage	urinous infiltration	abdominal distension	The total incidence
Research Group	35	0	0	0	1(2.86)	1(2.86)
control group	35	1(2.86)	3(8.57)	1(2.86)	2(5.71)	7(20.00)
$\chi^2$	-	-	-	-	-	5.081
<i>P</i>	-	-	-	-	-	0.024

### 3.2. Nursing satisfaction

There was a significant difference between the two groups of nursing satisfaction ( $P < 0.05$ ). See Table 2 below:

**Table 2.** Statistics and comparison of nursing satisfaction (example,%)

group	Example	Very satisfied	be basically satisfied	discontent	Overall satisfaction
Research Group	35	22(62.86)	12(34.29)	1(2.86)	34(97.14)
control group	35	18(54.29)	10(28.57)	6(17.14)	29(82.86)
$\chi^2$	-	-	-	-	3.968
<i>P</i>	-	-	-	-	0.046

## 4. Discussion

Kidney stones, a common condition in urology, significantly impact patients' physical and mental health. With the advancement of medical technology, holmium laser lithotripsy has proven effective in treating kidney stones due to its minimally invasive and safe nature. However, for patients, in addition to meticulous and standardized treatment, scientific and systematic nursing measures are crucial for promoting efficient and safe recovery<sup>[4]</sup>.

Targeted nursing is an enhancement and refinement of routine care, aiming to tailor care strategies based on the patient's specific circumstances. This approach involves analyzing potential care needs to develop appropriate measures, thereby improving care quality and refining care content<sup>[5]</sup>. In this study, we applied targeted nursing interventions to patients with kidney stones, considering the surgical requirements for holmium laser lithotripsy. First, psychological support was provided to enhance patient communication, address negative emotions, offer comfort from a caregiver's perspective, encourage emotional expression, and foster a positive mindset. Second, health education was provided to reinforce the patient's understanding of their condition and the importance of active cooperation with medical staff, ensuring they fully participate in all medical activities to achieve the desired outcomes. Third, complications were monitored by analyzing potential risks, enhancing intraoperative observation, managing body temperature to prevent hypothermia, and paying attention to drainage tube management and the characteristics of the drainage fluid to assess recovery and promptly address any abnormalities. Finally, personalized rehabilitation exercises were designed based on the patient's recovery progress, ensuring efficient and safe rehabilitation<sup>[6]</sup>.

## 6. Conclusion

To sum up, for patients with kidney stones, the perioperative intervention of holmium laser lithotripsy combined with

targeted nursing intervention can improve the nursing effect, reduce the incidence of related complications, improve satisfaction, and have a positive impact, which is worthy of clinical reference and application.

## Disclosure statement

The author declares no conflict of interest.

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