

Effect of Humanistic Nursing Care on Health Knowledge Mastery and Nursing Satisfaction Among Patients Undergoing Kidney Stone Surgery

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Abstract: *Objective:* To deeply understand the influence of humanistic nursing care on the health knowledge mastery and nursing satisfaction among patients undergoing kidney stone surgery. *Methods:* Sixty patients with kidney stone who underwent surgical treatment in our hospital from June 2019 to June 2020 were randomly divided into reference group and experimental group by random number table method. There were 30 patients in each group. The patients of reference group were given routine nursing care, and the patients of experimental groups were given humanistic nursing care. The mastery score of various health knowledge, nursing satisfaction and postoperative complications were compared between the two groups. *Results:* The scores of health knowledge mastery among the patients in experimental group who were treated with humanistic nursing care were much higher than those in reference group who were treated with routine nursing care. The nursing satisfaction of patients in experimental group (96.67%) was significantly higher than that in reference group (80.00%), and the incidence of complications after kidney stone surgery in the experimental group (6.67%) was higher than that in the reference group (26.67%) ($P < 0.05$). *Conclusion:* Humanistic nursing care is greatly conducive to the mastery of health knowledge in patients undergoing kidney stone surgery, and this nursing mode can meet the needs for nursing work and potentially minimize postoperative complications.

Keywords: Humanistic nursing care; Kidney stone surgery; Health knowledge; Nursing satisfaction; Influence

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1. Introduction

Kidney stone, which is the abnormal accumulation of crystalline substances in the human kidney, is a common and frequently occurring disease of the urinary system. The most clinically common stone is calcium oxalate stone ^[1]. Kidney stones are more prevalent in men than in women, and most of them are young and middle-aged. Most patients suffering from kidney stones feel varying degrees of low back pain. Some patients feel lumbar swelling when they exercise, while some patients experience sudden, severe pain in the waist and abdomen, which feels like a cut from the knife. In addition, the patient was accompanied by obvious symptoms such as emotional restlessness, nausea, vomiting and hematuria ^[2]. Kidney stones can seriously damage patients' renal function and even cause diseases in other parts of the body. In this study, 60 patients with kidney stones who received surgical treatment in our hospital from June 2019 to June 2020 were selected. By analyzing the actual situation of these patients, we can deeply understand the impact of humanistic nursing care on the mastery of health knowledge and nursing satisfaction among patients with kidney stones. The details of the specific report can be seen below.

2. Materials and methods

2.1. General information

Sixty patients with kidney stones who underwent surgical treatment in our hospital from June 2019 to June 2020 were randomly divided into reference group and experimental group, with 30 cases in each group. There were 20 male patients and 10 female patients in the reference group, aged 32–71 years, with an average age of 50.97 ± 2.63 years. There were 19 male patients and 11 female patients in the experimental group, aged 33–72 years, with an average age of 51.28 ± 2.37 years. There was no significant difference between the two groups ($P > 0.05$). The relevant data of the two groups can be used for comparative analysis. Inclusion criteria of this study are as follows: (i) patients who were diagnosed with kidney stones after admission and needed surgery; and (ii) patients who had given and signed forms of surgical consent and informed consent to participate in the experiment. Exclusion criteria of this study are as follows: (i) patients who had mental illness; and (ii) patients who were unamenable to surgery.

2.2. Method

Patients in the reference group were given routine nursing care. Nurses needed to make various preparations before operation, always pay attention to the changes of patients' vital signs during operation, assist doctors in their work, and regularly check patients' indicators after operation ^[3].

The patients in the experimental group were given humanistic nursing care. The detailed nursing works are described as follows:

2.2.1. Health education and care

Nursing staff should tell patients and their families in detail about the disease and prevention knowledge of kidney stones, the operation process and precautions of kidney stone surgery, as well as the specific requirements of postoperative diet and bed exercise. Since patients possess varying cognitive levels, nurses should also choose different methods to lecture them on health knowledge. For example, for patients and family members with poor understanding ability, nurses can use video as auxiliary teaching ^[4]. After explaining health knowledge, nursing staff should patiently listen to the questions of patients and family members, and then answer in an accurate and easy manner.

2.2.2. Ward humanistic care

Patients undergoing kidney stone surgery need to be hospitalized for a long time before and after operation. Therefore, nurses must create a good ward environment for patients, transport all medical devices that patients can use to the ward, and disinfect, sterilize, clean and ventilate the ward on time every day to ensure that the temperature and humidity in the ward are always within the range comfortable to the patients ^[5].

2.2.3. Psychological humanistic care

Before kidney stone surgery, the patient would be anxious, fearful and emotional. The nursing staff should sincerely encourage the patient, communicate with the patient all the times, and encourage patient with successful surgical cases to boost their confidence. After kidney stone surgery, patients may feel irritable and passionate due to physical discomfort. At this time, nurses need to divert the patient's attention, such as watching television and listening to music ^[6].

2.2.4. Postoperative humanistic care

The first postoperative humanistic care is pain care. Nurses can use oral drugs or intravenous injections to relieve pain for patients. The second is humanistic care for complication prevention, which requires nurses to regularly check the changes at the patient's surgical site, finding out whether there are signs of bleeding

or infection. The healing of the patient's surgical incision can be accelerated through massage and acupuncture point massage [7].

2.3. Evaluation criteria

After nursing care, the two groups of patients with kidney stones were compared in terms of their mastery of health knowledge, including disease prevention knowledge, disease knowledge, surgical operation knowledge and surgical prognosis knowledge. The higher the score of each health knowledge, the higher the patient's mastery of the particular aspect of health knowledge.

The satisfaction of the two groups of patients with kidney stones after different nursing care was compared. By means of questionnaire survey, the patients can be divided into three levels according to their scores on the working conditions and nursing quality of nursing staff: (i) satisfaction: ≥ 80 points; (ii) general satisfaction: 60–80 points; and (iii) dissatisfaction: ≤ 60 points. In the final calculation of satisfaction, the number of the first two grades is added and divided by the total number of patients in this group to compute the percentage.

The complications of patients with kidney stones after different nursing care were compared between the two groups. The common complications after kidney stones surgery included postoperative bleeding, infection, local injury and lower limb vein injury.

2.4. Statistical analysis

All the data of the two groups of patients with kidney stone were summarized and processed using SPSS 24.0 statistical software. Among them, the patient's nursing satisfaction and postoperative complications are expressed as count (%), while the difference was analyzed by χ^2 test. The patient's degree of mastery of various health knowledge is expressed as mean \pm standard deviation, while the difference was analyzed by *t* test. The comparison data of the two patient groups were significantly different if $P < 0.05$ after the analysis.

3. Results

3.1. Comparison of health knowledge mastery degree score between two groups of patients undergoing kidney stone surgery

The scores of various health knowledge mastery of kidney stone patients in the experimental group who were given humanistic nursing care were much higher than those in the reference group who were given conventional nursing care ($P < 0.05$), as shown in **Table 1**.

Table 1. Comparison of health knowledge mastery degree score between two groups of patients undergoing kidney stone operation

Group	Disease prevention knowledge	Disease knowledge	Surgical knowledge	Surgical prognosis knowledge
Experimental group (n=30)	31.72 \pm 5.28	31.27 \pm 5.18	29.95 \pm 5.26	30.17 \pm 5.22
Reference group (n=30)	25.93 \pm 4.92	26.34 \pm 4.97	24.11 \pm 4.95	25.30 \pm 5.04
t	4.3942	3.7615	4.4286	3.6761
P	0.0000	0.0004	0.0000	0.0005

Data expressed as mean \pm standard deviation.

3.2. Comparison of nursing satisfaction between the two groups of patients undergoing kidney stone surgery

The nursing satisfaction of patients in the experimental group (96.67%) was significantly higher than that in the reference group (80.00%; $P < 0.05$), as shown in **Table 2**.

Table 2. Comparison of nursing satisfaction between the two groups of patients undergoing kidney stone operation

Group	Satisfaction	General satisfaction	Dissatisfaction	Degree of satisfaction
Experimental group (n=30)	13 (43.33)	16 (53.33)	1 (3.33)	29 (96.67)
Reference group (n = 30)	9 (30.00)	15 (50.00)	6 (20.00)	24 (80.00)
χ^2				4.0431
P				0.0444

Data expressed as count (%).

3.3. Comparison of postoperative complications between the two groups of patients with kidney stone surgery

The incidence of complications after kidney stone surgery in the experimental group (6.67%) was significantly lower than that in the reference group (26.67%; $P < 0.05$), as shown in **Table 3**.

Table 3. Comparison of postoperative complications between the two groups of patients undergoing kidney stone surgery

Group	Postoperative bleeding	Infection	Local damage	Lower limb vein injury	Incidence rate
Experimental group (n=30)	1 (3.33)	1 (3.33)	0 (0.00)	0 (0.00)	2 (6.67)
Reference group (n=30)	2 (6.67)	3 (10.00)	2 (6.67)	1 (3.33)	8 (26.67)
χ^2					4.3200
P					0.377

Data expressed as count (%).

4. Discussion

Kidney stones can be caused by many factors, such as genetics, environment, eating habits, etc., but the most common causes are abnormal metabolism, lack of nutrition and urinary tract obstruction. Clinically, surgery is used to treat kidney stones [8]. Under the mode of humanistic nursing care, people-oriented nursing care is carried out for patients to address many aspects based on the actual situation. Among them, health education helps increase patients' understanding of kidney stones to the greatest extent and enables patients to cooperate with treatment more actively. Humanistic care in the ward provides a good treatment environment for patients and can speed up the recovery of patients. Psychological humanistic care improves patients' mentality and is more conducive to early recovery. Postoperative humanistic care not only alleviates the pain, but also prevents the occurrence of postoperative complications as much as possible and

ensures the health of patients. In this study, patients in the experimental group were given humanistic nursing care, while those in the control group were given routine nursing care. The scores of various health knowledge mastery of kidney stone patients in the experimental group who were given humanistic nursing care were much higher than those in the reference group who were given routine nursing care. The nursing satisfaction of patients in the experimental group (96.67%) was significantly higher than that in the reference group (80.00%), and the incidence of complications after kidney stone surgery in the experimental group (6.67%) was higher than that in the reference group (26.67%) ($P < 0.05$). According to the above results, humanistic nursing care is greatly conducive to improve the mastery of health knowledge of patients undergoing kidney stone surgery, and this nursing mode meets the patients' needs for nursing work and minimizes postoperative complications.

Disclosure statement

The author declares no conflict of interest.

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