

Application of Whole-Process Management in Day Surgery for Endometrial Polyp

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Abstract: *Objective:* To explore the effect of whole-process management model in nursing management of endometrial polyp day surgery. *Methods:* 266 patients that underwent endometrial polyp day surgery from January to December 2022 were selected for this study, and they were separated into an observation group (131 patients) and a control group (135 patients); the clinical data of the two groups were compared. *Results:* After intervention, the scores of Hamilton Anxiety Scale (HAM-A) of the patients in the observation group were lower than those in the control group ($P < 0.05$). The rate of postoperative complications in the observation group was lower than that in the control group ($P < 0.05$), and the satisfaction degree of the patients in the observation group was higher than that in the control group ($P < 0.05$). *Conclusion:* The application of the whole-course management model in endometrial polyp day surgery can alleviate patients' anxiety, ensure the quality and safety of day surgery nursing, and improve patients' satisfaction.

Keywords: Whole-process management; Endometrial polyp; Day surgery; Nursing safety

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1. Introduction

Endometrial polyp is a common benign tissue nodule lesion of endometrial in women, which affects women's reproductive health at different ages ^[1] and can cause serious complications such as uterine bleeding and infertility if not treated in time ^[2-4], affecting the patients' quality of life. Day surgery refers to the completion of the operation within 1 working day, including admission, surgery, short postoperative observation, and discharge ^[5]. Based on the whole-process management model ^[6], the data of patients with gynecological endometrial polyps in our hospital were collected and sorted out, and nursing intervention was carried out through the development of perioperative process management plan, health education, monitoring of nursing-sensitive indicators, etc., to ensure the quality and safety of nursing in day surgery.

2. Data and methods

2.1. General data

In this study, 131 patients with endometrial polyp were managed with whole-course management mode (observation group), and 135 patients were managed with routine management (control group). The clinical data of the two groups were compared. Inclusion criteria: (i) patients undergoing gynecological day surgery; (ii) patients who are conscious, able to think and express normally, and voluntarily participated in the study.

Exclusion criteria: (i) patients with gynecological malignant tumors; (ii) complicated with other non-gynecological diseases that can cause anxiety; (iii) patients with serious organic diseases and mental diseases. This study was approved by the hospital's Medical Ethics Committee.

2.2. Methods

The control group underwent routine gynecological surgery nursing, including admission assessment, various examinations, perioperative health education, and discharge guidance. The whole-process nursing management was adopted in the observation group on the basis of the control group.

2.2.1. Construction of whole-process nursing management

The whole-process nursing management team consisted of a group leader (the director of the gynecological surgery day-care center), a deputy group leader (head nurse), and 1 anesthesiologist, 2 surgical nurses, 1 attending doctor, and 1 gynecologist nurse. Various rules and regulations^[7] was formulated based on five aspects: patient assessment, psychological nursing, safety management, health education, and extended nursing. Besides, process optimization was carried out, and whole-process management of day surgery nursing was applied. Moreover, the incidence of postoperative complications and other key indicators was also monitored, and problems have been discovered and solved in time^[8].

2.2.2. Implementation of whole-process management

(i) Patient assessment

A “one-stop” service was provided for the admission of patients. Virtual beds were set up through the Hospital Information System (HIS)^[9] to manage pre-hospitalization; a safety assessment system was set up to screen high-risk patients and ensure surgical safety.

(ii) Health education

The enhanced patient education (EPE) model^[10] was used, which focuses on strengthening the preoperative preparation and drug management information of patients undergoing day surgery in stages.

(iii) Perioperative safety management

Patients were screened before operation through closed-loop authentication^[11]. During the operation, the concept of rapid rehabilitation was followed to shorten anesthesia and operation time, reduce stress and immune inflammatory reaction^[12], and prevent postoperative complications such as bleeding and infection.

(iv) Psychological care

Patients were given a detailed diagnosis and a clear explanation of the treatment, and they were encouraged to participate in the treatment. Several measures were also taken to reduce the patients' anxiety.

(v) Continuous care

Guidance on diet, medication, and complication prevention for patients with endometrial polyps were provided through an “Internet+” information platform^[13]. All nursing-sensitive indicators were collected and reviewed, and improvements weremade to the diagnosis and treatment service to ensure medical quality and safety.

2.2.3. Outcome indicators

(i) Degree of anxiety

The degree of anxiety of patients was measured by Hamilton Anxiety Scale (HAM-A). There are 14 items in the scale, each item is 0–4 points, the total score of more than 14 points indicates anxiety; a score of less than 7 indicates no symptoms of anxiety.

(ii) Complications

The complications of the two groups were recorded and analyzed, including uterine perforation, incision infection, vaginal bleeding and hyponatremia.

(iii) Satisfaction

To understand the satisfaction of patients towards the nursing, a questionnaire was distributed to the patients to using Questionnaire Star on the day of discharge, in which patients can choose from the options of “very satisfied,” “satisfied,” or dissatisfied. Satisfaction = (number of “very satisfied” + number of “satisfied”)/total cases ×100%.

2.3. Quality control

(i) The whole-process management plan was modified repeatedly according to advice by experts to ensure quality. (ii) The difference before and after the whole-process management mode for patients was recorded and evaluated. (iii) Data collection was performed full-time researchers one-on-one. Data entry and statistical analysis were carried out by two researchers, and all observations and findings were verified to ensure the reliability of the data.

2.4. Methods of statistical analysis

SPSS 22.0 software was used to establish a database and perform statistical analysis. The measurement data were expressed as mean ± standard deviation (SD). Independent sample *t* test was used to compare the two groups. Counting data were expressed as frequency and percentage, and χ^2 test was used for comparison between groups, where $P < 0.05$ was considered statistically significant.

3. Results

3.1. General data of the patients

The general data of the patients including age, marital status, status of employment, and area residence of both groups were compared, and there was no significant difference between the data ($P > 0.05$), as shown in **Table 1**.

Table 1. Comparison of general data between the two groups

General data	Control group (n = 135)	Observation group (n = 131)	<i>t</i> / χ^2	<i>P</i>
Age	42.06 ± 9.88	43.27 ± 9.62	1.010	0.313
<i>Marital status</i>				
Married	130 (96)	128 (98)	0.100	0.752
Unmarried	5 (4)	3 (2)		
<i>Status of employment</i>				
Employed	119 (88)	108 (82)	1.730	0.188
Non-employment	16 (12)	23 (18)		
<i>Area of residence</i>				
Rural areas	69 (51)	62 (47)	0.381	0.537
Cities	66 (49)	69 (53)		

3.2. Comparison of HAM-A scores between the two groups

After medical intervention, the HAM-A scores of patients in the observation group were significantly lower than those in the control group, ($P < 0.05$), as shown in **Table 2**.

Table 2. Comparison of HAM-A scores between the two groups (mean \pm SD, points)

Group	Control group (n = 135)	Observation group (n = 131)	t	P
HAM-A score before intervention	16.82 \pm 4.73	16.48 \pm 4.69	-0.591	0.555 (> 0.05)
HAM-A score after intervention	15.05 \pm 3.29	12.19 \pm 3.08	-7.323	0.000 (< 0.05)

3.3. Comparison of complications in patients

Table 3. Comparison of complications between the two groups (n [%])

Item	Control group (n = 135)	Observation group (n = 131)	χ^2	P
Uterine perforation	1	0		
Incision infection	4	1		
Vaginal bleeding	19	10		
Hyponatremia	1	0		
Rate of complications	25 (18.5)	11 (8.4)	5.820	0.016

3.4. Comparison of patient's satisfaction between the two groups

The satisfaction score of patients in the observation group on the day of discharge was significantly higher than that of the control group ($P < 0.05$), as shown in **Table 4**.

Table 4. Comparison of patient satisfaction (n [%])

Item	Control group (n = 135)	Observation group (n = 131)	χ^2	P
Very satisfied	99	116		
Satisfied	23	11		
Not satisfied	13	4		
Overall satisfaction	122 (90)	127 (97)	4.806	0.028

4. Discussion

The incidence of endometrial polyps in China ranges from 7.8% to 34.9%, with the highest incidence in women of childbearing age and menopausal women [14]. Some studies have pointed out [15] that some patients had high expectations of the surgery, but they are prone to anxiety due to long waiting time for surgery and concerns about the safety of the surgery. The results of this study showed that the HAM-A score of the observation group after intervention was lower than that of the control group, indicating that the whole-process management mode can help alleviate the anxiety of patients undergoing day surgery for endometrial polyps, which is consistent with the research results of Li *et al.* [16], who believed that intervention measures such as health education and psychological nursing can alleviate anxiety. This is because effective preoperative assessment and the implementation of enhanced patient health education model allows the patients and their families to have a comprehensive understanding of the day surgery, which enhances their confidence and reduce the anxiety brought by surgery.

Day surgery shortens the length of hospital stay, but causes great uncertainties in the postoperative recovery of patients [17]. This study shows that the rate of complications of the observation group with

whole-process management was lower than that of the control group ($P < 0.05$), which was similar to the study results of Mo *et al.* [18], suggesting that the implementation of whole-process management model can effectively improve the nursing quality of gynecological day surgeries. The management process of day surgery was optimized and improved from the aspects of patient assessment, psychological nursing, safety management, health education and extended care. The enhanced communication and cooperation among doctors, anesthesiologists and nurses could reduce duplication of work, improve work efficiency, and improve the overall nursing quality [19]. In terms of preoperative preparation, intraoperative nursing, and postoperative observation, efforts should be made to find out the hidden safety factors of day surgery nursing, improve the related rules and regulations and the professional qualities of medical staff, and reduce the occurrence of safety accidents. The results of this study showed that the rate of satisfaction of the observation group was significantly higher than that of the control group ($P < 0.05$), which was consistent with the results of a study done by Chen *et al.* [20]. Therefore, this suggests that nursing intervention can reduce the incidence of complications in patients with endometrial polyps and improve satisfaction.

5. Conclusion

In conclusion, the implementation of the whole-process management model can alleviate the anxiety of patients undergoing day surgery and improve the quality and safety of nursing.

Disclosure statement

The authors declare no conflict of interest.

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