Exploration on Reasons for Uroschesis after Radical Surgery of Cervical Cancer and Nursing Countermeasures

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Abstract: Objective: to explore the reasons for uroschesis after radical surgery of cervical cancer and nursing intervention countermeasures. Method: clinical data of 80 patients who received radical surgery of cervical cancer in the hospital where the author worked from July 2015 to December 2017 were collected. The 80 patients were classified into two groups (40 patients for each group) according to the odd number and even number of their hospitalization document. The control group received conventional nursing intervention, while the observation group received targeted nursing intervention on the basis of control group. Hospital stay, bladder function rehabilitation and postoperative uroschesis occurrence of two groups were compared. Results: hospital stay of observation group was obviously shorter than that of control group, and the difference had statistical significance (P<0.05); the proportion of bladder function rehabilitation to Level 0 in observation group was obviously higher than that of control group, and the proportion of bladder function rehabilitation to Level II in observation group was obviously lower than that of control group. The difference had statistical significance (P<0.05); postoperative uroschesis occurrence rate of observation group was obviously lower than that of control group. The difference had statistical significance (P<0.05). Conclusion: the application of targeted nursing for the patients after radical surgery of cervical cancer has good effect, contributes to shortening hospital stay, promotes patients' bladder function rehabilitation and reduces uroschesis occurrence, so it deserves to be applied and promoted clinically.

Keywords: cervical cancer; radical surgery; uroschesis; occurrence reason; intervention countermeasure

1. Introduction

Cervical cancer belongs to a common malignant tumor in clinical gynaecology. The pathogenesis is related to multiple factors. So far, there has been no unified standard. It may be related to virus infection, sexual behavior, delivery times, other biological factors and behavioral factors [1]. The operation is the main measure to treat this disease. But, according to the clinical report, uroschesis and other complications easily occur to the patients after radical surgery of cervical cancer, and they cause serous impacts on patients' living quality, physical and psychological health. Thus, uroschesis occurrence factors and intervention countermeasures after radical surgery of cervical cancer become current clinical research hotspot [2-4]. Clinical data of 80 patients who received radical surgery of cervical cancer in the hospital where the author worked from July 2015 to December 2017 were collected to explore the reasons for uroschesis after radical surgery of cervical cancer and nursing intervention countermeasures for clinical reference.

2. Data and Method

2.1. General Data

Clinical data of 80 patients who received radical surgery of cervical cancer in the hospital where the author worked from July 2015 to December 2017 were collected. Inclusion criteria: all patients received relevant examination, conformed to the diagnosis of cervical cancer, and had indications of radical surgery of cervical cancer; hysterectomy and pelvic lymph node dissection were implemented clinically according to patients' practical conditions, and indwelling catheter was applied for all patients; after operative treatment, patients showed micturition desire to different degrees, but did not urinate by themselves within 4-8h after the surgery. The patients felt abdominal swelling, and the bladder region was obviously full; the research content was approved by Ethics Committee of the hospital. Patients and their relatives were informed and singed the letter of consent at will. Exclusion criteria: those with abnormal cardiovascular and cerebrovascular function, abnormal hepatic and renal function and mental disease. According to patients' hospitalization time, they were classified into two groups, and each group included 40 patients. The age of the control group was 35~65, with the average age of 41.15±5.13. The judgement of pathological phase is as follows: 25 patients in Phase Ⅰb1, 11 patients in Phase

Ⅰb2, 3 patients in Phase Ⅱa and 1 patient in Phase Ⅱb. The age of the observation group was 35~65, with the average age of 42.02±5.25. The judgement of pathological phase is as follows: 27 patients in Phase Ⅰb1, 10 patients in Phase Ⅰb2, 2 patients in Phase Ⅱa and 1 patient in Phase Ⅱb. The baseline information difference of two groups had no statistical significance (P>0.05), so they had comparability.

2.2. Method

2.2.1. Conventional nursing

The control group received conventional nursing intervention, including basic nursing, psychological counseling, health education and life nursing, etc.

2.2.2. Targeted nursing

On the basis of control group, the observation group received targeted nursing intervention, including the following contents:

(1) Uroschesis prevention: in the operation period, patients' bladder and vagina protection as well as uroschesis prevention should be valued to reduce the damage to patients' bladder and vagina. Before the surgery, relevant education work should be completed, and the importance of off-bed activity early after the surgery as well as the necessity of active abdominal muscle exercise should be introduced to patients, including increasing bladder contractility and reducing uroschesis formation after the surgery. Besides, it is required to assist patients in urinating after the surgery.

(2) Urination training: before the surgery, on-bed prostration training was implemented for the patients, and urination method and attention were explained for the patients. Meanwhile, the benefits of horizontal position urination were explained for the patients (≥2 every day) to make sure the patients mastered horizontal position urination method.

(3) Mental nursing: mental nursing was implemented in the whole process. Mental state of patients before and after the surgery should be grasped. In addition, it is required to know whether patients' are nervous, their mental emotion for surgical incision pain and worry about postoperative wound infection or dehiscence. During the nursing period, nursing personnel need to patiently listen to patients' opinions, eliminate their doubts and remove their worries as far as possible.

(4) Assisting patients in urinating correctly: after the surgery, most patients can site on bed, so it is required to teach micturition method to the patients, including adding the screen beside the bed to protect patients' privacy, and assisting them in siting up and urinating or urinating according to the postures that the patients get used to.

(5) Urination induction: choose and adjust suitable position for urination according to patients' preference, such as promoting urination by utilizing conditioned reflex formed by "bicker" or washing patients' perineum with warm water, and assisting them in loosening smooth muscle to reach the effect of urination. During assisting urination, it is required to pay attention to protecting patients' privacy, make patients relax mentally and make them enhance compliance.

(6) Hot compression and massage of patients' hypogastrium: hot-water bag and hot towel are used for hot compression of bladder region for about 20min. During the hot compression, massage of patients' hypogastrium should be conducted to facilitate patients' bladder and urethra to return to normal, eliminate edema and relax their urethral sphincter so as to conduct reflexive stimulus of patients' bladder and reach the effect of promoting patients' urination.

(7) Relaxing the bowels and urinating: in normal conditions, people often urinate during excretion. Thus, it is required to pay attention to correct urination intervention for the patients with uroschesis after the surgery, guide them to take left lateral position, inject enema into patients' anus ad closely observe patients' urination for 15min.

(8) Acupoint injection: except the above physical intervention method, traditional Chinese medicine may be applied properly. Acupuncture may be used to stimulate patients' Zusanli point. It is better when the patients have sore and numb feeling. Then, neostigmine is injected in the acupoint to reach the treatment purpose of promoting patients' urination.

2.3. Observation Indicators

(1) Conducted the statistics of treatment time of both groups;

(2) Conducted the statistics of uroschesis occurrence after the surgery.

2.4. Curative Effect Criteria

Bladder functions of patients after nursing intervention of both groups were compared. The detailed criteria of Level 0, Level I and Level II are as follows [2]: Level 0: patients have obvious full feeling in the bladder, and surplus urine volume<50ml; Level I: surplus urine volume is 50~100ml; Level II: 50~100ml >100ml.

2.5. Statistical Method

SPSS21.0 statistics software package was used to process the data. P<0.05 means the difference has statistical significance. T test was applied for measurement data ($\bar{x} \pm s$).$\chi 2$ teste was used for numeration data.

3. Results

3.1. Surgery Time Comparison

The hospital stay of observation group was obviously shorter than that of control group, and the difference had statistical significance (P<0.05) (Tab.1).

Table 1. Surgery time comparison ($\bar{x} \pm s$)

Group	No.	Surgery time (min)
Observation group	40	11.75±3.85
Control group	40	16.79±3.42
t	/	6.190
P	/	<0.05

3.2. Bladder Function Rehabilitation of Both Groups

The proportion of bladder function rehabilitation to Level 0 in observation group was obviously higher than that of control group, and the proportion of bladder function rehabilitation to Level II in observation group was obviously lower than that of control group. The difference had statistical significance (P<0.05) (Tab.2).

Table 2. Bladder function rehabilitation of both groups

Group	No.	Level 0	Level Ⅰ	Level II
Observation group	40	25（62.50）	10（25.00）	5（12.50）
Control group	40	9（22.50）	18（36.00）	13（32.50）
χ^2	/	31.120	2.359	10.351
P	/	<0.05	>0.05	<0.05

3.3. Comparison of Postoperative Uroschesis Occurrence Rate

Uroschesis did not happen to the observation group, while uroschesis happened to 5 patients (12.50%). The reasons are summarized as follows: pelvic plexus nerve injury (2), bladder muscle layer damage (1), urinary tract infection (1) and sustentacular tissue defect (1). The difference had statistical significance (χ^2=11.285; P<0.05).

4. Discussion

4.1. Uroschesis Occurrence Factors After Radical Surgery of Cervical Cancer

The factors for uroschesis occurrence after radical surgery of cervical cancer are diversified. The main factor may be related to neurogenic bladder function damage caused by the surgery. The main injured parts include nerve fiber outside the ureter, parasympathetic nerve fiber at the side of bladder, superficial layer or deep layer of sacral ligament, cardinal ligament and other pelvic plexus nerves. In this study, uroschesis caused by this factor happened to 2 patients. Bladder muscle layer and sustentacular tissue damage: vagina antetheca and lower uterine segment need to dissociate in the surgery, so the surface of the wound is generally large, which may lead to bladder muscle layer injury, and large weak area may appear [5]. In addition, patients' bladder reinforcement deficiency causes the bladder loses the contraction function, thus resulting in uroschesis occurrence. Apart from bladder muscle layer, extensive resection may occur to uterus, parametrium and vagina. Thus, pelvic cavity emptiness may occur to the patients, thus leading to the loss of support. In this study, two kinds of tissue damage happened to 1 patient respectively. Urinary tract infection is a common factor for uroschesis. The previous researches indicate that, when the indwelling catheter is used for 3d, uroschesis occurrence rate progressively increases at the speed of 5%/d, which increases the risk of urinary tract infection [6]. In this study, uroschesis caused by this factor happened to 1 patient.

4.2. Application Effect of Targeted Nursing in Prevention of Postoperative Uroschesis

Uroschesis occurrence may result in severe impacts on patients' prognosis and psychological status. Based on the research results, the hospital stay of observation group was obviously shorter than that of control group. Thus, targeted nursing intervention contributes to promoting patients' fast rehabilitation. The proportion of bladder function rehabilitation to Level 0 in observation group was obviously higher than that of control group, and the proportion of bladder function rehabilitation to Level II in observation group was obviously lower than that of control group. Targeted nursing intervention can facilitate patients' bladder function rehabilitation effect. Uroschesis occurrence rate of observation group was lower than that of control group, which indicates that the nursing mode is helpful to reduction of uroschesis occurrence rate. This conclusion is consistent with the current report [7-9]. Although conventional nursing can gain certain effect in the application, the effect is limited, because this intervention scheme lacks targeting and puts particular emphasis on basic nursing. The targeted nursing emphasizes patients' conditions of disease, emotion and treatment method specificity. In this study, the following measures were proposed: uroschesis prevention, urination training, psychological nursing, assisting patients in urinating correctly, urination induction, hot compression and massage of hypogastrium, relaxing the bowels and urination as well as acupoint injection. These measures may be the key to the good effect of targeted nursing [10].

5. Conclusion

In conclusion, the application of targeted nursing for the patients after radical surgery of cervical cancer indeed has good effect. The targeted nursing contributes to shortening hospital stay, promoting patients' bladder function rehabilitation, and reducing uroschesis occurrence. Therefore, it deserves to be promoted and applied.

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