

Effect of Perioperative Period Nursing on Quality of Life of Patients with Breast Reconstruction with Latissimus Dorsi Flap

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Abstract To investigate the effect of perioperative period nursing on the quality of life of patients with breast reconstruction with Latissimus Dorsi Flap. A total of 90 patients with breast reconstruction with Latissimus Dorsi Flap were enrolled from January 2018 to November 2019. Grouped by digital table method, 90 cases patients were divided into experimental group and control group, with 45 cases in each group. The control group received clinical routine nursing, the observation group received targeted nursing intervention measures during perioperative period. The satisfaction and the occurrence of postoperative adverse reactions of the two groups were compared. The average length of hospital stay and postoperative upper limb rehabilitation training compliance; upper limb function score and quality of life score before and after nursing; incidence of upper limb numbness and scar contracture. The nursing satisfaction of the experimental group was statistically significant compared with the control group ($P < 0.05$). The postoperative hospital stay was significantly less than that of the control group, and the postoperative upper limb rehabilitation training compliance was higher than that of the control group. The difference was statistically significant ($P < 0.05$). There was little difference in quality of life score and upper limb function score between the two groups before treatment. The difference was not statistically significant. After nursing, the quality of life score and upper limb function score of the experimental group patients. The difference was statistically significant ($P < 0.05$). The incidence of upper limb numbness and scar contracture in the experimental group was lower than that in the control group, and the difference was statistically significant ($P < 0.05$). Conclusion The application of rehabilitation nursing after modified radical mastectomy for breast cancer is effective in the treatment of modified radical mastectomy for breast cancer. It can effectively improve the upper limb function, reduce the incidence of upper limb complications, and improve the quality of life and satisfaction of patients. Perioperative nursing intervention in patients with I stage of latissimus dorsi flap after breast modified radical mastectomy can effectively prevent the occurrence of serious complications and improve the satisfaction of breast reconstruction and the success rate of operation.

Keywords: perioperative period nursing, breast reconstruction with Latissimus Dorsi Flap, effect of intervention

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modified radical mastectomy for breast cancer, as reported below.

1. Introduction

Breast cancer modified radical mastectomy has become the first choice for clinical treatment of breast cancer in recent years, because the loss of breast or morphological changes can easily lead to the physical, psychological, family, social and other aspects of the patients [1,2,3]. The problem is solved by the I stage reconstruction of latissimus dorsi muscle flap after radical mastectomy [4,5,6]. This study aimed to investigate perioperative nursing interventions for I stage breast reconstruction of latissimus dorsi flap after

2. Information and Method

A total of 90 patients with breast reconstruction with Latissimus Dorsi Flap were enrolled from January 2018 to November 2019. Grouped by digital table method, 90 cases patients were divided into experimental group and control group, with 45 cases in each group. There was no significant difference between the two groups in general data of age, course and condition ($P > 0.05$).

The control group received routine nursing, and the treatment group strengthened perioperative nursing, as follows:

2.1. Preoperative Care

2.1.1. Psychological Care

Patients often appear anxiety, fear, pessimism and despair of bad psychology, managers timely psychological care of patients is very necessary. Nursing staff should be kind and kind, actively communicate with patients and their families, explain disease knowledge and preoperative precautions in detail.

2.1.2. Preoperative Preparation

Assist the patient to do all routine examinations; tell the patient about the operation method, postoperative precautions and possible complications according to the plan of operation; inform the patient to prohibit diet for 12 h before operation; prepare the skin of the receiving area and the supply area, avoid skin injury, and advise the patient to protect the anatomical marking line marked before operation.

2.2. Postoperative Care

2.2.1. Ward Environment

Keep the ward clean and ventilated, control at 24°C~26°C, humidity control at 45%~60%. Too high temperature will increase the oxygen consumption of the whole body and flap tissue, and low temperature can lead to vasospasm of the flap, which is not conducive to the survival of the flap. Appropriate humidity can inhibit the growth of mold and bacteria in postoperative anti-infection care.

2.2.2. Vital Signs

After returning to the ward, the patient was given low flow oxygen inhalation and electrical monitoring. The vital signs of body temperature, respiration, blood pressure, pulse and oxygen saturation were observed and recorded.

2.2.3. Posture Nursing

The first 6 h after operation should go to the pillow supine position, wait for the patient to be conscious and the vital sign is stable, encourage the patient to change to the healthy lateral position 30°, the free supply area is oppressed; the first d after operation can change to the half sitting position, less supply area bleeding risk.

2.2.4. Blood Observation of Myocutaneous Flap

Myocutaneous flap necrosis is a serious complication of breast reconstruction, which should be caused by microvascular circulation disorder. Preventive nursing measures include: maintaining effective drainage, stopping subcutaneous hemorrhage and effusion; suitable wound dressing after operation; close observation of the color change of myocutaneous flap and capillary pressure test; continuous monitoring of flap temperature change by semiconductor thermometer after operation.

2.2.5. Nursing Care of Negative Pressure Drainage Tube

The drainage tube includes the supply area and the receiving area. Ensure that the drainage tube is negative pressure, squeeze the drainage tube to keep unobstructed, properly fix the drainage tube to avoid its distortion, compression, shedding. Observe the change of the character, color and quantity of drainage fluid, replace the drainage device daily, pay attention to aseptic operation and prevent infection. Postoperative drainage 24 h less than 10 ml,

The drainage tube can be pulled out.

2.3. Rehabilitation Training

Day of operation: the patient was told to be in the adductor position within 24 h of the shoulder joint. The first ~3 d: after operation do fist, bend wrist and forearm, elbow joint flexion and extension movement; 4~7 after operation with the healthy hand to support the affected limb to do lifting movement, the affected side hand touch the opposite shoulder ipsilateral ear; 8~10 after operation, the affected limb finger climb wall movement; 11~13 d: the affected side palm placed behind the neck, to the head chest, practice the affected limb rotation movement. According to the patient's wound healing and physical strength gradually increase the amount of exercise, practice the upper arm of the affected limb elevation, the affected arm over the head to touch the contralateral ear and so on. Rehabilitation training should abide by the principle of gradual and orderly, do not act too quickly, the second half of the year to avoid blood collection, infusion or lifting weight on the affected limb. Guide patients to learn breast massage, along the incision from outside to inside, down to the upward thumb ring massage, told patients to wear a comfortable bra as soon as possible after wound healing, to prevent reconstruction of breast deformation droop.

2.4. Observation Indicators

To compare the satisfaction of the two groups : satisfactory: compared with the healthy breast, small, similar shape, symmetrical, almost the same color, good sex; more satisfied: compared with the healthy breast, small, shape is basically similar, basically symmetrical, skin color difference is not obvious, sex is OK; dissatisfied: compared with the healthy breast, small, morphological difference, asymmetrical, skin color difference, scar hyperplasia in the surgical site.; average hospitalization days, postoperative upper limb rehabilitation training compliance (0~100 points, the higher the compliance); upper limb function score before and after nursing (with FMA upper limb function score ,~66 points, the higher the better), quality of life score (with QOL scale ,0~100 points, the number is proportional to the quality of life of patients undergoing modified radical mastectomy); incidence of upper limb numbness and scar contracture.

2.5. Statistical Methods

All clinical data of this study, input statistical software SPSS 17.0. Count data (the incidence of nursing satisfaction,

upper limb numbness, scar contracture, etc.) were expressed as rate (%), and χ^2 tests were performed. The measurement data (quality of life score before and after nursing, upper limb function score, average hospitalization days, postoperative upper limb rehabilitation training compliance) were expressed as " $\bar{x} \pm s$ ", and the comparison was t test. $P < 0.05$ was statistically significant.

3. Results

3.1. Comparison of Experimental Group and Control Group Satisfaction

Compared with the control group, the nursing satisfaction of the experimental group was statistically significant ($P < 0.05$), as shown in Table 1.

3.2. Comparison of Clinical Related Indexes between the Two Groups before and after Nursing

Before nursing, there was no significant difference between the two groups in comparing quality of life score

and upper limb function score. After nursing, the difference between the two groups was statistically significant in terms of quality of life score and upper limb function score ($P < 0.05$), as shown in Table 2.

3.3. Comparison of the Average Days of Hospitalization and the Compliance of Rehabilitation Training of Upper Limbs after Operation

After operation, the days of hospitalization in the experimental group were significantly lower than those in the control group, and the compliance of upper limb rehabilitation training was higher than that in the control group ($P < 0.05$), as shown in Table 3.

3.4. Comparison of the Incidence of Flap Necrosis and Fat Liquefaction between Two Groups

Compared with the control group, the incidence of flap necrosis and fat liquefaction in the experimental group was significantly lower ($P < 0.05$), as shown in Table 4.

Table 1. Satisfaction comparison between experimental group and control group [n(%)]

Group	Cases	Satisfy	Quite satisfied	Dissatisfied	Satisfaction
Control group	45	16	20	9	36 (80.00)
Test group	45	30	10	2	44 (88.89)
χ^2					11.96, 2
P					0.0025

Table 2. Comparison of clinically relevant indicators between pre- and post-treatment groups ($\bar{x} \pm s$)

Group	Cases	Period	Upper Extremity Function Score	Quality of life score
Control group	45	Pre-treatment	33.32 $\pm$ 1.25	51.36 $\pm$ 0.21
		Post-treatment	50.74 $\pm$ 1.32	80.71 $\pm$ 0.17
Test group	45	Pre-treatment	35.34 $\pm$ 1.21	56.25 $\pm$ 0.26
		Post-treatment	69.21 $\pm$ 1.69	93.21 $\pm$ 0.21

Table 3. Comparison of average hospital stay days and postoperative upper limb rehabilitation training compliance ($\bar{x} \pm s$)

Group	Cases	Average hospital stay days (d)	Postoperative upper limb rehabilitation training compliance
Control group	45	13.12 $\pm$ 1.45	79.33 $\pm$ 3.44
Test group	45	8.55 $\pm$ 1.78	96.44 $\pm$ 3.78
t		19.31	14.27
P		0.0329	0.0445

Table 4. Comparison of the incidence of upper limb numbness, scar contracture [n(%)]

Group	Cases	Upper limb numbness	Scar contracture	Incidence rate
Control group	45	7	6	13(28.89)
Test group	45	2	1	3(6.67)
χ^2				11.96
P				0.0025

4. Discussion

The loss of breast caused by modified radical mastectomy destroys the beauty of female body [7,8], and breast reconstruction with latissimus dorsi flap makes up for this regret, which not only increases the self-confidence of patients, but also improves the quality of life of patients [9,10,11,12].

In order to ensure the physical rehabilitation of breast cancer patients, nursing staff [13] should strengthen perioperative nursing, including: doing psychological guidance before operation, paying attention to ward environment after operation, observing vital signs of patients closely, paying attention to post-operative posture [14,15]. Strengthen myocutaneous flap blood flow nursing and negative pressure drainage tube nursing to guide the functional exercise of affected limbs [16]. Perioperative nursing care of breast cancer patients not only effectively relieves anxiety and tension, but also improves clinical treatment effect by strengthening communication, further establishing good nurse-patient relationship, improving patients' compliance with clinical treatment [17]. The real-time monitoring of vital signs and therapeutic reactions can not only ensure the safety of the whole treatment process, but also reduce the occurrence of complications and adverse reactions. In addition, through perioperative functional exercise, passive or active exercise, the reconstructed side of the breast was stimulated to a certain extent, while regulating blood flow, accelerated postoperative recovery time. According to the results of this study, the postoperative satisfaction of the treatment group was significantly better than that of the control group ($P < 0.05$).

To sum up, strengthening perioperative nursing care in breast cancer patients undergoing breast reconstruction with breast reconstruction with latissimus dorsi flap can minimize the physiological and psychological pain of patients, promote the recovery of patients, and improve the clinical efficacy. It is worth popularizing and applying in clinic.

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Conflict of Interest

All authors declare no conflicts of interest in this study.

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