

# *Efficacy of Ziwu Liuzhu Method Combined with Shuxin Foot Bath Decoction in Relieving Lower Extremity Edema after Lymphadenectomy for Gynecological Malignant Tumors*

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**Abstract:** **Objective:** To investigate the effect of "Ziwu" timing method combined with Shuxin Foot Bath Decoction in relieving lower extremity edema after lymphadenectomy for gynecological malignant tumors. **Method:** A retrospective collection of 82 cases of gynecological malignancies who underwent lymphadenectomy in the gynecological ward of our hospital from May 2020 to May 2022 were retrospectively collected, and the patients were numbered by random number table method, and those with odd numbers entered the control group, Numbers with double numbers entered the observation group, with 41 cases in each group. The control group received conventional treatment for postoperative lower extremity edema, and the observation group received conventional treatment and Ziwu Liuzhu method combined with Shuxin Foot Bath Decoction. The scores of symptoms of edema of the affected limb, the quality of life was assessed by the European Cancer Research and Treatment Group The Organizational Quality of Life Questionnaire (EORTC-Q30), the circumference of the affected limb, and the Simple Fatigue Scale (BFI) to assess the severity of fatigue in patients and the effect of fatigue on personal life, comparing between the two groups of patients before and after treatment. **Result:** In the 2nd and 3rd week of treatment, the clinical efficacy of edema of the affected limb, the quality of life was assessed by the European Cancer Research and Treatment Group The Organizational Quality of Life Questionnaire (EORTC-Q30), the circumference of the affected limb, and the Simple Fatigue Scale (BFI) scores of the observation group were compared with those of the control groups. The comparisons were all statistically significant,  $P < 0.05$ . The results of the curative effect of edema showed that the marked rate of the observation group was significantly higher than that of the control group. **Conclusion:** In the real clinical environment, the implementation of "Ziwu" timing method combined with Shuxin Foot Bathing Decoction can effectively relieve the lymphatic resection of gynecological malignant tumors.

## 1. Introduction

Lymphadenectomy is an indispensable and effective treatment for gynecological malignant tumors. After lymphadenectomy for gynecological malignant tumors, the most common long-term complication is lower extremity lymphedema, which often occurs months or even years after surgery. Perineum), and accompanied by a series of adverse symptoms, such as skin tightness, heaviness, numbness, but relieved in the morning. Once lower extremity lymphedema occurs, it has a long course, repeated development and poor treatment effect[1]. In recent years, it has gradually become the focus of research in this field. Although many studies have explored the treatment of gynecological malignancies. However, due to the number of cases included in each study and the emphasis on risk factors, and some patients due to differences in ethnicity and treatment methods, the results vary greatly. There are various methods of treating lower extremity edema in the motherland medicine, from a single oral traditional Chinese medicine decoction to a combination of traditional Chinese medicine retention enema, external application of ointment, traditional Chinese medicine injection, traditional Chinese medicine foot bath, and external treatment of traditional Chinese medicine at the same time. It has certain advantages to reduce the use of diuretics and reduce the occurrence of toxic and side effects of western medicine[2-4]. At present, the treatment of invigorating the spleen and tonifying the kidney, invigorating the water and removing dampness, dredging the meridians, promoting blood circulation and removing blood stasis has achieved good curative effect. Therefore, in this study, the "Ziwu" timing method combined with Shuxin Foot Bath Decoction was used to relieve gynecological malignant tumor lymphatic resection. The clinical efficacy of postoperative lower extremity edema is reported below.

## 2. Methods and Materials

### 2.1 Normal Information

A total of 82 cases were collected from May 2020 to May 2022 who were diagnosed with gynecological malignant tumors and underwent lymphadenectomy in the gynecological ward of our hospital, and the patients were numbered according to the random number table method. In the control group, those with double numbers were included in the observation group, with 41 persons in each group. Inclusion criteria[5]: (1) Those who were diagnosed with gynecological malignancies and underwent lymph node resection; (2) were diagnosed with postoperative lower extremity edema based on clinical manifestations and imaging examinations; (3) were older than 18 years; (4) had normal symptoms. (5) Those who understand the purpose and content of this research, voluntarily participate and sign the informed consent form. Exclusion criteria: (1) patients with deep vein thrombosis, pulmonary embolism or major organ diseases; (2) patients with mental disorders or mental disorders. There was no significant difference in the general data of the patients in each group ( $P>0.05$ ), which was comparable. This study was approved by the hospital medical ethics committee.

### 2.2 Method

Both groups were given conventional edema treatment: ①rest and diet. Patients with mild edema should alternate between activities and bed rest, while patients with severe edema should be given bed rest. ③ Observe the dynamic changes of edema, assist the patient in a comfortable position, pay attention to the patient's breathing rate, monitor the oxygen content of the finger pulse; accurately record the 24-hour urine volume and the circumference of the lower extremities. ④ skin observation. Take a bath or shower with lukewarm water and change clothes frequently. Keep

the bed unit clean and dry, change the position regularly, and protect the skin. ⑤ psychological counseling. Actively communicate with patients, help patients establish a correct and positive view of disease, and encourage them to maintain a stable and optimistic attitude to cooperate with medical care.

The control group received ACE inhibitors, inotropes, diuretics and other drugs for conventional edema treatment according to the "China Heart Failure Diagnosis and Treatment Guidelines 2018", such as furosemide, hydrochlorothiazide, tola Semi, etc., administer according to the doctor's order, strictly control the etiology and incentives of heart failure, and at the same time closely monitor the patient's vital signs, understand the use of commonly used drugs and adverse reactions, pay attention to the patient's mental state during medication, and appropriately adjust the type of drugs according to the needs of the disease. , dosage and method of medication.

On the basis of the control group, the observation group was given Shuxin Foot Bath Decoction, a classic traditional Chinese medicine formula prepared in the hospital: Aconite 10g, Guizhi 15g, safflower 15g, Phyllostachys chinensis 30g, Poria cocos 30g, which were uniformly boiled in the preparation room 400ml decoction preparation pack, 2 packs of preparation and hot water are used to prepare a 6L foot bath solution at 40°C, the immersion depth is 20cm, soak for 30 minutes, and use it in conjunction with the theory of "Ziwu Liuzhu", choose noon every day (11:00-13:00 in the morning) and in the afternoon (17:00-19:00 in the afternoon) for foot bath.

The two groups were treated for 3 weeks (21 days in total), and the observation indexes were evaluated once a week, three times in a row, and the changes of the observation indexes in each group before and after treatment and the changes of the indexes in the two control groups and the observation group were compared.

## 2.3 Observation Indicator

Criteria for judging the efficacy of edema[6]: recovery: the symptoms disappeared completely, and the change in the score was reduced by 95%; markedly effective: the symptoms were significantly improved, and the change in the score was reduced by 70%; effective: the symptoms were improved, but not obvious, and the change in the score was reduced by 30%; Invalid: no improvement in symptoms, or even worsening of symptoms, and the change in the score is reduced by less than 30%.

The quality of life was assessed by the European Cancer Research and Treatment Group The Organizational Quality of Life Questionnaire (EORTC-Q30)[7] was used to evaluate the pre-and post-intervention quality of life. The EORTC-Q30 questionnaire consists of 30 items. Entry 29 and 30 on a 7-point scale, with a score of 1 to 7 representing "very poor" to "very poor" different grades of "good"; other items are divided into 4 grades:1, 2, 3, 4 points Represents none, a little, some and a lot. EORTC-The Q30 questionnaire is divided into three subscales, namely the overall health status subscale (EORTC-Q30-GHS). functional subscale (EORTC-Q30-FS) and symptom subscale (EORTC-Q30-SS). subscale entry score. Adding and dividing by the number of items included is the subscale rough score (RS). Then, the standardized scores (SS) were calculated according to the following formula. EORTC

-Q30-FS subscale:  $SS=[1-(RS-1)/R] \times 100\%$ , EORTC-Q30-GHS and EORTC-Q30-SS subscales:  $SS=[(RS-1)/R] \times 100\%$ , R is the score of each field or item Full distance.

Comparison of the circumference of the affected limbs before and after treatment[11]: The sum of the 15 cm suprapatellar circumferences of both lower limbs was used as the measurement value, and the circumferences of both lower limbs were measured before treatment and after weekly treatment, in cm.

Cancer-related fatigue assessment using the Simple Fatigue Scale(BFI)[7] to assess the severity

of fatigue in patients and the effect of fatigue on personal life. interference. The BFI scale consists of 9 questions, each of which uses a visual. The visual analog scoring method, that is, on a straight line, the numbers 0-10 represent from 0 to 10 "None" to "most severe" or "no impact" to "full impact" class. The average score of the 9 questions is the total score of fatigue assessment 1 to 3, 4 to 6, 7-10 points are respectively judged as mild fatigue and moderate fatigue and severe fatigue.

## 2.4 Data Processing

SPSS 19.0 was used for statistical data processing in this study. Measurement data were expressed as mean±standard deviation ( $\bar{x}\pm s$ ), and t-test was used for comparison; enumeration data was expressed as case ( % ), and X2 test was used for comparison, and non-parametric rank-sum test was used for rank data.  $P<0.05$  was considered statistically significant.

## 2.5 Tables

Comparison of clinical efficacy of edema in the two groups After treatment, the total effective rate in the observation group was significantly higher than that in the two control groups, as shown in Table 1.

Table 1: Comparison of clinical efficacy of edema

Group	N	ineffective (%)	effective (%)	markedly effective (%)	cured (%)
control group	41	13(31.71%)	21(51.22%)	7(17.07%)	0(0.00%)
observation group	41	8(19.51%)	17(41.46%)	16(39.02%)	0(0.00%)
$\chi^2$		5.12	4.92	7.22	
P		<0.05	<0.05	<0.01	

After each intervention group EORTC-Q30-FS, EORTC-Q30-SS, EORTC-Q30-GHS, the scores were significantly improved compared with those before intervention ( $P<0.05$ ), after the intervention, the scores of each subscale of the observer were better than those of the control group ( $P<0.05$ ), as shown in Table 2.

Table 2: Quality of life of patients in each group before and after intervention(points,  $\bar{x}\pm s$ )

Group	N	time	EORTC-Q30-FS	EORTC-Q30-SS	EORTC-Q30-GHS
control group	41	Before intervention	64.34±4.41	25.12±4.45	55.28±5.38
		After intervention	67.98±5.01*	22.44±4.60*	63.53±7.25*
observation group	41	Before intervention	65.13±5.69	23.43±4.27	54.77±5.23
		After intervention	73.11±4.62* b	17.66±3.12* b	78.90±6.45* b

Note: Compared with this group before intervention, \* $P<0.05$ ; and Compared with the observation group and the control group after intervention, b $P<0.05$ .

The circumferences of the affected limbs in the two groups before and after treatment were compared for 2 weeks and after 3 weeks of treatment. The circumferences of the affected limbs of the two groups were reduced, but the reduction degree of the observation group was higher than that of the two control groups, and the difference was statistically significant,  $P<0.05$ . as shown in Table 3.

Table 3: Comparison of limb circumference before and after treatment (cm, x±s)

Group	N	Before treatment	1 week of treatment	2 weeks of treatment	3 weeks of treatment
control group	41	49.12±1.36	48.12±1.17	47.16±0.85	45.96±0.68
observation group	41	49.12±1.64	47.88±1.51	41.44±1.26	39.20±1.38
Z		1.26	4.32	43.72	48.63
P		0.53	0.16	<0.05	<0.05

Comparison of BFI scale scores between groups BFI of patients in each group after intervention, the scores of the scale were significantly lower than those before the intervention ( $P < 0.05$ ). The score in the observation group was lower than that in the control group ( $P < 0.05$ ), as shown in Table 4.

Table 4: Comparison of BFI scores in each group before and after intervention (points, x±s,)

Group	N	Before treatment	1 week of treatment	2 weeks of treatment	3 weeks of treatment
control group	41	4.03±0.31	3.98±0.37	3.58±0.59	3.31±0.88
observation group	41	4.12±0.84	3.42±0.51	3.19±0.16	2.81±0.28
Z		1.06	5.79	7.12	11.03
P		1.32	0.04	<0.05	<0.05

## 2.6 Discuss

Studies have reported that lymph nodes and lymphatic vessels will inevitably be damaged during the treatment of gynecological malignant tumors, resulting in the loss of compensatory ability, which will cause lymphatic fluid to accumulate in the body and cause obstruction to return. That is, lower extremity lymphedema[8]. In this study, the self-made classic prescription of Shuxin Foot Bath Decoction was used in the hospital, which was composed of Fuzi 10g, cassia twig 15g, safflower 15g, chicken blood vine 30g, and Poria bark 30g. Cold uterus, yin-cold edema, cold-damp arthralgia, etc., to invigorate the kidney to help Yang diuresis, cinnamon twig assists the aconite to reach the limbs, nourishes the blood vessels, and helps to diuresis; safflower promotes blood circulation and removes stasis, helps the blood vessels to be unobstructed; The blood activates the blood, replenishes the blood when the blood rises and raises the yang, and makes the blood active; Based on the theory of Yin-Yang and Five Elements in Chinese medicine, Ziwu Liuzhu is a time-selected treatment theory that studies the regularity of qi and blood flow in human viscera and meridians from the perspective of time. Heaven and Man have made a specific description accordingly[9]. The chapters "Meridians" and "Ying Qi" in "Lingshu" pointed out[10] that the qi and blood of the meridians of the human body undergo periodic changes of rise and fall with the change of the twelve o'clock. It means that the yin and yang of the human body rise and fall, the yin and yang are in motion, the meridians flow and the time points open and close, which is the main time of the zang-fu organs and the best time to regulate the functions of the zang-fu organs. Therefore, choose the time when qi and blood should be injected into a certain zang-fu meridian. At that time, the zang-fu organs are most prosperous, and their functions are the most prosperous, that is, when the zang-fu meridian is the main order, the foot bath therapy is performed at the main order time, which regulates the function of the zang-fu organs. The most effective, can achieve twice the result with half the effort. Modern medical research shows that the qi, blood and functions of the five zang organs of the human body conform to the law of zang-fu meridians governing the perfusion of the time, which further illustrates the scientific nature of the theory of "meridian" time-selected treatment[11]. The results of this study showed that after the intervention of "Ziwu"



timing method combined with Shuxin Foot Bathing Decoction, the limb circumference and quality of life in the observation group were significantly improved compared with those in the control group ( $P < 0.05$ ). And after 3 weeks of treatment, the circumference of 15 cm above the patella of the affected limb was significantly reduced compared with the two control groups at the same period ( $P < 0.05$ ); it can be seen from Tables 2 and 4 that after treatment, the quality of life effect of the observation group was significantly better than that of the control group. At present, in China, the combination of "Ziwu" timing method combined with traditional Chinese medicine foot bath method is used to treat various types of edema, such as cardiogenic edema and nephrogenic edema[12,13], all of which have achieved good curative effects.

### 3. Conclusions

To sum up, in patients with lower extremity edema after lymphatic resection of gynecological malignant tumor, the "Midden" method combined with Shuxin Foot Bath Decoction can effectively relieve the edema and improve the quality of life of the patients. It is safe, easy to operate, and beneficial to clinical practice application.

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