

Treatment of Lower Limb Lymphedema after Gynecological Tumor Surgery

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Abstract: Secondary lower limb lymphedema is one of the most common and difficult to cure complications after gynecological malignant tumor surgery. This article mainly collects databases such as HowNet and Wanfang in recent years to summarize the mechanism and treatment of lower limb lymphedema after gynecological malignant tumor surgery.

Keywords: lower limb lymphedema; treatment; gynecological malignant tumor

Cervical cancer, endometrial cancer and ovarian cancer are the three major malignant tumors in women. Since the three have no obvious symptoms and signs in the early stage, and the main ways of metastasis are direct metastasis and lymphatic metastasis, so they often need timely surgical treatment once found^[1]. However, lymphedema has become the most common complication after gynecological tumor surgery. Zhang Lijuan and other researchers found that the incidence of postoperative secondary lymphedema of the lower limbs can reach up to 47%^[2], which is mainly manifested by lower limb swelling, pain, numbness, and poor activity, Some patients terminate treatment due to unbearable pain, which seriously affects the treatment effect, quality of life and survival period^[3]. However, there is still no clear clinical treatment for lower limb lymphedema. This article mainly collects the treatment plans for lower limb lymphedema after gynecological tumor surgery in recent years to help patients alleviate pain.

1. Mechanism of secondary lower limb lymphedema formation after surgery

The mechanisms of lymphedema formation mainly include: (1) congenital lymphatic failure; (2) Hypothesis of interstitial pressure imbalance; (3) Inflammatory reaction; (4) The double-edged sword effect of macrophages, etc.^[4]. The secondary lymphedema after surgery is mostly due to the destruction of lymph nodes or lymphatic vessels during surgery, leading to the obstruction of lymph circulation, but its mechanism has not been fully clarified. Some studies have shown that polygenic variation may be one of the causes of postoperative lymphedema^[5]. Obesity and postoperative weight gain are the main risk factors leading to postoperative lymphedema. Liu Ningfei^[5] et al. showed that the late stage of lymphedema patients is mainly related to fat deposition. Chronic inflammation caused by the exudation of monocytes and tissue fibrosis caused by the deposition of collagen will run through the whole disease.

2. Treatment

2.1 Comprehensive detumescence method of manual lymphatic drainage (CDT)

CDT is a conservative treatment for early lymphedema, mainly including wearing elastic socks, using bandage compression treatment, manual massage treatment, regular functional exercise, skin care, warm water foot bath and other methods. At the same time, in the process of preventive and conservative treatment, we should: exercise properly to improve the resistance of our body, and avoid sedentary activities such as bathing and bathing in hot springs; At the same time, we should wear grade 3 pressure socks in our daily life, carry out preventive CDT every day as much as possible, avoid injury to the affected limbs and do well in skin care. Good prevention and treatment is the basis of treatment and relief of lower limb lymphedema^[6].

Ju Lingwei^[7] et al. used CDT to treat lower limb lymphedema, with significant effect. Huang Liemi

[8] and other researchers found that the improved CDT of negative pressure lymphatic reflux promoting treatment system+multi-layer low elastic bandage binding+functional exercise+self-skin care significantly improved the circumference, extracellular water content, subcutaneous tissue thickening, etc. of patients with moderate and severe lower limb lymphedema after treatment, and the anxiety, depression and other emotions of patients were significantly reduced, and the relevant scores were significantly improved. Compared with traditional CDT, this study significantly reduced the treatment time, saved the treatment cost, and provided great convenience for clinical use. Chen Lei [9] and other studies showed that CDT can alleviate the symptoms of lower limb lymphedema at all stages after surgery, and can be treated for a long time, safe and effective; Zhang Lijuan [2] and other studies showed that foam granular bandages can repeatedly reposition and find the best pressure to promote lymphatic reflux to improve the symptoms of patients' lower limb lymphedema by evenly increasing the force area of the limbs, combined with air wave pressure treatment, and the patients have strong medical compliance.

2.2 Drug treatment

Drug treatment of lower limb lymphedema is still the primary choice for patients with lower limb lymphedema. The treatment mainly includes traditional Chinese medicine and western medicine.

2.2.1 Western medicine

It mainly starts from the aspects of diuresis and anti-inflammatory, including sodium aescinat combined with diuretics [10], but there is no good treatment.

2.2.2 Traditional Chinese medicine

The treatment of secondary lower limb lymphedema by traditional Chinese medicine mainly includes oral administration of traditional Chinese medicine, fumigation and washing of traditional Chinese medicine and application of traditional Chinese medicine. With regard to the classification of lower limb lymphedema, Bart [11] and others summarized the views of Wei Xuhuai, Chen Shuchang, Wang Wanchun and others, and believed that the main pathogenesis of lymphedema was vein stasis, which was mainly related to spleen deficiency and dampness stagnation and qi stagnation and dampness stagnation. At the same time, it also included four syndrome types: damp-heat stasis, cold-dampness stasis, heat toxin stasis and qi deficiency and phlegm stasis, which needed to be treated according to the different symptoms of different patients.

In terms of treatment, White Pigeon [12] and others combined "removing Wan Chen Qi" with the main pathogenesis of blood stasis, and summarized the treatment rules as follows: activating blood circulation, clearing collaterals, and harmonizing Qi and blood; In the middle stage, remove pathogenic factors and dredge collaterals, promote hydration and remove dampness; In the late stage, it is mainly to strengthen the right and remove the evil, and calm the yin and yang. Li Nan [13] and others reported that Xihong Decoction and Xiaozhong Zhitong Plaster were applied externally to treat lower limb lymphedema of malignant tumors, and the effect was good. Li Jie [14] and others summarized the treatment of lymphedema: Li Jin used Bixie Xiaozhong Pill to treat lower limb lymphedema of damp-heat block type; Dong Juanjuan used the experience of Professor Wu Quansheng to treat lower limb lymphedema from the dialectical point of Qi and blood; Wu Jianping, using the experience of Professor Cui Gongrang, mainly selected drugs to promote dampness and blood circulation; Professor Chen Bonan used Chinese medicine to treat lower limb lymphedema, at the same time, he added a small amount of yang warming drugs and cooperated with Chinese medicine external washing; The above treatment methods mainly focus on the invasion of dampness, which can relieve the edema symptoms of patients and improve their daily life. The treatment is effective.

2.3 Drug combined with comprehensive detumescence method

Drug therapy alone has a long period of effect and slow effect. In clinical practice, it is often combined with comprehensive detumescence therapy, with better effect. Ma Yuehai [15] et al. reported the clinical efficacy study on the treatment of postoperative secondary lower limb lymphedema by oral administration and external treatment of traditional Chinese medicine combined with lymphatic drainage technique. The combination of oral administration of traditional Chinese medicine and rattan therapy (fumigation in the morning and evening), combined with lymphatic drainage technique, achieved good results.

2.4 Surgical treatment

Surgical treatment [16] of lymphedema mainly includes physiological technology and reduction

technology. Physiological techniques include lymph node transplantation and lymphatic bypass drainage; Reduction techniques mainly include skin or subcutaneous tissue transplantation and liposuction. However, the risk of secondary surgery and the problem of postoperative recovery are always unknown, and may even be ineffective. Therefore, surgical treatment is not the first choice for the treatment of lymphedema. Shen Hangchong^[17] et al. showed that further research and observation were needed in the treatment of patients with moderate and severe lymphedema using vascularized lymph node flap transplantation; There is a research report^[18] After the use of lymphatic microsurgery, it can prevent and treat lower limb lymphedema. The incidence of lower limb lymphedema in patients is significantly reduced, and it can improve the quality of life and prognosis of patients.

2.5 Acupuncture and moxibustion treatment

Acupuncture and moxibustion is a traditional treatment method of Chinese medicine, which also has a significant effect on the treatment of lower limb lymphedema after surgery. Sun Xiaohu^[19] and others believe that acupuncture and moxibustion can stimulate striated muscle, cause muscle contraction, and drive lymph flow in the heart of the valve, so that in the early stage of lymphedema, pricking blood and cupping therapy can be combined to dredge the blockage of channels, alleviate the symptoms of edema, and achieve the purpose of treatment. Some studies have shown that selecting the acupoints of the Stomach Meridian of Foot Yangming and the Gallbladder Meridian of Foot Shaoyang in combination with electroacupuncture can obviously relieve the symptoms and pain of patients, but it is difficult to completely cure.

The research points out that^[20] for patients with secondary lymphedema of the lower limbs, acupuncture and moxibustion at Sanyinjiao, Zusanli, Shenshu, Yinlingquan, Xuehai, Fenglong and other acupoints of the affected limbs is often used, which has the effect of promoting blood circulation, unblocking collaterals, promoting qi and promoting water circulation. Sanyinjiao has the effect of invigorating spleen and blood, regulating liver and tonifying kidney; Adhering to massage and tapping Shenshu points can increase renal blood flow and improve renal function; Zusanli is one of the most important acupoints of the whole body, which can generate stomach qi, promote the flow of stomach qi, and improve the immunity of the human body; Yinling Spring belongs to the Foot-Taiyin Spleen Meridian, which has the function of expelling and infiltrating spleen dampness, and can be used to treat edema, adverse urination, etc; Xuehai acupoint has the function of transforming blood into qi and transforming spleen blood; Fenglong point has the effect of harmonizing stomach qi, dredging tendons and activating collaterals, mainly treating dizziness and lower limb pain caused by phlegm and dampness. The above acupoints selected through acupuncture and moxibustion combined with dialectical acupoint selection can dredge the lymphatic network, promote lymph flow, and help alleviate the symptoms of lower limb lymphedema.

3. Discussion

With the incidence rate of gynecological malignancies increasing year by year, lymphedema of lower limbs as a chronic and irreversible complication has gradually attracted people's attention. At present, the treatment of malignant tumors is still based on surgery, radiotherapy and chemotherapy, which will inevitably lead to lower limb lymphatic reflux dysfunction. Once lymphedema occurs, it will worsen and even lead to limb disability. Because of its chronic extensibility and refractory nature, it will seriously affect the quality of daily life of patients. At present, the clinical treatment of lower limb lymphedema is mostly CDT, mainly conservative treatment, supplemented by surgical treatment.

Reductive surgical resection is mainly suitable for patients with advanced edema; Compared with traditional surgery, liposuction is less traumatic and safer, but it still cannot achieve the curative effect, and liposuction is more difficult in the late stage, and the effect is not good. However, with the emergence of microsurgery technology, it has opened a new world for surgical treatment because it has prevented the occurrence of lower limb lymphedema in treatment. However, in general, the secondary surgical injury and surgery caused by surgical treatment did not provide a comprehensive and effective treatment for lower limb lymphedema, so surgical treatment is still not the first choice.

Comprehensive detumescence treatment, drug treatment and acupuncture and moxibustion treatment can promote lymph reflux to a certain extent, thus reducing the symptoms of lymphedema; However, due to its slow treatment cycle, poor patient compliance, and some patients with pain in acupuncture and moxibustion treatment, CDT and drug treatment are often used together clinically. At the same time of giving oral medicine to the patient, entrust the patient to use CDT treatment at the same time, which can see significant curative effect in a short time and relieve the swelling and discomfort of the affected limb; Significantly improved patients' life score; Improve edema symptoms, relieve anxiety and depression of patients, and improve time efficiency; At the same time, it can

stimulate the patient's compliance and obtain relatively satisfactory results.

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