

Feasibility Study of Fengxiang Lotion on Prevention and Treatment of HPV Infection

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Abstract: High-risk HPV persistent infection is a high risk factor of female lower reproductive tract cancer. Due to the deep anatomy of the female lower reproductive tract and the vaginal stump retraction after hysterectomy, most patients with HPV infection have no obvious clinical symptoms, so it is more difficult to find, and the treatment is more difficult. The popularity of thinprep cytologic test (TCT) and human papilloma virus (HPV) screening is conducive to the early detection of HPV infection. At present, there are no precise clinical guidelines on the prevention and treatment of HPV infection. Common treatment methods include surgical treatment, physical therapy, local medication, etc., and preoperative vaginal condition assessment is required if necessary. This paper aims to explore the feasibility of prevention of HPV infection after cervical / total hysterectomy based on previous studies. In order to provide new ideas and methods for the prevention and treatment of HPV infection, especially for the prevention and treatment of traditional Chinese medicine.

Keywords: Fengxiang lotion; HPV infection; prevention and treatment of traditional Chinese medicine

1. Introduction

High-risk high risk-human papillomavirus (HR-HPV) infection of female genital tract epithelial cells is very common, and most of the infection without any symptoms, it is generally cleared by the human immune system within 6 to 24 months, only a few persistent infections lead to the occurrence of cervical lesions [1]. In particular, patients with hysterectomy for cervical cancer (CC) and cervical intraepithelial neoplasia (CIN) have a significantly increased risk of HPV infection. In recent years, with the extensive screening of HPV infection, thinprep cytologic test (TCT) and human papilloma virus (HPV), the early diagnosis rate of HPV infection has gradually increased [2].

Xu Ying et al. [3] study after total hysterectomy of 56 patients, including because of cervical factors of vaginal intraepithelial neoplasia rate significant difference, high-risk HPV infection rate in patients with cervical factors than not cervical factors, the difference is statistically significant. Therefore, the cervix, vaginal wall and vulva should be carefully examined before total hysterectomy. For patients with HPV infection and cervical lesions, the cervical and vaginal wall should be carefully evaluated before surgery, colposcopy fixed biopsy, early detection of lesions, clear whether there are vaginal lesions and the need to expand the scope of surgery.

2. HPV infection- Vaginal microecological changes

Relevant reports have confirmed that the correlation of altered vaginal microenvironment and the occurrence of cervical lesions is mainly due to the vaginal microecological imbalance to increase the cervical susceptibility to HPV, resulting in persistent HPV infection. However, it is unclear whether the microecology of the diseased cervical tissue is changed. Female vagina is a complex microecosystem of [4] composed of vaginal anatomical structure, microecological flora, local immunity, and endocrine regulation function of the body. Among them, the formation of the vaginal microecological flora is an important part of the vaginal microecological environment. Known vaginal secretions can be isolated from dozens of microorganisms, mainly including gram-positive aerobic bacteria (Lactobacillus, corynebacterium, etc.), gram-negative aerobic bacteria (Escherichia coli, gardenia, etc.), anaerobic bacteria (clostridium, digestive streptococcus, etc.) and some pathogens (such as mycoplasma and Candida yeast) [5]. Vaginal microdysbiosis refers to the imbalance of normal vaginal flora caused by

various reasons, breaking the balance of mutual restriction and mutual dependence between the flora, thus causing the occurrence of vulvovaginal infectious diseases. Because the cervix is exposed to the vagina, the occurrence, development and outcome of cervical disease are closely related to the homeostasis of the vaginal environment. Therefore, it focuses on exploring the relationship between vaginal microecological changes and HPV virus infection and cervical lesions, which is of great significance to prevent and reduce the harm of cervical cancer to women.

Recent studies have shown that vaginal microecology plays a key role in preventing HPV infection and accelerating HPV clearance, and that its internal equilibrium imbalance and HPV infection can promote each other and influence [6] mutually. A meta-analysis showed that vaginal microecology is closely related to HPV infection and CIN development, BV, Chlamydia trachomatis, Ureaplasma urealyticum infection can increase the risk of HPV infection, and vulvovaginal Candida disease can reduce the risk of HPV infection, Lactobacillus will not increase the risk of HPV infection, trichomonas vaginitis is not related to HPV infection; BV can also increase the risk of CIN occurrence [7]. HPV infection reduces local Lactobacillus, destroys the biological barrier in the local immune microenvironment, aggravates the destruction of the vaginal microenvironment, promotes the abnormal adhesion of HPV in the reproductive tract, leads to the vaginal microecological imbalance, destroys the local immunity, and increases the adhesion, invasion and propagation of the abnormal flora. A vicious circle forms in the vaginal environment, leading to the further development of HPV infection and inducing cervical lesions.

Vaginal microecology is influenced by age, pregnancy history, menstruation, personal hygiene habits, sex life, and the use of antibiotics. As a part of the vaginal microenvironment, the cervical tissue is both influenced by and changes the vaginal microenvironment. Changes in the host and the surrounding environment may damage the balance of the vaginal microenvironment, resulting in local microenvironment imbalance, increase the body's susceptibility to various pathogens and the persistence of pathogen infection, thus causing various reproductive tract diseases, such as vaginitis, pelvic inflammation, cervical intraepithelial neoplasia, or even cervical cancer. Related literature reports that the prevention of cervical cancer is not only related to the body's immune function (whether it is cleared after HPV infection), but also closely related to the destruction of vaginal microecological balance and [8].

3. Traditional Chinese medicine knowledge of HPV infection

"HPV infection" is the concept of modern medicine, no name records in ancient Chinese medicine, such as cervicitis caused by HPV infection, cervical cancer, to bring quantity increase, even red and white intersection, contact bleeding for clinical manifestations, according to the characteristics of cervical HPV infection and clinical performance can refer to "with disease", "five color with" category syndrome differentiation theory. Dampness and heat are the key pathogenic factors. Ren pulse loss, with pulse loss about the core disease. "Fu Qing main female" mentioned "husband is wet", spleen and kidney 2 dirty and water transport closely related, congenital endowment insufficiency, spleen, kidney Yang deficiency, fire, gasification failure, water wet, stop poly, kidney closed, solid slip down, or kidney Yin deficiency, phase fire partial embryo, damage blood collateral, compound wet evil, any take two veins damaged. Wet turbidity for a long time heat, or because of the mood is not adjusted, liver depression and spleen, spleen deficiency dampness heat, qi lift imbalance, gas, blood and tear stagnation lead to dampness and heat poison gathered in the mouth can also be this disease. About the treatment of this disease "Confucianism family" said: "the treatment of diarrhea and control, can not suddenly use the medicine of heat dry, dry water dry, water dry will be thirsty, thirst is bad urine, urine adverse foot swollen, face, gradually to cure." Is to explain the treatment of the disease attention problem. Professor He Fengjie believes that damp and heat toxic evil is too sheng, injury and rush, rush is not solid, easy to breed insect evil, syndrome differentiation is divided into hot and heat injection type, wet poison accumulation type, spleen deficiency and wet sheng type, kidney Yin deficiency combined with damp and heat [9].

4. Fengxiang lotion

Fengxiang lotion is a traditional Chinese medicine preparation developed by Professor He Fengjie of Shaanxi University of Traditional Chinese Medicine after long-term clinical exploration and experimental observation. It is mainly composed of seven drugs, such as ground dragon, lilac, bitter ginseng and snake bed. Its main effect is to clear heat and improve dampness, kill insects and stop

itching. Drugs can enter the human blood circulation system locally through the vagina, and play their therapeutic role in [10] by improving the microecological environment and the body's immune function, etc. Taking dione and lilac as jun drugs, studies found that dithrone extract can regulate humoral immunity, especially the value appreciation and differentiation of B lymphocytes, and increase the formation and secretion of specific antibodies, thus improving the phagocytosis rate and phagocytosis index. Modern pharmacological research shows that it has a strong anti-inflammatory and swelling effect, and can also promote blood circulation and remove blood stasis, stimulate the body to produce growth factors, and provide nutrients, thus accelerating wound healing. [11-12]; clove has a strong volatilization and penetration, skin surface effectively inhibit and kill skin bacteria and insect poison, and can eliminate inflammation, antipyretic and analgesic [13-14]. Snake bed is good at insecticide, dry dampness, dispel wind, in addition, also has estrogen-like effect, appropriate amount of estrogen is an important condition to maintain the normal pH value of the vaginal environment, can reduce miscellaneous bacteria, restore microecological balance [15]; yellow cypress, bitter ginseng clear heat dry dampness, detoxification, for a variety of bacterial infection and fungal infection has a strong inhibitory effect. Research shows that yellow cypress has anti-bacteria, fungi, viruses and other pathogenic microorganisms and anti-inflammatory analgesic effect [16]; cockscomb has a significant tourniquet, analgesia, anti-tumor and improve the body immunity effect [17], compatible with bitter ginseng, pepper heat clearing dry dampness, insecticide and detoxification. Several drugs are used together to play an antibacterial, anti-inflammatory, anti-virus, tumor suppression and other effects of [18]. Combined with internal treatment, the disease is combined with the addition and decrease of the certificate, and the clinical effect is remarkable.

4.1 Fengxiang Wash-Vaginal Microecology

"Vaginal microecological imbalance" according to its clinical manifestations can also be attributed to the "disease", "Yin and itching" and other categories, mainly due to the liver, spleen, kidney dysfunction, wet moisture, dampness and heat, or infection of wet poison; there are also infections with diseases or insects, insects and Yin. Therefore, in the treatment, to clear dampness and evil, insecticidal and stop itching for the principle. In the treatment means to external treatment method, the commonly used square including enclosed vaginal medicine, external washing method, fumigation method and external application method. External treatment method is mainly targeted to treat the local focus, relieve the symptoms to reduce the discomfort of patients, and with internal medicine can play a better effect, including alum stone pill is the earliest application in the external medicine of the disease, "Golden Chamber Synopsis" recorded: "alum stone pill, treat white under dry blood. Alum stone three points burned, almond a point, a total of honey pill jujube core, Yin, a day." Outside, internal treatment and acupuncture are also more commonly used [19]. Fengxiang lotion usage is also according to female special anatomy, the agent to effect effect, the ground dragon, clove soaked in liquor (immersion) in 2d, the temperature is not more than 60°C, then bubble drink ground dragon, clove residue with other 5 Fried concentrated to 100 mL, concentrate mixed with medicinal liquor, refrigerated seal, each time with disposable syringe (2mL) into the vagina, 2 times/d, waist cushion lying flat after 30 min. In the early stage, a lot of clinical studies have been carried out on the treatment of traditional Chinese medicine Fengxiang lotion in the treatment of vaginitis, with remarkable efficacy, and [20] has certain significance in preventing HPV infection and the occurrence and development of cervical cancer.

4.2 Fengxiang Lotion-Body immunity

The occurrence of HPV infection is closely related to the immune status of the body. The immune environment in the local environment of the vagina is that the immune cells and their secreted cytokines, antibodies, and other things together constitute a complex immune network system. Immune responses in the local vaginal immune microenvironment during the progression of host anti-HR-HPV infection and cervical lesions are also playing an important role in [21]. The study found that the systemic immune status of the body continuously infected by HR-HPV in the early cervix did not change significantly, but the vaginal local immune microenvironment has changed, so the HR-HPV persistent infection may be closely related to [22] and the altered vaginal immune microenvironment. Cells (T helper, Th) 0 can differentiate into Th1 and Th2 cells. Maintaining a dynamic balance of Th1 and Th2 cells is an important condition for maintaining the stability of the body. Th1 cells are involved in cellular immunity and secrete IL-2, IL-12, and interferon (IFN) - γ . IL-12 belongs to Th1 cytokine, which is a glycoprotein that can stimulate the activity of T cells and natural killer cells (NK cells). It can induce the transcription and secretion of cytokines, enhance cytotoxicity, stimulate the proliferation of activated T lymphocytes and NK cells, and promote the differentiation of Th0 and cells to Th1 cells.

IL-12 is a substance secreted by cellular immunity, and a large number of studies have found that IL-12 expression is inversely correlated with the degree of cervical lesions, and the higher the degree of cervical lesions, the lower the expression of IL-12 in the body is, [21-23].

The intervention effect of [24] by Li Xiaoning et al in vaginal local interleukin-10,12 levels and Fengxiang lotion in patients with high-risk HPV-infected cervical intraepithelial neoplasia, Outpatient colposcopy biopsy was diagnosed as CIN I or CIN, In 60 patients with HR-HPV infection, Moreover, 30 cases each were included in the CINI and CIN groups, The study showed that the Th1 / Th2, Altering the immune status of the vagina, To ify that in addition to anti-tumor, antiviral and insecticidal functions, It also regulates the local immune function, It provides a favorable environment for the transformation of cervical lesions into normal tissue. In another study of [20], "phoenix lotion" after HPV and CINI patients, group 2 patients vaginal lavage SIgA, I g A, IgG and IgE levels returned to normal levels, confirmed that Chinese medicine "phoenix lotion" can improve the vaginal immune environment, make it to normal state, to improve the vaginal local humoral immune function, for the body resistance and eventually remove high-risk HPV virus prepared good conditions.

5. Conclusion

Vaginal microecological imbalance, continuous HPV infection and cervical disease affect and cause each other. Vaginal microecology plays a key role in female reproductive tract health. Dynamic and balanced vaginal microecology plays a protective role in the development of HPV infection, CIN and even cervical cancer, and vaginal microdysbiosis can mutually promote the development of HPV infection and cervical lesions, thus aggravating the lesions. Fengxiang lotion can clearly improve the vaginal microecology, strengthen the local immune environment of the body, play an important role in the process of removing high-risk HPV, and has an important clinical reference significance. In practical clinical application, according to the actual situation of patients, internal and external combination, we can play the important role of TCM in common gynecological diseases and improve the local immune environment, improve the application rate of TCM in clinical practice, and accelerate the construction of a healthy China.

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