

Research Progress on the Combination of Traditional Chinese and Western Medicine in the Treatment of Lung Cancer

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Abstract: *At present, the incidence and mortality rates of lung cancer are constantly rising. Western medicine has conducted extensive research on lung cancer and made certain progress, generating many new understandings and treatment plans. However, the survival rate and quality of life of lung cancer patients are still relatively low at present. In clinical work, it has been found that integrated traditional Chinese and western medicine has many benefits in the treatment of lung cancer, which can alleviate the toxic and side effects of chemotherapy, make patients better tolerate the adverse reactions of chemotherapy, improve the sensitivity of chemotherapy, and enhance the effect of anti-tumor. In recent years, the application of integrated traditional Chinese and western medicine has been gradually expanded, and some research results have been achieved.*

Keywords: Traditional Chinese medicine, Western medicine treatment, Lung cancer.

1. Introduction

Lung cancer is one of the most common malignant tumors in the world, and the clinical symptoms are relatively insidious. Patients with advanced lung cancer account for up to 75% of the patients, resulting in poor efficacy and low five-year survival rate. At the same time, lung cancer incidence and mortality are increasing in developing countries. It is the first cancer in China. At present, the main treatment methods of lung cancer are surgical treatment, radiotherapy, chemotherapy, targeted therapy, immunotherapy and interventional therapy [1]. These therapies can effectively relieve patients' symptoms and prolong their survival. However, the standardized treatment of western medicine is accompanied by certain adverse reactions, which will damage the normal tissues and cells of the body, thus causing systemic local reactions. Some treatment methods are highly selective, and there will be drug resistance and other phenomena, which cannot effectively relieve the symptoms of all patients, and has certain limitations in the treatment effect, quality of life, side effects and other aspects. The use of integrated traditional Chinese and western medicine in the treatment of lung cancer can effectively solve the above problems, protect the body, reduce side effects, enhance anticancer effect, and improve clinical efficacy [2].

2. Lung Cancer in Traditional Chinese Medicine

2.1 Etiology and Pathogenesis of Lung Cancer

The symptoms of lung cancer were recorded early in traditional Chinese medicine, and there was a record of similar symptoms of lung cancer in the Classic of Difficulties: "The volume of the lung, called Xi Ben, is under the right hypoxium, as large as a cup, for a long time, making people cough and cold, wheezing, and obstructing the lung". According to traditional Chinese medicine, the occurrence of lung cancer is closely related to the deficiency of qi and the

invasion of pathogenic toxin. In terms of etiology and pathogenesis of lung cancer, the fundamental cause of tumor formation is deficiency of positive and excess of negative factors, which is mostly caused by the imbalance of Yin and Yang, weakness of positive qi, and endogenous pathogenic toxins. Professor Zhou Weishun believes that lung cancer is mainly caused by the lack of vital qi and the stagnation of pathogenic toxins in the lung, which leads to the loss of lung ventilation and health, stagnation of qi and phlegm, blood stasis, and the formation of physical accumulation and rapid circulation [3]. The deficiency of qi and the imbalance of qi, blood and Yin and Yang in zangfu organs are the main basis of lung cancer. The deficiency of qi and Yin in lung cancer is mostly qi deficiency and Yin deficiency, and the depletion of qi and Yin in lung is the internal cause of lung cancer [4]. The onset of lung cancer is caused by the deficiency of qi, the loss of the external defense, and the invasion of cancer poison. Moreover, due to the deficiency of qi and Yin, the phlegm in the lung congeals blood and stasis, and the cancer poison becomes accumulated. Lung cancer is caused by deficiency, and it is a disease in which the whole body is deficiency, the local is real, and the original is deficiency and the standard is excess. Deficiency is mainly caused by Yin deficiency and qi deficiency, but qi stagnation, blood stasis, phlegm and poison accumulation. Professor Liu Jiexiang believes that the reason why people suffer from cancer is related to the deficiency of qi, the lung is jiao zang, like moisturizing but evil dryness, evil poison stagnation lung, and heat for a long time. When lung cancer occurs, the deficiency of the body's vital energy is the internal cause. The occurrence and development of tumors is a process of the struggle between the body's vital energy and pathogenic factors. When the body's vital energy is deficient, it cannot resist pathogenic factors, which leads to vigorous growth of cancer. When the body's vital energy can resist pathogenic factors, it will inhibit the growth of cancer [5].

Therefore, in the treatment of tumors with traditional Chinese medicine, attention should be paid to the use of traditional Chinese medicine to supplement the healthy qi of the human

body, regulate the constitution, and improve the deficiency of the constitution, so as to balance the Yin and Yang of the human body, harmonize qi and blood, and promote the normal physiological function of zangfu meridians.

2.2 The Treatment Methods for Lung Cancer

When treating lung cancer, Professor Shen Chunti believes that the disease is located in the lungs, and phlegm and toxins are the key pathogenic mechanisms of lung cancer. Phlegm and toxins accumulate internally, generating heat and damaging yin. Therefore, in treatment, methods such as clearing heat, resolving phlegm, detoxifying, and nourishing yin should be adopted. At the initial stage of lung cancer, the patient's vital energy has not yet been weakened, but the pathogenic factors are relatively strong. At this time, the main pathogenesis is the accumulation of phlegm and toxins with excessive pathogenic factors. Therefore, the treatment should focus on clearing heat, resolving phlegm, detoxifying and dispersing nodules. After lung cancer surgery or when the disease develops to the middle and late stages, the body's qi is insufficient, the liver and spleen are injured after a long illness, the spleen is disabled, phlegm and dampness are endogenous, hindering the qi machine, and phlegm and blood stasis congeals, and blood stasis dissipates heat and hurts Yin. At this time, we should replenish qi and nourize Yin, clear heat and dissipate blood stasis [6]. Professor Pei Zhengxue considered that deficiency of lung-spleen qi was common in the early stage of lung cancer, and the patients presented with cough, poor appetite, fatigue, phlegm, loose stool, and weak pulse. Xingsu powder was used for treatment. Deficiency of lung-kidney Yin was common in the middle and advanced stage of lung cancer, and the clinical manifestations were dry cough with little phlegm, shortness of breath, bone steam and hot flusher, deafness and tinnitus, thin pulse, and red tongue. When lung cancer is complicated with infection, fever is often seen in the lung, and the patient's symptoms are high fever, chest tightness and chest pain, hemoptysis, red tongue and yellow greasy coat, and pulse string slip. Maxing Shigan decoction, Sanhuang Xiexin decoction, and Liangge powder are used. Most of the patients with extensive metastasis of lung cancer are in the collaterals after a long illness, and the clinical manifestations are as thin as bone, with dark face, pain all over the body, and the pulse is heavy and thin. Fuyuan Huoxue decoction and Sijunzi decoction are used for addition and reduction [7].

Professor Liu Huaimin divides lung cancer into five syndrome types. The syndrome of spleen deficiency and phlegm dampness is mainly treated by supplementing qi and strengthening spleen, strengthening health and preventing cancer. The main treatment of phlegm blocking lung syndrome is dissipating phlegm, soft and strong anti - cancer. The formula of strengthening spleen and eliminating phlegm and removing blood stasis is modified and modified (Dannanxingzhi, Pinellia pinellia, whole Trichosanthis fructus, Zhejiangfritillary, stir-fried bitter almond, Camptothecia fructus, centipede, scorpion, seaweed, kelp, saponiae saponiae thorn, cat's wort, Astragalus, yam, Coicis seed, Platycodon). Qi stagnation and blood stasis syndrome is mainly treated by soothing the liver and regulating qi, promoting blood circulation and removing stasis. Chaihu Shugan powder is modified and modified, and drugs for

promoting qi and activating blood circulation, invigorating spleen and eliminating dampness are used. Qi and Yin deficiency syndrome is used to nourish qi, nourish Yin, strengthen the health and anti cancer treatment, prescription Qibei Bufe granule (root, fried peach seed, coix seed, fried winter melon seeds, scrophularia, north radix, Radix ophiorrhiza, Zhejiangfritillary, astragali, houttuynia, Radix campanulata, stir-fried silkworm, cat's foot grass, Shu Yang Quan, solanum nigrum, stir-fried bitter almond, scorpion, centipede, Xianhecao, stir-fried chicken gold, fried licorice). For spleen and kidney Yang deficiency syndrome, the treatment method of improving temperature Yang is adopted, and the yanghe decoction is added and reduced [8].

3. Integrated Traditional Chinese and Western Medicine in the Treatment of Lung Cancer

3.1 Traditional Chinese Medicine Combined with Surgery for Lung Cancer

Radical surgical resection is considered to be the treatment of choice for patients with stage I and II non-small cell lung cancer (NSCLC). However, although the curative effect of surgical resection is remarkable, this method also has certain defects. Patients will have inflammatory reaction and pulmonary dysfunction after surgery. Severe stress reaction will also aggravate tissue stress trauma, cause inflammatory cascade reaction, and patients need to stay in bed for a long time to recover. Traditional Chinese medicine combined with surgery can effectively solve the above problems [9]. Shi Dongfeng et al. 's randomized controlled study showed that Bufe-Huoxue decoction (containing salvia miltiorrhiza, astragalus, and earthdragon, etc.) assisted thoracoscopic surgery could significantly improve the postoperative symptoms of patients with non-small cell lung cancer (total effective rate 98. 15%), reduce the levels of inflammatory factors (CRP, IL-6, etc.), and shorten the length of hospital stay (4. 87±1. 12 days). Its mechanism is related to tonifying lung and spleen, promoting blood circulation and resolving phlegm, and inhibiting inflammatory response [10]. Li Jili et al. conducted a clinical study to observe the efficacy of Qianjin Weijing decoction and Shengmai powder as adjuvant therapy in 150 patients with non-small cell lung cancer (NSCLC) undergoing surgery. The study found that after 3 months of treatment, the total effective rate of traditional Chinese medicine in the observation group was significantly higher than that in the control group (89. 33% vs 76. 00%), and the improvement of cough, sputum and other TCM syndromes was more obvious. The levels of serum tumor markers (CA50 and CEA) decreased significantly, the immune function indicators (CD4⁺, CD3⁺, CD4⁺/CD8⁺ ratio increased, CD8⁺ decreased) improved better, and the quality of life (FACT-L score) improved more significantly. Research results show that Qianjin Weijing decoction and Hesengmai powder can effectively improve the immune function of patients with NSCLC after surgery, reduce the levels of tumor markers, relieve clinical symptoms, and improve the quality of life [11].

3.2 Traditional Chinese Medicine Combined with Chemotherapy in the Treatment of Lung Cancer

In the treatment of lung cancer, chemotherapy is usually a

common treatment for patients with advanced or recurrent lung cancer. Chemotherapy can also be combined with surgery to assist surgical treatment. However, the effect of simple chemotherapy is limited, and there are many side effects of chemotherapy, which can not only cause systemic or local reactions, but also kill tumor cells and normal proliferating cells at the same time, thereby destroying the immune function of the body. At the same time, patients will have a certain degree of drug resistance. These factors affect the clinical treatment effect of lung cancer. In clinical practice, it has been found that traditional Chinese medicine combined with chemotherapy has a better effect on lung cancer [12]. Zhao Xiao-feng et al. selected 78 elderly patients with advanced non-small cell lung cancer, and they were divided into chemotherapy alone group and integrated traditional Chinese and western medicine group, with 39 cases in each group. Both groups were treated with gemcitabine + cisplatin or vinorelbine + cisplatin chemotherapy. In addition, the combined group was treated with TCM syndrome differentiation (north almond, etc., for the type of lung depression and phlegm stasis, and Radix salvia, etc., for the type of qi and Yin deficiency). The results showed that there was no significant difference in the total effective rate between the two groups ($P > 0.05$), but the average survival time and 1-year survival rate of the combined group were higher, and the incidence of adverse reactions was lower, the differences were statistically significant ($P < 0.05$) [13].

Wang Zhongqi divided 208 patients with non-small cell lung cancer into the treatment group (97 cases) and the control group (94 cases). The control group was treated with GP routine chemotherapy for 4 courses, and the treatment group was treated with anti-tumor Zengxiao decoction (Shenghuangqi, Huangjing, Ganoderma lucidum, Jiangchuan Huanglian, Zhuangzhu, etc.) from the first day of chemotherapy for two weeks on the basis of the control group. Feiyanning decoction (Radix astragali, Ganoderma lucidum, Rhizoma Huangjing, Xianlingpi, Qiye Yihua, apiary, dried toad skin, etc.) was taken in the second week after chemotherapy. The clinical results showed that the recurrence and metastasis of tumor in the treatment group were lower than those in the control group, with a significant difference ($p < 0.05$) [14].

3.3 Traditional Chinese Medicine Combined with Radiotherapy for Lung Cancer

In the treatment of lung cancer, radiotherapy is a key treatment method, which uses high-energy X-rays or other types of radiation to destroy tumor cells or stop their growth. The main goal of radiotherapy is to destroy the DNA of tumor cells, hinder their normal function, and promote their loss of vitality, so that they cannot continue to divide and proliferate. Radiotherapy can be used as the primary treatment for lung cancer or in combination with other treatments such as surgery, chemotherapy, or targeted therapy to increase the therapeutic effect. However, in the process of radiotherapy, normal tissues may be damaged, and even pulmonary fibrosis may occur, which not only affects the clinical efficacy, but also affects the quality of life of patients [15]. Traditional Chinese medicine believes that radiation injury is caused by heat and toxin, which leads to lung qi weakness. In the treatment, Fuzheng Peiben is used as the main method,

accompanied by clearing heat and detoxifying, cooling blood and nourishing Yin, so as to obtain good clinical efficacy.

Wang Min randomly divided 130 patients with radiation injury of lung cancer into the study group (65 cases) and the control group (65 cases). The control group was treated with prednisone acetate tablets, and the study group was treated with self-made Yiqi Bufeijiedu decoction on the basis of the control group (Astragalus membranaceus, Shizuanzhen, Jigan, Zhidao lily, Shijianzhen, Maidong, American ginseng, North Radix salvia miltiorrhiza, almond, Cordyceps sinensis, Radix chinensis, Radix salvia miltiorrhiza, almonds, Cordyceps sinensis). Burnt licorice). The treatment results showed that the clinical efficacy of the study group was higher than that of the control group, and the incidence of adverse reactions in the study group was lower than that in the control group ($p < 0.05$), indicating that this treatment method can effectively treat radiation injury [16].

Pang Jun believed that radiotherapy could lead to abnormal coagulation function, and patients would consume body fluid and gas, forming the syndrome of blood stasis. He randomly divided 60 patients with non-small cell lung cancer into a treatment group and a control group, with 30 patients in each group. The control group and the treatment group were treated with conventional radiotherapy, and the treatment group was treated with Zhilong Huoxue Tongyu capsule (Astragalus membranaceus, leech, lumbricus, Daxueteng, cinnamomum twig, etc.). The treatment results showed that Zhilong Huoxue Tongyu capsule could significantly improve the clinical symptoms of TCM in patients with hypercoagulable state of non-small cell lung cancer [17].

In Gao Xiaoxia's study, 68 patients with lung cancer treated with radiotherapy were randomly divided into control group (radiotherapy only) and observation group (radiotherapy + Zhenqi Liujun Ziyin Jiedu prescription), and 62 cases were finally completed. The results showed that the incidence of radiation pneumonitis in the observation group (19.35%) was lower than that in the control group (45.16%), and the severity was lighter. In the observation group, cough, expectoration, shortness of breath, fatigue and other TCM symptoms improved more significantly, KPS score increased more significantly, and the effective rate was 93.55%. There was no liver and kidney function damage and blood toxicity [18].

4. Conclusion

At present, a large number of studies have shown that the combined treatment of traditional Chinese and Western medicine is of great significance in the field of lung cancer. The holistic concept and dialectical treatment methods of traditional Chinese medicine, when applied, can not only enhance the immunity of patients but also alleviate the adverse reactions of Western medical treatment. In addition, personalized treatment plans can also be provided based on the unique conditions of the patients. At the same time, there are still some problems in the process of integrating traditional Chinese and Western medicine to treat lung cancer. Most studies select a small sample size, lacking the support of large samples. Moreover, some traditional Chinese medicine therapies are based on the clinical experience summaries of

scholars themselves without scientific assessment, thus making it difficult to promote them on a large scale. Furthermore, some traditional Chinese medicines may interact with Western medicines, but the lack of research in this area has led to the failure of traditional Chinese medical treatments to gain the trust of some people. Therefore, in the future, it is still necessary to increase research efforts on the integrated treatment of lung cancer with traditional Chinese and Western medicine, expand its application scope, and provide better therapeutic effects for patients.

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