

The efficacy of earth cultivation and gold generation method in the treatment of middle and late stage lung cancer

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Abstract: Lung cancer is the number one malignant tumor disease in China in terms of death rate, and early stage patients can choose surgery for better prognosis. However, most patients usually lose the chance of surgery when they are diagnosed in the middle and late stages of the disease, with poor prognosis and poor quality of life. Based on the theory of five elements in Chinese medicine, nourishing the spleen and stomach can effectively enhance the physiological state of lung, which is the method of cultivating earth and generating gold. In the late stage of lung cancer, together with other treatments such as radiotherapy, targeted therapy and immunotherapy, it can relieve clinical symptoms, improve the quality of life and prolong the survival period.

Keywords: Lung cancer; Traditional Chinese medicine; Cultivating earth and generating gold method; Tumor

1. Introduction

According to the annual report of malignant tumor data in China in 2020, lung cancer is the most common type of cancer causing death in China, and the incidence and mortality rate are the first among malignant tumors ^[1], as shown in Figure 1 and Figure 2. According to the modern medical level, the first treatment option for lung cancer patients is surgical resection, followed by repeated radiotherapy, chemotherapy, bioimmunotherapy and other adjuvant treatments ^[2]. Removal of the diseased lung lobes and removal of surrounding lymph nodes is the most effective treatment for lung cancer, especially early stage lung cancer. Sadly, many patients have already entered the middle and late stage when they find out they have lung cancer, and they usually have lost the indication for surgery, so the treatment at this time cannot rely on radiotherapy alone, because not only the recurrence and metastasis rate is high, but also the body function is damaged to a certain extent by continuous radiotherapy, which will present huge toxic side effects ^[2]. At this time, the unique advantages of Chinese medicine method in treating cancer are revealed, which regulates the disease state by balancing the qi, blood, yin and yang in the body. According to clinical observation, Chinese medicine method has embodied an important role during the treatment and recovery stages of lung cancer, striving for a new and alternative treatment path for the majority of lung cancer patients.

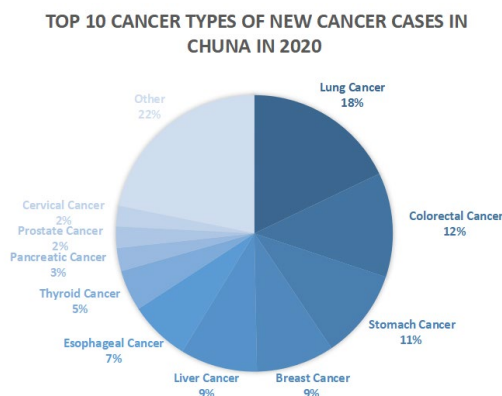


Figure 1: Top 10 cancer types of new cancer cases in China in 2020

2022 Deaths from malignant tumors in China

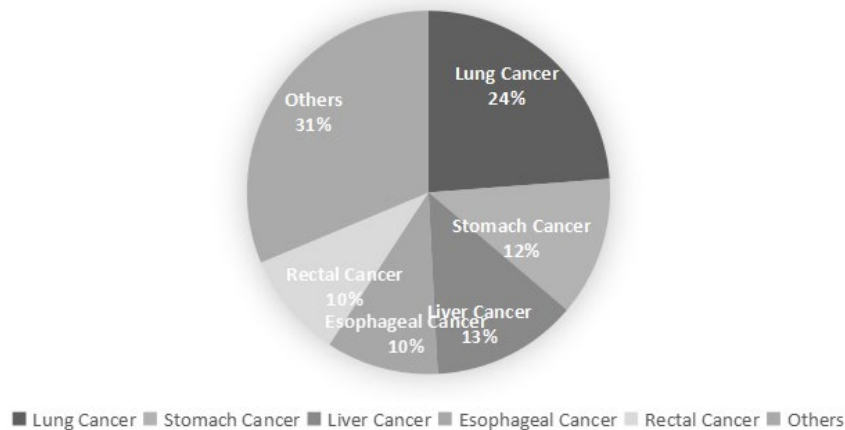


Figure 2: 2022 Deaths from malignant tumors in China

2. Basic concept

2.1. Pathogenesis of lung cancer

2.1.1. Pathogenesis and influencing factors

Many clinical scholars have speculated on the pathogenesis of lung cancer related to (1) chronic inflammation in the airways: inflammatory factors will lead to the shedding and proliferation of lung cell tissues, which will contribute to the proliferation and chemosis of squamous epithelial cells until carcinogenesis if not timely intervened, so chronic inflammation is considered as one of the mechanisms of lung cancer. (2) Genetic: It has been found that the process of cysteine-rich acidic protein via microvascular remodeling and excessive accumulation of extracellular matrix proteins in lung cancer disease can, to a certain extent, play a role in controlling cell adhesion, proliferation and differentiation, and then promote the process of lung cancer development^[3]. (3) Signaling: evidence that Wnt1 protein is a key regulator of alveolar epithelial type II cell proliferation^[4]. Abnormal activation of Wnt1 protein has also been detected in a number of tumor cells, which can contribute to cancer cell growth and development. Therefore, inhibiting the signaling pathway of wnt1 can stop the infiltration and metastasis of cancer cells. According to clinical data, there are many factors that can contribute to the formation of lung cancer, and poor living habits and living environment can accelerate the process of cancer. Therefore, maintaining healthy living habits and rest in daily life, quitting smoking and limiting alcohol, and staying away from cancer-promoting environment can effectively prevent the occurrence of lung cancer. However, the specific pathogenesis of lung cancer is still unknown and needs to be confirmed by a lot of data studies.

2.1.2. The formation of lung cancer in Chinese medicine

According to traditional Chinese medicine, the generation of disease is the result of a fierce struggle between the positive and the evil, with the positive qi being weak and in a downward position, unable to strongly resist the external evil, resulting in the invasion of the evil into the dirty. The lungs are located in the highest position of the body, and are named "Huagai", and the lungs are called "delicate organs", which are considered to be the most delicate, difficult to withstand changes in heat and cold, and easily invaded by evil spirits. If the body is in a weak state, external evil will take advantage of the weakness and enter the body, which will attack the lung and hurt the yin, and the lung will lose its function of declaring and descending, and the water will be lost, just like what the "Essential Readings of the Medical Doctor" says: "The accumulation of the Qi is not enough, and then the evil is based on it." This leads to the accumulation of liquid as phlegm, poor qi flow, and the interconnection of phlegm and stasis, and the interconnection of external evil and internal injury to the body eventually becomes cancerous and toxic.

2.2. Clinical presentation

Clinical manifestations of lung cancer patients in the late stage include cough, hemoptysis, dyspnea, pain, etc. Especially, dyspnea and pain are the factors that make patients with middle and late stage lung cancer suffer and their quality of life is seriously affected. The study showed that the clinical symptom relief of intermediate and advanced non-small cell lung cancer treated by the Pei Tu Sheng Jin method was more obvious [5] (Figure 3). The most common distant metastases of lung cancer are brain metastases and bone metastases. According to the data, about 20-65% of lung cancer patients will develop brain metastasis, which can cause intracranial hypertension, headache, vomiting and even coma, and is the most common type of brain metastasis tumor [6-8]. In contrast, bone pain and pathological fractures often occur when bone metastases occur. At this time, it already indicates that the patient's prognosis is poor, so we mostly adopt palliative treatment, appropriately play humanistic care, pay attention to the patient's psychological condition, and develop an individual treatment plan suitable for each patient.

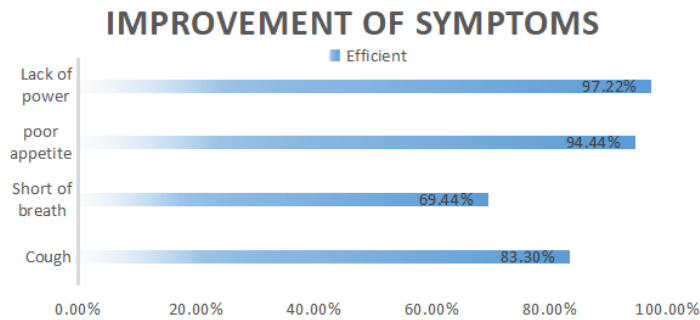


Figure 3: Improvement of symptoms

2.3. Basic theory of the Pei Tu Sheng Jin method applied to lung cancer

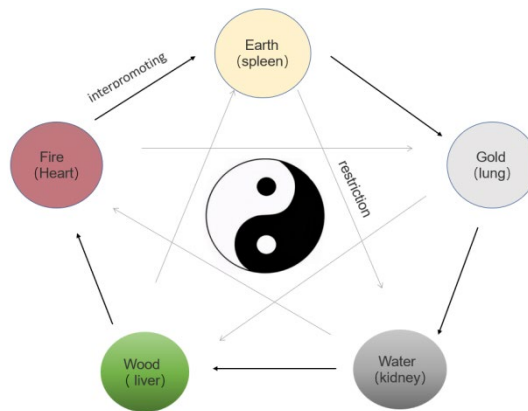


Figure 4: The five elements are related to each other

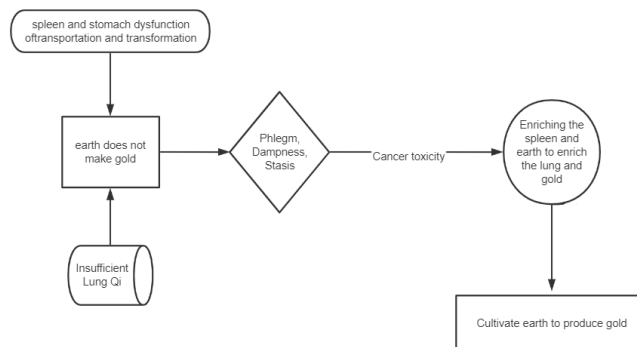


Figure 5: Diagram of cultivating earth to produce gold

According to the theory of traditional Chinese medicine, the lung is gold and the spleen is earth in the middle jiao, according to the law of the five elements, the spleen is the mother and the lung is the son, as shown in Figure 4. If there is a lack of righteousness and a weakness of the spleen and stomach in the middle jiao, the lung is unable to resist the invasion of evil qi, and the water and fluid are not in harmony, so that phlegm, dampness and stagnation gather in the chest and the chest, and accumulate for a long time, and eventually become cancerous and toxic. If the spleen and stomach fail to transport and transform, resulting in a lack of lung qi, it is said that "earth does not produce gold". At this time, earth disease and dirty deficiency are unable to transport and produce gold energy, so that the lung energy cannot recover in time. In this situation, you can use medicines that nourish the spleen and earth to strengthen the middle house and enrich the lung gold, so that the middle qi is abundant, the sea of qi is full, and blood transport is sufficient. If the earth is strong, gold will be generated, thus driving away the evil, and the lung deficiency symptoms will disappear. This is the method of "cultivating earth to produce gold" [9]. (Figure 5)

3. A brief list of the views of ancient and modern medical practitioners

3.1. Ancient medical views

Zhang Zhongjing's Huangqi Jianzhong Tang was originally recorded in the "essentials of the golden cabinet-Combined treatment of blood stasis, deficiency and fatigue", "deficiency of the deficiency of labor and urgency, Huangqi Jianzhong Tang is the main." Among them, Huang Qi tonifies the qi and fixes the surface, and helps the toxin to generate energy, while Dang Ginseng and Bai Zhu tonify the middle and benefit the qi, and strengthen the spleen and promote water, which is respected by later medical practitioners as the origin of the method of sweet and warm to cultivate the earth and generate gold. The representative formula is Si Jun Zi Tang, in which ginseng tonifies the middle qi, Fu Ling and Bai Zhu strengthen the spleen and dispel dampness, and licorice nourishes the stomach and harmonizes the middle, which greatly enriches the content of Pei Tu Sheng Jin method. Based on text mining technology to analyze the pattern of Chinese medicine use in lung cancer treatment, frequent application of drugs with the effect of strengthening the spleen and benefiting the qi such as ginseng, astragalus, atractylodes and poria, etc. resulted in fruitful results [10].

3.2. Modern medical views

Most modern Chinese medicine practitioners believe that the pathological mechanism of lung cancer is characterized by deficiency of the body and stagnation of phlegm and stagnation of blood as the reality. In recent years, in order to make the diagnosis and treatment of lung cancer more standardized, domestic experts have formulated a Chinese medicine treatment plan for lung cancer, which is roughly divided into (1) lung yin deficiency (2) lung spleen qi deficiency (3) qi-yin deficiency (4) qi stagnation and blood stasis (5) phlegm-heat blocking lung [11], for standardized evidence-based treatment, and through research, it has been shown that lung spleen qi deficiency evidence is most closely related to lung cancer [12]. Zhou Zhou and other scholars found that the two most common types of tumor differentiation based on the relationship between the degree of tumor differentiation and TCM evidence were spleen-lung qi deficiency and phlegm-damp stagnation [13]. Therefore, when treating lung diseases, we should first treat the spleen, dispel dampness and cut off phlegm, so that the spleen and stomach can be healthy and transported normally, in order to relieve symptoms such as deficiency of middle energy and deficiency of both qi and yin.

4. Clinical Applications

4.1. Application of ancient prescriptions

Professor Wang Xiangqi's research suggests that the method of cultivating earth and generating gold can be divided into three major categories: sweet and flat, sweet and warm, and sweet and cool, represented by Ginseng Ling Bai Zhu San, Si Jun Zi Tang, and Clear Dryness and Save Lung Tang, respectively. The methods of Gan-Wen, Gan-Liang and Gan-Ping should be applied flexibly to accurately grasp the etiology and pathogenesis of the disease and implement evidence-based treatment. When it comes to the regulation of the spleen and stomach, we must mention Li Dongyuan, who advocates the theory of the spleen and stomach and believes that "all diseases arise from the failure of the spleen and stomach".

4.2. Antitumor monomeric herb use

Many traditional herbs can be flexibly and appropriately used in tumor treatment in terms of their medicinal properties, efficacy and preparation methods, all of which can produce cancer-inhibiting effects on tumor cells and bring into play the unique advantages of Chinese medicine. Chonglou can play the characteristics of clearing heat and detoxifying, relieving swelling and pain, and is widely used in anti-tumor and anti-bacterial treatment. It has been proved that Chonglou has certain inhibitory effect on the growth of lung cancer, liver cancer, stomach cancer and other tumors^[14]. The use of monomeric drugs should pay attention to the medicinal properties of the affected body itself and the disease nature of the disease, not to be added to prevent the aggravation of the disease or the occurrence of concurrent disease, the loss is not worth it.

4.3. Clinical application status observation

Du Yanlin et al. designed a clinical trial in which 80 patients were randomly divided into two groups. The control group was treated with chemotherapy using GP regimen, and the experimental group was treated with oral Pei Tu Sheng Jin formula and chemotherapy at the same time^[15]. Bu Xuhai used the Pei Tu Sheng Jin Chinese medicine method with TP regimen chemotherapy to treat 68 patients with advanced NSCL, the control group used TP regimen chemotherapy and the experimental group used Chinese medicine therapy with chemotherapy, the conclusion was that the experimental group had much better treatment efficiency, symptom improvement rate, leukopenia and GI response rate, KPS score, quality of survival and other experimental data than the control group, which simply and clearly showed that the Pei Tu Sheng Jin method treatment has a very obvious therapeutic effect on lung cancer in the middle and late stages^[16]. The above experimental results show that the use of Pei Tu Sheng Jin method of treatment or with treatment has a certain alleviating effect on the clinicopathological response of middle and late stage lung cancer, effectively improving the tolerance of patients' organism and reducing their psychological burden during treatment. However, recurrence and metastasis are the most fearful and worrying things for patients in the later stage of treatment, and they are also gradually becoming the main factors for the ultimate failure in fighting lung cancer treatment^[17]. The treatment of lung cancer by TCM does not simply aim at eliminating the cancer, but takes the survival effect of the organism as the most important factor to adopt the appropriate treatment, which is tailored to the individual, and treats the tumor to preserve the patient's life experience and achieve the best state of "peaceful coexistence" with the cancer. In conclusion, the distinctive feature of TCM treatment for middle and late stage lung cancer is to support the body to coexist with the tumor and to improve the quality of life as much as possible, which effectively differentiates it from other western medical treatments and achieves a treatment effect that cannot be underestimated^[18].

5. Conclusion

Through clinical efficacy observation, many patients nowadays start to pay attention to the integrated treatment method of Chinese and Western medicine for tumors, and they will choose the cross management idea of Chinese and Western medicine, with Western medicine as the main treatment during preoperative and radiotherapy, and Chinese medicine can be used for systematic conditioning during postoperative recovery. In the treatment of lung cancer by Chinese medicine, it is important to highlight the arrangement of Pei Tu Sheng Jin method in both preoperative adjuvant and postoperative conditioning period^[19]. This treatment can be used as a long-term treatment plan for middle and late stage lung cancer. If used in combination with the method of removing phlegm and blood stasis, it will also achieve more satisfactory results. Prof. Pang Dexiang proposed the combination of internal and external causes of lung cancer, and formulated his own Lung Jin Sheng formula to improve the immunity of patients and prolong their life span^[20]. It is believed that in the near future, through the continuous promotion of standardized Chinese medicine treatment, more and more lung cancer patients will come to choose Chinese medicine treatment, and fundamentally remove the prejudice and unknown of the public towards Chinese medicine treatment. To sum up, the method of "cultivating earth to produce gold" derived from the theory of treating the spleen first for lung disease is the essence of the ancient formula, and its combined application with modern medical treatment is one of the effective solutions for lung cancer treatment, and the combination of Chinese and Western medicine will definitely become the future development trend of tumor treatment, which is worthy of clinical promotion and further research.

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