

An Overview of the Correlation between Tcm Pattern Type and Clinical Objective Indicators of Chronic Obstructive Pulmonary Disease

Lu Zeng^{1,*}, Yaohui Li²

¹Shaanxi University of Traditional Chinese Medicine, Xiayang, 712046, China

²Shaanxi Provincial Hospital of Traditional Chinese Medicine, Xi'an, 710000, China

Abstract: *The correlation between TCM pattern type and clinical objective indicators of chronic obstructive pulmonary disease (COPD) mainly includes the following aspects: TCM pattern type and lung function, blood gas analysis, and inflammatory indicators. Through reviewing the literature, the author found that different TCM types of COPD have a certain correlation with clinical objective indicators. Its relevance is summarized and summarized in order to provide a reference for the diagnosis and treatment of COPD in integrated traditional Chinese and Western medicine.*

Keywords: *COPD, TCM pattern type, Objective indicators, Review*

Currently, COPD is the fourth most common disease causing human deaths, and the number of cases has been increasing in recent years, with the absolute number of cases predicted to increase to more than 150% by 2030 ^[1]. With the development of medicine in the motherland, Chinese medicine has certain advantages in the treatment of COPD. In relevant research, many scholars have incorporated clinical objective indicators into the TCM system, and explored dialectical treatment from a microscopic perspective by giving full play to the advantages of integrated Chinese and Western medicine. Through the search literature, the author found that there is a correlation between COPD TCM type and clinical objective indicators, and now summarizes the study on the correlation between COPD TCM type and objective index as follows.

1. TCM Etiology and Pathogenesis

Ancient Chinese medicine books do not have a record of COPD disease names, and according to their clinical symptoms, they can be classified as "lung distension". Professor Jiang Liangduo^[2] believes that repeated exogenous infection, deficiency of lung, spleen and kidney are the causes of COPD, and mutual resistance of phlegm and blood stasis is the key to the pathogenesis. In the stable stage, the main treatment is to invigorate the lung and kidney, expel phlegm and activate blood, while in the acute exacerbation stage, it also aims to clear heat and nourish yin. Professor Wang Chengxiang^[3] believed that lung distention is a disease, because the evil qi of the five viscera and six fu organs invaded the lung through the hundreds of channels, and the lung is affected by the disease qi of the viscera and fu organs, which affects breathing, resulting in cough; The source is that the soil does not produce gold, and the lung qi loses nourishment; if it reaches the kidney over time, the gold does not produce water, and the lung and kidney are both deficient, unable to absorb qi and asthma. He believes that the stable stage of the disease is phlegm-drinking in the lung, and the acute exacerbation stage is phlegm-heat accumulating in the lung. Professor Meng Jingchun^[4] believes that prolonged cough damages the lung, and exogenous pathogens take advantage of the deficiency to enter, resulting in the inability of lung qi to disperse and depressurize, and the lack of qi distribution to breed phlegm pathogens; Lung Qi rises and falls unfavorably, then produces phlegm and asthma; mother disease and child, kidney yang deficiency causes water to be lost in transport and transformation, then phlegm is produced. The etiology and pathogenesis of lung distention is summarized as the invasion of exogenous pathogens, deficiency of lung, spleen and kidney, phlegm-drinking, phlegm and blood stasis. To sum up, in the etiology of lung distention, deficiency is the premise of the disease, and evil is the pathogenic factor. Therefore, the basic pathogenesis of lung distention can be attributed to the deficiency and the excess, which is based on the deficiency of the three viscera of the lung, spleen and kidney. Phlegm turbidity, water drinking and blood stasis are the targets.

2. Correlation between TCM Syndrome Types and Main Objective Indicators

2.1 TCM Syndrome Types and Lung Function

COPD is a disease characterized by persistent airflow limitation, and pulmonary function test is the main objective indicator for judging persistent airflow limitation, which is of great significance for the diagnosis and treatment of COPD. Zhao Na^[5] selected 30 AECOPD inpatients with TCM syndrome types: wind-cold attacking the lung, phlegm-damp obstructing the lung, phlegm-heat blocking the lung, and water-drinking lingering the heart, respectively, and measured forced vital capacity (FVC), forced breathing in the first second and calculated the ratio of FEV1/FVC to the predicted value. The results showed that the levels of FEV1 and FEV1/FVC in the lungs with wind-cold attack were significantly higher than those in the water-drinking heart, phlegm-heat obstructing the lung, and phlegm-damp obstructing the lung ($P < 0.05$). However, there was no significant difference in pulmonary function between drinking water to the heart, phlegm-heat obstructing the lung, and phlegm-damp obstructing the lung. Some scholars^[6-8] found that phlegm-heat obstructing the lung accounted for the highest clinical proportion by including COPD patients, followed by lung-kidney qi deficiency, phlegm turbidity obstructing the lung, and phlegm stasis obstructing the lung syndrome. The results of FEV1/FVC and FEV1 from high to low were: phlegm turbidity obstructing the lung, phlegm-heat obstructing the lung, phlegm stasis obstructing the lung, lung-kidney qi deficiency ($P < 0.05$). Blood gas analysis can understand and determine pulmonary ventilation or ventilation dysfunction, the type and severity of respiratory failure.

2.2 TCM Syndrome Types and Blood Gas Analysis

Zhao Na's study^[5] showed that the PaO₂ of water-drinking Lingxin type was significantly lower than that of wind-cold attacking the lung, phlegm-dampness blocking the lung, and phlegm-heat obstructing the lung, while PaCO₂ was significantly higher than the other three types ($P < 0.05$). There was no significant difference in PaO₂ and PaCO₂ among the three syndromes of wind-cold attacking the lung, phlegm-damp obstructing the lung, and phlegm-heat obstructing the lung. Wang Zhao^[7] selected 81 COPD patients and found that the results of PaCO₂ and PaO₂ were the most serious in both lung and kidney deficiency, followed by phlegm and blood stasis obstructing the lung, phlegm-heat obstructing the lung, and phlegm-damp obstructing the lung, with significant differences. Zou Peng^[8] and others screened out 320 patients who met AECOPD for blood gas analysis, and the results showed that the PaO₂ of lung and kidney deficiency was significantly lower than the syndrome of phlegm and blood stasis blocking the lung, phlegm-heat blocking the lung, and phlegm-damp blocking the lung. The PaCO₂ was significantly higher in lung and kidney deficiency, phlegm and blood stasis obstructing the lung than phlegm-heat obstructing the lung and phlegm-damp obstructing the lung ($P < 0.05$). There is a correlation between TCM syndrome types of COPD and the degree of dyspnea.

2.3 TCM Syndrome Types and Inflammatory Indicators

COPD can aggravate symptoms through bacterial infection, cold air and interruption of conventional treatment, and progress to an acute exacerbation period with increased inflammatory mediators and airway inflammation. Therefore, the detection of inflammatory factors is of great significance for judging the severity of the disease and treatment^[9]. Liu Guangming^[10] selected 153 AECOPD patients to detect PCT and hs-CRP. The results showed that compared with 20 patients with stable COPD, these two indicators were significantly higher in patients with AECOPD than those in stable COPD. The PCT and hs-CRP detected in AECOPD patients with phlegm-heat stagnant lung and phlegm blocking the orifices were significantly higher than those of phlegm-damp blocking the lung, wind-cold attacking the lung, and lung-kidney qi deficiency, and the differences were significant.

3. Summary

Traditional Chinese medicine has certain advantages in the treatment of COPD, and clinical treatment of COPD patients with integrated traditional Chinese and Western medicine can improve their survival rate and quality of life. Exploring the TCM syndrome types and clinical objective indicators of COPD can enable physicians to scientifically and comprehensively understand the etiology, pathogenesis and clinical manifestations of COPD, more objectively guide clinical syndrome differentiation, and optimize diagnosis and treatment plans. However, there are some shortcomings in

the research: first, the classification of TCM syndromes in clinical research is not uniform; second, the sample size of clinical research is small; third, there are small differences in research results; fourth, there is a lack of dynamic observation. Therefore, in future experiments, researchers need to establish a unified TCM classification, conduct large-scale clinical trials, and conduct a more in-depth and comprehensive study of the correlation between TCM syndrome types and objective indicators, so as to provide a reference for the diagnosis and treatment of COPD with integrated traditional Chinese and Western medicine.

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