



Psychological Research Progress in Patient with Lung Cancer: An Overview

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

(1) Through the research, the psychological problems of cancer patients provide effective nursing measures to provide theoretical basis; (2) By improving the psychological problems of cancer patients, and then improve the family care enthusiasm, so as to improve the quality of life of patients.

Methods: The literature with psychological problems of lung cancer patients as key words was collected through CNKI.

Results: According to the results of literature analysis, demographic factors such as age, education level, residence, family income, cancer stage, coping style and other factors have a certain degree of influence on the psychological problems of patients with lung cancer chemotherapy.

Conclusion: Different coping styles lead to different degrees of psychological problems in patients. Positive coping styles mainly reduce the psychological pressure of patients, but also have a positive impact on the treatment and recovery of patients' diseases.

Keywords: Lung cancer; malignant tumor; mental health status; post operative trauma.

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1. INTRODUCTION

In recent years, with the development of society, the incidence of various diseases has increased year by year, especially malignant tumors. Malignant tumor is a general term for a large group of diseases, which are characterized by the loss of normal regulation of cells in the body, unrestrained growth and abnormal differentiation, local tissue invasion and distant transplantation. Malignant tumor can occur in any age, any organ and any tissue, and its incidence is closely related to harmful environmental factors, unhealthy lifestyle and genetic susceptibility. Most malignant tumors detected early are potentially curable. The common malignant tumors in the world include gastric cancer, breast cancer, lymphatic cancer, lung cancer, esophageal cancer and so on. All of them have the characteristics of great trauma to the human body and are difficult to cure, and all of them seriously threaten people's health. Among them, lung cancer is a malignant tumor originating from the bronchial mucosa or glands of the lung, with the fastest increase in morbidity and mortality. In the past 50 years, many countries have reported that the incidence and mortality of lung cancer have increased significantly. According to the latest cancer burden data in 2020 released by the International Agency for Research on Cancer (IARC) of the World Health Organization, lung cancer ranks the second in the total number of new cancers worldwide (incidence rate 11.4%). Lung cancer is the leading cause of cancer deaths with 1.8 million deaths and a mortality rate of 18%, far exceeding other types of cancer. China ranked first in both incidence (23.7%) and mortality (30.1%) of cancer in the world. However, lung cancer has a higher incidence (17.9%) and mortality (23.8%) than other cancers. There are also differences in the incidence of lung cancer between different genders. According to the "Interpretation of the 2020 Global Cancer Statistical Report" published by Liu Zongchao [1] et al, in the statistics of the global male cancer new cases in 2020, males are the most commonly diagnosed with lung cancer (accounting for 14.3% of the new cases). Lung cancer (8.4%) was the third most common cancer in women. Therefore, lung cancer has become one of the malignant diseases threatening human health [2].

A large number of studies have proved that the incidence of lung cancer is related to long-term heavy smoking. According to the Report on the Health Hazards of Smoking in China released by

the Ministry of Health, the smoking rate in China is still at a high level, and smoking and second-hand smoke exposure have posed a great threat to people's health and become one of the causes of many diseases, especially lung cancer [3]. In addition, chronic obstructive pulmonary disease, coal smoke exposure, family history of first-degree relatives with lung cancer, genetics and other factors are risk factors for lung cancer. Lung cancer is treated by surgery, radiotherapy and chemotherapy. Chemotherapy is the most important treatment for patients with advanced lung cancer. While killing cancer cells, it also harms normal cells in the body, with obvious toxic and side effects. In particular, some patients need large-dose combined chemotherapy, which has more obvious physical and mental damage to patients [4]. Lung cancer is commonly seen in patients with lung cancer, as one of the malignant tumors with the worst prognosis, the invasion of cancer leads to patients with breathing difficulties, pain, chest tightness, hemoptysis and other symptoms. Lung cancer is characterized by a series of negative characteristics, such as high mortality rate, high treatment cost, heavy treatment burden, strong concealment, and high recurrence rate, which bring varying degrees of physical and psychological pressure to patients and their families, as well as a certain degree of torture to the quality of life of patients and the psychology of their families [5]. This study elaborated the progress of psychological research on lung cancer patients.

2. DEMOGRAPHIC FACTOR

Many scholars have conducted a series of studies on the psychology of lung cancer patients. Chen Xuejiao et al. [6] pointed out in their study on postoperative psychological distress of lung cancer patients that psychological distress is an individual's unpleasant emotional experience caused by multiple factors, including psychological, social and spiritual aspects, which can evolve from mild vulnerability and fear to serious psychological problems such as pain and anxiety. The incidence of this factor is high and is affected by the patient's residence, age and economic status.

2.1 Place of Residence

The impact of the disease on the patient varies greatly depending on the place of residence. According to Jiang Yiling et al. [7] 's investigation on the psychological distress and coping style of

patients with advanced lung cancer undergoing chemotherapy in rural areas, patients living in rural areas often have a series of psychological problems due to the refractory disease and adverse reactions of chemotherapy, which may be related to rural patients' tenacity, relative conservatism and unwillingness to disclose their true thoughts easily. The pain in the late stage of the disease can also affect the psychological feelings of patients. The main causes of distress of this type of patients may be: (1) low income, the disease brings great economic problems to themselves and their families; (2) The patient's ability to seek social help and network support was limited, and a series of complicated procedures made the patient helpless and desperate; (3) Some patients did not have a clear understanding of the disease and believed that lung cancer was contagious, which led to patients receiving a bad view of the environment and causing mental stress; (4) Patients had insufficient knowledge of treatment methods and limited language understanding of medical staff, which aggravated their own psychological distress; (5) Some patients are resigned to the refractoriness of the disease, and cannot relieve their inner pressure due to the influence of the environment. The accumulated negative emotions in the past lead to excessive psychological pressure, depression, anxiety and other adverse emotions.

2.2 Age

Psychological distress is a kind of psychological disorder caused by multiple factors, which is mainly manifested as mental crisis and emotional crisis. Individuals who endure psychological pain for a long time will have a certain degree of impact on their quality of life and disease recovery. The survey shows that the proportion of cancer deaths in Chinese residents is increasing year by year, and the elderly patients often have significant psychological distress. Elderly patients with lung cancer are older, have poor physical function, and have limited knowledge of the disease, which leads to worse mental health and prognosis. The elderly are generally unwilling to burden their children, and the high cost of disease treatment will bring greater economic pressure to families with poor economic conditions. These factors lead to the aggravation of psychological pain in patients.

2.3 Economic Conditions

As a major disease trauma, lung cancer seriously threatens the life of patients, leading to a series

of negative changes in patients' psychological, physiological and social functions, affecting their quality of life. Economic problems may also be one of the factors causing psychological problems in patients with lung cancer. Patients with unstable economic sources are often unable to withstand the high treatment costs of the disease [8]. Chen Sijuan [9] 's research on the psychological distress of lung cancer chemotherapy patients showed that the working status, type of medical insurance, disease stage and other factors of lung cancer chemotherapy patients after illness directly affected the degree of their psychological distress. Families with poor economic conditions can hardly afford the high treatment costs of diseases, which aggravates their psychological burden. Jiang Dandan et al. [10] found that patients lost their ability to work due to the disease, which seriously affected the family economy and increased the burden on the already poor family, thus leading to severe psychological pain in patients.

2.4 Tumor Staging

Some scholars have shown that the higher the tumor stage, the higher the severity of the disease, the worse the prognosis and survival rate, and the more intense the psychological distress and pain of patients. When patients are in the middle and late stages of the disease, their sleep quality is affected, respiratory system function is damaged, distant metastasis of tumors and systemic symptoms are more serious, which further aggravates the degree of psychological distress of patients [11].

2.5 Education Level

Patients with different education levels had different views on the disease and their attitude after illness. He Yi et al. [12] showed that the higher the education level of the patient, the stronger the learning ability. After knowing the diagnosis of the disease, the patient would take the initiative to learn, be familiar with the knowledge related to the disease, and know how to deal with the disease related problems through learning. The level of psychological distress was kept low.

2.6 Coping Style

Also known as coping strategy, it is a means for individuals to deal with stressful situations and maintain psychological balance during stress. It refers to the cognitive and behavioral ways

adopted by individuals in the face of setbacks and pressure, also known as coping strategy or coping mechanism. It is an important mediating factor in the process of psychological stress. Individual coping style affects the nature and intensity of stress response, and then regulates the relationship between stress and stress results. Zhang Jing et al. [13] 's study on the mental health of lung cancer patients also showed that the mental health of lung cancer patients was related to factors such as age, course of disease, education level and economic income, and proposed the relationship between coping style and mental health of patients. Among them, negative coping style was unfavorable to the physical and mental health of patients. Positive coping style can relieve the pressure of mental work and improve the psychological adaptability of patients.

2.7 Resilience of Mind

Resilience refers to the ability of individuals to recover to their original state through their own psychological adjustment when they encounter major psychological trauma. Resilience plays a mediating role in social support and mental health, anxiety sensitivity and mental health, and social support and coping style. Zhou Tingting et al. [14] pointed out in their study on the psychological resilience of lung cancer patients that psychological resilience refers to the ability of individuals to recover to the original state through self-adjustment when they encounter major psychological trauma. The greater their psychological resilience, the stronger their adaptability to the outside world, which helps patients to adapt to the role change as soon as possible and reduce their psychological burden. Li Xinrui et al. [15] showed that the psychological resilience test of patients with advanced cancer was lower than the average score in China, suggesting that the psychological resilience of this population is low and needs to be improved urgently. Some external factors, such as peer support, cultivating hobbies and other rich lifestyles, can help to improve the psychological state of patients, enhance their psychological resilience, and better cope with the disease [16].

2.8 Humanistic Nursing

Malignant tumor diseases bring great pain to patients due to their condition, radiotherapy and chemotherapy. Through the research of many scholars, the focus of clinical nursing for malignant tumors has evolved from a single

treatment and disease control to the physiological, psychological and social adaptability of patients. Many scholars have pointed out the psychological intervention for patients with malignant tumors. Bai Yunbo et al. [17] mentioned in the study on the effect of psychotherapy intervention on patients with malignant tumors that the focus of the intervention of malignant tumors is to adopt effective strategies to improve anxiety and depression. According to the research findings, some patients do not have a clear understanding of their own diseases, and a certain degree of health education should be provided to patients in time during the process of psychotherapy intervention. Reduce patients' exaggeration of the disease to affect their own emotional fluctuations. Tong Chunyu et al. [18], in their study on the psychotherapy of patients with advanced lung tumors, asked the treatment staff that patients would have more emotions after admission, such as psychological tension, anxiety, fear, etc. He proposed that the treatment staff should establish a relationship of mutual respect and mutual help with each patient, and relieve the anxiety and depression of patients through the psychological intervention of treatment staff. Guide the formation of correct thinking and cognition, so that patients can correctly understand the disease, so as to strengthen the cooperation with the nursing staff. In the doctor-patient relationship, doctors should constantly improve their theoretical knowledge reserve and operation ability, often communicate with patients to understand their real thoughts, help patients relieve bad emotions, and improve their compliance with treatment.

3. DISCUSSION

In summary, lung cancer is one of the malignant tumors with the highest morbidity and mortality in the world, which not only poses a great threat to people's health, but also has a great impact on their psychological, physiological and social functions. According to the literature analysis, the results showed that: (1) demographic factors: the younger the patient, the higher the degree of psychological distress and pain. The younger the patient, the greater the family and social responsibility, and the greater the psychological pressure on themselves. The higher the education level, the clearer the cognition of the disease, and the better the cooperation with the treatment of the disease, which is conducive to the recovery of the disease. The lower the family income, the higher the degree of psychological

distress and pain. It may be related to the lack of available social resources due to low income, and thus the lack of adequate treatment; The higher the cancer stage, the higher the severity of the disease, and the stronger the patients' confidence in treatment and psychological distress. (2) Coping style: with negative coping style, patients' compliance with treatment was not strong, which affected the treatment and progress of the disease, and strengthened the degree of psychological distress of patients. The positive coping style can greatly improve the patients' treatment compliance and the effect of disease treatment, reduce the patients' psychological pressure, and improve their ability to resist pressure, so as to reduce the patients' psychological distress and pain. (3) Psychological resilience: the greater the psychological resilience of patients, the stronger their adaptation to the outside world, the better they can change their role into patients, the stronger their acceptance of the disease, and the better they can cooperate with the doctor's treatment; (4) Humanistic nursing: Giving patients humanistic nursing can better understand the real thoughts of patients, give patients the most needed help, help patients to relieve bad emotions, improve patients' treatment compliance, and is conducive to the treatment and prognosis of patients.

4. CONCLUSION

In recent years, with the transformation of medical model, more scholars have paid attention to the impact of psychological problems on the disease process of patients. Lung cancer is one of the diseases with high mortality worldwide, and psychological factors have become an important influencing factor of the cure rate of lung cancer, which may become one of the important causes of lung cancer [19]. According to their own conditions, lung cancer patients have different attitudes towards the disease and treatment compliance. Psychological pain is common in patients with lung cancer, which needs to be paid attention to by medical staff. The current psychological pain of patients should be assessed, and appropriate intervention measures should be given in time to alleviate the degree of psychological pain of patients and improve their quality of life and treatment compliance.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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