Prevalence of residents with chronic obstructive pulmonary disease and risk factor analysis in Dongguan Shi long region in Guangdong Province.

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Abstract

Purpose: To investigate the prevalence of residents with Chronic Obstructive Pulmonary Disease (COPD) and related risk factors in the Dongguan Shi long region of Guangdong Province, China.

Method: Random samples of patients more than 40 y of age with high-risk COPD from the region underwent pulmonary function testing and completed a questionnaire survey to determine the prevalence of COPD. Then, single and multiple factor logistic analysis was carried out on the influencing factors.

Results: The overall COPD prevalence in this region was 9.05%, the prevalence for males was higher than females. With aging, the prevalence of COPD increased significantly (P<0.05). COPD was mainly grades I and II. The differences between COPD patients and non-COPD patients pertaining to gender, age, education level, Body Mass Index (BMI), a family history of respiratory disease, and Smoking Index (SI) were significant (P<0.05). Logistic multi-factor regression analysis showed that BMI, age, gender, and SI were risk factors for COPD prevalence (P<0.05 or P≈0.05).

Conclusion: The prevalence of COPD in this region was higher, and BMI (higher), age (elder), gender (male), and SI (higher) were shown to be risk factors. Therefore, active intervention for these risk factors should be offered to reduce the COPD prevalence in this region.

Keywords: Single factor, Chronic obstructive pulmonary disease (COPD), Smoking index, Prevalence.

Introduction

The Global Burden of Disease Study projected that Chronic Obstructive Pulmonary Disease (COPD) ranked sixth as a cause of death in 1990 [1]. Based on the relevant data, COPD mortality was ranked fourth in the world in 2010, behind cancer, cardiovascular and cerebrovascular diseases [2,3], and will become the third leading cause of death worldwide by 2020 [4]. Data involving the urban population of China indicated that respiratory diseases (mostly COPD) accounted for 13.89% of deaths, and was thus fourth among causes of death. Among the causes of death in rural areas, respiratory diseases accounted for 22.4%, ranking first. Indeed, the number of patients in China who die of COPD disease is approximately 1 million each year [5,6]. Although previous studies have advanced a clear theory on the pathogenesis and pathophysiologic process of COPD [7-9], the impact of an aging population, environmental pollution, and increase in smokers on the increased mortality rate suggests that more effort on clinical prevention is needed. Furthermore, research has demonstrated that COPD is associated with heredity and the environment, and the pathogenesis has shown that COPD is preventable [10,11]. Therefore, identifying the pathogenic

characteristics and risk factors for COPD in an effort to provide guidance for early screening and intervention in high-risk groups to delay the progression of COPD is of primary importance. This study focused on the morbidity of COPD in the Dongguan Shi long region of Guangdong Province, China, and investigated the distribution of high-risk groups and main risk factors by collecting demographic characteristics and using statistical methods. The COPD patients included in this study were collected from December 2011 to December 2012 in this region.

Materials and Methods

Clinical materials

Random samples of COPD high-risk patients>40 y of age from the residents in Dongguan Shi long region, Guangdong Province between December 2011 and December 2012. Patients who did not undergo pulmonary function testing, had a severe mental illness or cardiovascular disease, underwent major chest surgery history within 2 months, or had life-threatening disease were excluded from the analysis. A total of 2267 questionnaires were distributed, 2243 of which were