A Bright Future for Novel Treatments of Idiopathic Pulmonary Fibrosis

Boric Mattie*

Department of Pulmonary Medicine, Golden Gate University, San Francisco, CA, USA

Introduction

Asthma is a chronic respiratory condition that affects millions of people worldwide. It is characterized by inflammation of the airways, leading to symptoms such as shortness of breath, wheezing, coughing, and chest tightness. While asthma can be managed through proper medical care and lifestyle adjustments, smoking exacerbates the condition and creates a deadly combination that significantly impacts individuals' health and well-being. This article aims to explore the relationship between asthma and smoking, shedding light on why this combination is particularly dangerous and the importance of addressing both issues simultaneously.

Before delving into the connection between asthma and smoking, it is crucial to understand the fundamentals of asthma. Asthma is primarily an inflammatory disease that affects the airways, leading to their narrowing and increased mucus production. This inflammation is usually triggered by various stimuli, known as triggers, which can differ from person to person. Common triggers include allergens respiratory infections, cold air, exercise, and irritants like smoke and air pollution [1].

During an asthma attack, the muscles surrounding the airways tighten (bronchoconstriction), causing the airways to become narrower. Additionally, the airways' lining swells, and excess mucus production further obstructs airflow. As a result, individuals experience difficulty breathing, wheezing, coughing, and a feeling of tightness in the chest. Asthma attacks can range from mild to severe and, in extreme cases, may even become life-threatening. It is essential to understand the current treatment landscape for IPF. The mainstay of IPF management includes antifibrotic drugs like pirfenidone and nintedanib, which have been shown to slow disease progression and preserve lung function to some extent. Additionally, supportive measures such as oxygen therapy, pulmonary rehabilitation, and vaccinations are employed to manage symptoms and improve overall well-being [2].

Description

Smoking, both active and passive (exposure to secondhand smoke), is one of the most significant risk factors for developing asthma and exacerbating its symptoms. Cigarette smoke contains numerous harmful substances, such as nicotine, tar, carbon monoxide, and volatile organic compounds, which can severely irritate the airways and worsen inflammation. The following are some of the ways smoking influences asthma.Studies have consistently

shown that individuals who smoke are more likely to develop asthma than non-smokers. Moreover, exposure to secondhand smoke from family members or in public places can also contribute to asthma development, particularly in children. For those who already have asthma, smoking can trigger more frequent and severe asthma attacks. The toxic substances in smoke directly affect the airways, causing bronchoconstriction and inflammation, making it harder for individuals to breathe. Smokers with asthma may have a diminished response to asthma medications, such as bronchodilators and corticosteroids. The continued exposure to smoke undermines the effectiveness of these medications in controlling inflammation and bronchoconstriction. Smokers with asthma are more likely to experience severe asthma exacerbations that may require emergency medical attention or hospitalization. The combination of smoking and asthma can be life-threatening in such situations. Smoking significantly accelerates the decline in lung function over time. For individuals with asthma, this decline can be even more pronounced, leading to greater impairment in daily activities and reduced quality of life [3-5].

Conclusion

Asthma and smoking form a deadly combination that poses significant health risks to individuals affected by this condition. Smoking worsens asthma symptoms, increases the risk of severe exacerbations, and accelerates the decline in lung function. Recognizing the interplay between asthma and smoking is crucial for effective management and prevention strategies. Addressing the issue holistically involves education, smoking cessation programs, and supportive environments for individuals trying to quit. Public health efforts to prevent smoking initiation and reduce secondhand smoke exposure are also essential in curbing the impact of this deadly combination. By prioritizing smoking cessation and asthma management together, we can strive to improve the lives of millions affected by this deadly combination and create a healthier future for generations to come.

Acknowledgement

None.

Conflict of Interest

The authors declare that there is no conflict of interest associated with this manuscript.

****Address for Correspondence**: Boric Mattie, Department of Pulmonary Medicine, Golden Gate University, San Francisco, CA, USA, E-mail: boricmattie45@yahoo.com*

References

1. Li Guangdi and Erik De Clercq. "Therapeutic options for the 2019 novel coronavirus (2019-nCoV)." *Nat Rev Drug Discov* 19 (2020): 149-150.

2. Nemati, Shamim, Andre Holder, Fereshteh Razmi and Matthew D. Stanley, et al. "An interpretable machine learning model for accurate prediction of sepsis in the ICU." *ICU Crit Care Med* 46 (2018): 547.

3. Mohammed, Akram, Franco Van Wyk, Lokesh K. Chinthala and Anahita Khojandi, et al. "Temporal differential expression of physiomarkers predicts sepsis in critically ill adults." *Shock* 56 (2021): 58.

4. Han, Daiwei, Marjolein A. Heuvelmans, Rozemarijn Vliegenthart and Mieneke

Rook, et al. "Influence of lung nodule margin on volume-and diameter-based reader variability in CT lung cancer screening." *Br J Radiol* 91 (2018): 20170405.

5. Goo, Jin Mo. "Computer-aided detection of lung nodules on chest CT: Issues to be solved before clinical use." *Korean J Radiol* 6 (2005): 62-63.

How to cite this article: Mattie, Boric. "A Bright Future for Novel Treatments of Idiopathic Pulmonary Fibrosis." *J Pulm Respir Med* 13 (2023): 643.