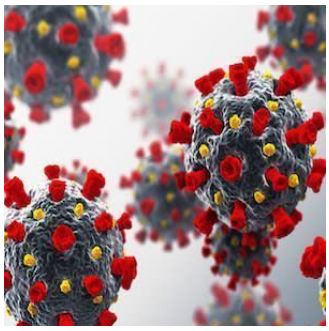
ICU
MANAGEMENT & PRACTICE

## Association Between Pre-Existing Respiratory Disease and COVID-19



Pre-existing respiratory disease could worsen the severity of COVID-19. A review of cases has shown that the prevalence of chronic respiratory disease in hospitalised COVID-19 patients was lower compared to prevalence in the general population. Another systematic review found mixed evidence on asthma. Some data suggests hospitalisation was equally probable, but disease severity might be more severe. Another review suggests that chronic obstructive pulmonary disease (COPD) was associated with a four-times higher risk of severe disease. However, evidence still remains weak.

Inhaled corticosteroids are commonly used to treat airway disease. They may also modify the severity of COVID-19. However, there is observational evidence that inhaled corticosteroids may be associated with an increased risk of non-COVID-19 respiratory tract infections. There is evidence of increased risk in patients with COPD and patients with asthma who were prescribed high dose inhaled corticosteroids. Data remains scarce.

A study was conducted to assess whether chronic lung disease or the use of inhaled corticosteroids affects the risk of contracting COVIID-19. The study used data from 1205 general practices in England. Patients 20 years and older were included. The researchers analysed the risks of COVID-19 related hospitalisation, ICU admission, and death in relation to respiratory disease and the use of inhaled corticosteroids. Data for 8,256,161 patients were analysed. The most common respiratory diseases were asthma, COPD, and bronchiectasis.

Findings show that people with some respiratory diseases, including COPD, asthma, severe asthma, bronchiectasis, sarcoidosis, extrinsic allergic alveolitis, idiopathic pulmonary fibrosis, other interstitial lung disease and lung cancer, were at an increased risk of hospitalisation and death, compared to those without these diseases. The risk of hospitalisation for most respiratory diseases was increased between 30 and 50%. People with asthma had the lowest risk. People with lung cancer were at twice the risk of admission to hospital than people without lung cancer.

Having COPD was associated with a 54% increase in the risk of death due to COVID-19. There was no evidence that people with asthma were at an increased risk of death. The risk of death in people with lung cancer was 77% higher than in the general population.

People with two or more prescriptions for inhaled corticosteroids were at a slightly higher risk of severe COVID-19 than those on one or zero inhaled corticosteroid prescriptions.

Overall, these findings suggest that the risk of severe COVID-19 in people with asthma is small. However, people with COPD and interstitial lung disease have a modestly increased risk of severe COVID-19 disease, but their risk of death is lower than the ordinary risk of death from any cause. The use of inhaled corticosteroids may be associated with a modestly increased risk of severe COVID-19.

Source: The Lancet

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