Asthma

Asthma is a common and potentially serious chronic disease that imposes a substantial burden on patients, their families and the community. It causes respiratory symptoms and affecting all levels of society. Olympic athletes, famous leaders and celebrities, and ordinary people live successful and active lives with asthma., limitation of activity, and flare-ups (attacks) that sometimes require urgent health care and may be fatal. Fortunately… asthma can be effectively treated and most patients can achieve good control of their asthma.

Asthma patients in the Pandemic of Covid 19

Coronavirus disease 2019 (COVID-19) is acute respiratory infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was first identified in December 2019 in Wuhan, China, and since spread globally, resulting in an ongoing pandemic. Despite rigorous global containment and quarantine efforts, the incidence of COVID-19 continues to rise. There is no vaccines or antiviral drugs to prevent or treat coronavirus infections.

Epidemiology. The prevalence of asthma increased steadily over the latter part of the last century, first in the developed and then in the developing world. Current estimates suggest that asthma affects 300 million people world-wide and an additional 100 million persons will be diagnosed by 2025. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.

Pathology-The underlying pathophysiology in asthma is airway inflammation. Chronic airway inflammation results in the production and release of multiple mediators that may result in epithelial damage, smooth muscle hypertrophy, airway fibrosis, and remodeling in some patients.There are significant knowledge gaps in the pathogenesis of COVID-19. If it is confined to the conducting airways, it should be mild and treated symptomatically at home. However, COVID-19 that has progressed to the gas exchange units of the lung must be monitored carefully and supported to the best of our ability.

Clinical Presentation. Patients with asthma classically present with a history of episodes of coughing, chest tightness, shortness of breath, and wheezing. The cough may be spastic and dry or may be productive of mucus. Some patients have only cough or shortness of breath, as asthma presents differently in different patients. For example, some patients may have an unremitting cough after exposure to cold air or after respiratory tract infections.

Symptoms of COVID-19 are non-specific and the disease presentation can range from no symptoms to severe pneumonia leading to death. Coronavirus Disease 2019 (COVID-19) – typical signs and symptoms include: fever, dry cough, fatigue, sputum production, shortness of breath, sore throat, headache, myalgia or arthralgia, chills, nausea or vomiting, nasal congestion, diarrhea, and hemoptysis, and conjunctival congestion. Recently loss of smell and loss of taste is also added

The diagnosis of asthma is predominantly clinical and based on a characteristic history. Supportive evidence is provided by the demonstration of variable airflow obstruction, preferably by using spirometry. If spirometry is not available, a peak flow meter may be used. Patients should be instructed to record peak flow readings after rising in the morning and before retiring in the evening.

Covid 19-Routine laboratory investigations are usually nonspecific. WBC is usually normal or low. There may be lymphopenia, the platelet count is usually normal or mildly low. The ALT/AST, prothrombin time, creatinine, D-dimer, CPK and LDH may be elevated and high levels are associated with severe disease. Chest radiography is often the first diagnostic test performed for respiratory diseases, It usually shows bilateral infiltrates. Specific diagnosis is by specific molecular tests (RT PCR) on respiratory samples

Management Advise patients with asthma to continue taking their prescribed asthma medications, particularly inhaled corticosteroids (ICS), and oral corticosteroids (OCS) if prescribed. Stopping ICS often leads to potentially dangerous worsening of asthma. Make sure that all patients have a written asthma action plan with instructions about: Increasing controller and reliever medication when asthma worsens. Taking a short course of OCS for severe asthma exacerbations. Avoid nebulizers where possible, Nebulizers increase the risk of disseminating virus to other patients and to health care professionals Pressurized metered dose inhaler via a spacer is the preferred treatment during severe exacerbations, with a mouthpiece or tightly fitting face mask if required. Avoid spirometry in patients with confirmed/suspected COVID-19. Spirometry can disseminate viral particles and expose staff and patients to risk of infection, while community transmission of the virus is occurring in your region, postpone spirometry and peak flow measurement within health care facilities unless there is an urgent need. Follow strict infection control procedures if aerosol-generating procedures are needed.

Summary Asthma cannot be cured but it can be well controlled. Inhaled therapy is the ideal treatment of asthma Both preventer and reliever drugs should be used properly, Patient education is central to asthma management. Physicians must explain proper technique of inhalation and cross check it.

Asthma exacerbation and COVID-19 are difficult to differentiate clinically. The most common presenting symptoms of COVID-19 is dry cough and shortness of breath — are also common with acute exacerbation of asthma. Fever is more commonly associated with COVID-19 but could be present with any infection-triggered exacerbation of asthma. Screening protocols for COVID-19 should be applied to anyone having worsening respiratory symptoms, including those with asthma, in view of the varied clinical presentations of COVID-19.

Oral steroids should still be used to treat asthma exacerbations. Oral steroids are not recommended to treat lung disease associated with COVID-19. However, in patients with asthma, current recommendations are to use oral steroids for moderate-to-severe asthma exacerbations that respond poorly to bronchodilators because use of these steroids hastens symptom resolution and decreases the risk of admission to hospital.