SEVEN HILLS TIMES

Volume 5 **Issue No 04** **April 2021**

An Official Publication of
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VISION

To emerge as one of the premier pharmacy colleges in the country and produce pharmacy professional of global standards.

MISSION

• To deliver quality academic programs in Pharmacy and empower the students to meet industrial standards.
• To build student community with high ethical standards to undertake R&D in thrust areas of national and international standards.
• To extend viable outreach programs for the health care need of the society.
• To develop industry institute interaction and foster entrepreneurial spirit among the graduates

COVID-19 ASSOCIATED NOSOCOMAL INFECTIONS

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Background:

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. 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.

The best way to prevent and slow down transmission is to be well informed about the COVID-19 virus, the disease it causes and how it spreads. Protect yourself and others from infection by washing your hands or using an alcohol based rub frequently and not touching your face. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes etc.

COVID-19 has already claimed more than one million lives worldwide. In the absence of an effective vaccine or antiviral therapy, supportive care plays a vital role in the management of COVID-19. Glucocorticoids and probably remdesivir are the only drugs proven to be beneficial in COVID-19.

Glucocorticoids are inexpensive, widely available, and have been shown to reduce mortality in hypoxemic patients with COVID-19. [1] Nevertheless, glucocorticoids can increase the risk of secondary infections. Moreover, the immune deregulation caused by the virus and the use of concurrent immunomodulatory drugs such as tocilizumab could further increase the risk of infections in COVID-19 patients. [2, 3].

In previous influenza pandemics, bacterial co-infections have been a major cause of mortality. So it is important to evaluate the burden of co-infections in patients with COVID-19. Many patients with coronavirus disease 2019 (COVID-19) are critically ill and require care in the intensive care unit (ICU). Bacterial and fungal nosocomial infection is a common complication of ICU admission in patients with COVID-19. It usually presents as a severe form of infection, and it is associated with a high mortality and longer course of ICU stay. The clinical course of COVID-19 critically ill patients, during their admission in the intensive care unit (UCI), includes medical and infectious complications.

PULMONARY PNEUMONIA

Most people who get COVID-19 have mild or moderate symptoms like coughing, a fever, and shortness of breath. But some who catch the new coronavirus get severe pneumonia in both lungs. COVID-19 pneumonia is a serious illness that can be deadly. Pneumonia lung infection will cause inflammation in the tiny air sacs inside your lungs. They may fill up with so much fluid and pus that it’s hard to breathe. You may have severe shortness of breath, a cough, a fever, chest pain, chills, or fatigue.

About 15% of COVID-19 cases are severe. That means they may need to be treated with oxygen in a hospital. About 5% of people have critical infections and need a ventilator. It’s more likely in people who are 65 or older. Those who are 85 or older are at the highest risk of pneumonia.

People who get pneumonia may also have a condition called acute respiratory distress syndrome (ARDS). It’s a disease that comes on quickly and causes breathing problems.

Many studies indicate that older age, presence of comorbidities and secondary infections as predictors of mortality among this population. Further evaluation regarding ICU clinical course and predictors of mortality revealed that above listed are the risk factors and prognostic factors of Ventilator Associated Pneumonia among CoViD-19 patients.

PULMONARY MUCORMYCOSIS

Physicians caring for critically ill COVID-19 patients must be aware of serious infections that can complicate the course of COVID-19. A high degree of clinical suspicion is required to diagnose pulmonary mucormycosis. [3, 2] Early diagnosis and timely management are necessary to improve outcomes in pulmonary mucormycosis.

Mucormycosis is an uncommon but serious infection that complicates the course of severe COVID-19. Subjects with diabetes mellitus and multiple risk factors may be at a higher risk for developing mucormycosis. Additional cases of COVID-19 associated mucormycosis (CAM) includes glucocorticoids for COVID-19, 10–14 days hospitalization and diabetes mellitus as the most common risk factor.

The diagnosis of CAM is thus even more challenging. A lack of clinical suspicion and difficulty isolating the causative fungi might contribute to the under diagnosis of mucormycosis. Two of the eight cases included in our review were diagnosed postmortem. Further, biomarkers such as beta-d-glucan and galactomannan, which aid in diagnosing invasive aspergillosis, are not available for mucormycosis.

Pulmonary mucormycosis is increasingly diagnosed, and the case fatality has improved over time. [5] Control of hyperglycemia, early treatment with liposomal amphotericin B, and surgery are essential for the successful management of mucormycosis. [2, 5] However, COVID-19 has created a unique scenario where all three aspects of the management are compromised. Firstly, hyperglycemia is aggravated by the most effective therapy for severe COVID-19, namely glucocorticoids.

PULMONARY ASPERGILLOSIS

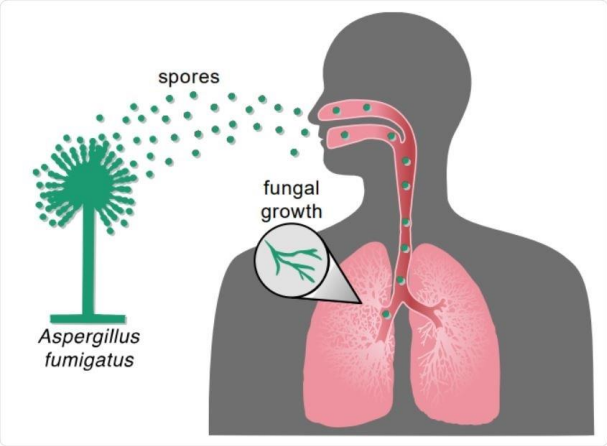
Invasive pulmonary aspergillosis (IPA) is increasingly recognized as a life-threatening super infection of severe respiratory viral infections, such as influenza. The pandemic of Coronavirus Disease 2019 (COVID-19) due to emerging SARS-CoV-2 rose concern about the eventuality of IPA complicating COVID-19 in intensive care unit mechanically-ventilated patients. Regarding CAPA, the reported incidence in the literature has varied from 4% to 35% among ICU COVID-19 cases severe coronavirus disease (COVID-19) is currently managed with systemic glucocorticoids. Opportunistic fungal infections are of concern in such patients. While COVID-19 associated pulmonary aspergillosis is increasingly recognized.

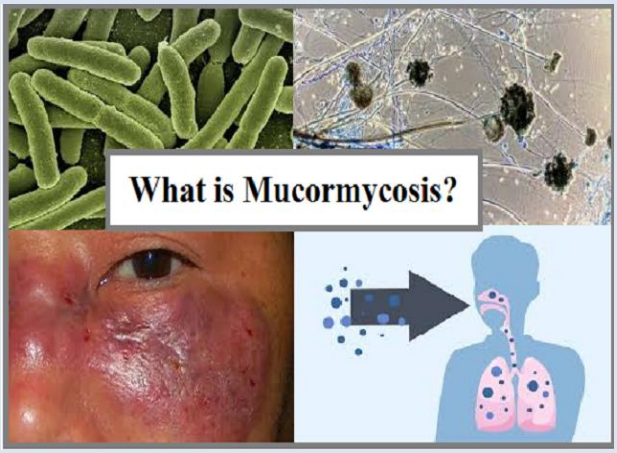
Different diagnostic approaches and interpretation of IPA markers may also affect the estimation of IPA includes the use of non-BAL respiratory samples (e.g. bronchial aspirates), the availability of Aspergillus PCR, the cut-off used to define GM positivity in BAL, and the possible artifact of false positive GM secondary to other therapeutic interventions of COVID-19 (e.g. use of broad-spectrum beta-lactams, convalescent serum or antibody-based therapy, as previously reported in other settings) [6]. However, these differences in management are not sufficient to explain such important geographical disparities in reported CAPA incidences. Other factors, notably environmental, should be suspected. The great immediate impact of COVID-19 on overwhelmed hospitals, especially early in the pandemic, could explain some of the local variations. One meta-analysis of 702 COVID-19 autopsy reports identified 11 proven invasive mold infections (including 6 CAPA, 4 unspecified mold infections and 1 mucormycosis), which suggests a CAPA incidence

To date, one study reported better outcomes among COVID-19 patients with fungal superinfections (including both molds and yeasts) receiving appropriate antifungal therapy versus not (38.5% mortality versus 90%, p=0.008) [7]. In another study with high reported CAPA incidence, there was a trend towards improved outcome among Downloaded from https://academic.oup.com/jid/advance-article/doi/10.1093/infdis/jiab163/6189669 by guest on 23 July 2021 Accepted Manuscript 9 CAPA patients having received voriconazole versus not (46% mortality versus 59%, p=0.3). In contrast, one case series reported a favorable outcome in most COVID-19 patients with putative IPA in the absence of any antifungal therapy, suggesting colonization instead of invasion [8]. Limited data are available regarding the impact of antifungal prophylaxis on CAPA incidence.

POINTS TO NOTE

Fungal co-infection is a recognized complication of respiratory virus infections, increasing morbidity and mortality, but can be readily treated if diagnosed early. Fungal disease occurs frequently in critically ill, mechanically ventilated COVID-19 patients. The survival benefit observed in patients receiving antifungal therapy implies that the proposed diagnostic and defining criteria are appropriate. Screening using a strategic diagnostic approach and antifungal prophylaxis of patients with risk factors will likely enhance the management of COVID-19 patients.





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Departmental Activities April-2021:

No of Patients Screened	Drug Information Queries	Adverse Drug Reactions	Medication Errors	No of Prescriptions Audited
645	20	02	6	547

Perfect Click

Glimpse of various activities in April 2021

Awareness on Elimination of Single-Use Plastic