



MANAGEMENT OF COVID 19 PATIENTS – A BRIEF OUTLOOK

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ABSTRACT

Corona viruses are large group of viruses that cause illness in humans and animals. Most patients with COVID-19 predominantly have a respiratory tract infection associated with SARS-CoV-2 infection. However, in a small proportion of cases, they can progress to a more severe disease characterized by the Acute Respiratory Distress Syndrome (ARDS), sepsis and septic shock, multi organ failure, including acute kidney injury and cardiac injury. This article discusses the management of Covid positive individuals.

Key words: Covid 19, Corona virus.

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INTRODUCTION

Coronaviruses cause different types of diseases including severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), and coronavirus disease 2019 (COVID-19). Some strains of coronaviruses can also cause the common cold. Corona is derived from Latin corōna, meaning "crown, garland", which is how the virus looks morphologically. The incubation period for COVID-19 is thought to extend to 14 days, with a median time of 4-5 days from exposure to symptoms onset. The signs and symptoms of COVID-19 present at illness onset vary, but over the course of the disease, most persons with COVID-19 will experience the following fever or chills, cough, Shortness of breath or difficulty breathing, Fatigue, Muscle or body aches, Headache, New loss of taste or smell, Sore throat, Congestion or runny nose, Nausea or vomiting, Diarrhea[1].

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General Protective Measures

Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water. Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands. Maintain at least 1 metre (3 feet) distance between yourself and others. When someone coughs, sneezes, or speaks they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person has the disease. Avoid going to crowded places. [2] Where people come together in crowds, you are more likely to come into close contact with someone that has COVID-19 and it is more difficult to maintain physical distance of 1 metre (3 feet). Avoid touching eyes, nose and mouth. Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to your eyes, nose or mouth. From there, the virus can enter your body and infect you. Make sure you, and the people around you, follow good respiratory hygiene. This means

covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately and wash your hands. Droplets spread virus. By following good respiratory hygiene, you protect the people around you from viruses such as cold, flu and COVID-19.[3,4]

Protection for Health Care workers

All patients to considered to be potentially Covid Positive. Proper care and protection to be taken. Usage of personal protective equipment is encouraged. N 95 masks to be worn while examining patients. An N95 respirator is a respiratory protective device designed to achieve a very close facial fit and very efficient filtration of airborne particles. The 'N95' designation means that when subjected to careful testing, the respirator blocks at least 95 percent of very small (0.3 micron) test particles.³ Wear PPE before patient contact and remove after coming out of patient care area. Do not touch your face while wearing a PPE. Do not re-use disposable PPE as it is associated with risk of infection. Do not allow attenders until or unless required to enter beyond the waiting room of the Hospital, strictly follow social distancing rule in the waiting area. Routine visits avoided. Patients placement 1 meter apart in the waiting area.

Presentation of the disease

Several studies have documented SARS-CoV-2 infection in patients who never develop symptoms (asymptomatic) and in patients not yet symptomatic (pre-symptomatic). One study found that as many as 13% of reverse transcription-polymerase chain reaction (RT-PCR)-confirmed cases of SARS-CoV-2 infection in children were asymptomatic. Another study of skilled nursing facility residents who were infected with SARS-CoV-2 after contact with a healthcare worker with COVID-19 demonstrated that half of the residents were asymptomatic or pre-symptomatic at the time of contact tracing, evaluation, and testing. Patients may have abnormalities on chest imaging before the onset of symptoms.[5]

The largest cohort reported of >44,000 persons with COVID-19 from China showed that illness severity can range from mild to critical:

- Mild to moderate (mild symptoms up to mild pneumonia): 81%
- Severe (dyspnea, hypoxia, or >50% lung involvement on imaging): 14%
- Critical (respiratory failure, shock, or multiorgan system dysfunction): 5%

In this study, all deaths occurred among patients with critical illness, and the overall case fatality rate was 2.3%. The case fatality rate among patients with critical disease was 49%. Among children in China, illness severity was lower with 94% having asymptomatic, mild, or moderate disease; 5% having severe disease; and <1%

having critical disease.¹⁶ Among U.S. COVID-19 cases with known disposition, the proportion of persons who were hospitalized was 19%.The proportion of persons with COVID-19 admitted to the intensive care unit (ICU) was 6%.

Clinical Management and Treatment

The National Institutes of Health published guidelines on prophylaxis use, testing, and management of patients with COVID-19. The recommendations were based on scientific evidence and expert opinion and will be updated as more data become available.

For mild to moderate diseases, patients may not initially require hospitalization, and many patients will be able to manage their illness at home. The decision to monitor a patient in the inpatient or outpatient setting should be made on a case-by-case basis. This decision will depend on the clinical presentation, requirement for supportive care, potential risk factors for severe disease, and the ability of the patient to self-isolate at home. Patients with risk factors for severe illness (see People Who Are at Higher Risk for Severe Illness) should be monitored closely given the possible risk of progression to severe illness, especially in the second week after symptom onset.[6]

Some patients with COVID-19 will have severe disease requiring hospitalization for management. Inpatient management revolves around the supportive management of the most common complications of severe COVID-19: pneumonia, hypoxemic respiratory failure/ARDS, sepsis and septic shock, cardiomyopathy and arrhythmia, acute kidney injury, and complications from prolonged hospitalization, including secondary bacterial infections, thromboembolism, gastrointestinal bleeding, and critical illness polyneuropathy/myopathy.

Hypercoagulability and COVID-19

Some patients with COVID-19 may develop signs of a hypercoagulable state and be at increased risk for venous and arterial thrombosis of large and small vessels.^{74,75} Laboratory abnormalities commonly observed among hospitalized patients with COVID-19-associated coagulopathy include, Mild thrombocytopenia, Increased D-dimer levels, Increased fibrin degradation products, Prolonged prothrombin time, Elevated D-dimer levels have been strongly associated with greater risk of death.

There are several reports of hospitalized patients with thrombotic complications, most frequently deep venous thrombosis and pulmonary embolism. Other reported manifestations include:

- Microvascular thrombosis of the toes
- Clotting of catheters
- Myocardial injury with ST-segment elevation
- Large vessel strokes

The pathogenesis for COVID-19-associated hypercoagulability remains unknown. However, hypoxia and systemic inflammation secondary to COVID-19 may lead to high levels of inflammatory cytokines and activation of the coagulation pathway. There are limited data available to inform clinical management around prophylaxis or treatment of venous thromboembolism in COVID-19 patients. Several national professional associations provide resources for up-to-date information concerning COVID-19-associated hypercoagulability,

including management of anticoagulation. This is a rapidly evolving topic, with new information released often [7].

CONCLUSION

Management of Covid 19 positive patients is an emerging area. As more and more information becomes available, the efficiency of management of patients improves and can improve the prognosis of those affected with this dreaded disease.

REFERENCES

1. Guan WJ, Ni ZY, Hu Y, et al. Clinical Characteristics of Coronavirus Disease 2019 in China. *N Engl J Med* 2020;382:1708-20.
2. Li Q, Guan X, Wu P, et al. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia. *N Engl J Med* 2020;382:1199-207.
3. Lauer SA, Grantz KH, Bi Q, et al. The Incubation Period of Coronavirus Disease 2019 (COVID-19) From Publicly Reported Confirmed Cases: Estimation and Application. *Ann Intern Med* 2020.
4. Chen N, Zhou M, Dong X, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet* 2020;395:507-13.
5. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020;395:497-506.
6. Wang D, Hu B, Hu C, et al. Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. *JAMA* 2020.
7. Xu XW, Wu XX, Jiang XG, et al. Clinical findings in a group of patients infected with the 2019 novel coronavirus (SARS-Cov-2) outside of Wuhan, China: retrospective case series. *BMJ* 2020;368:m606.

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