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Review Article

Review on Covid 19 In-correlation with Multi-organ Responses

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Abstract

The out breaks of COVID-19 and rapid spread from December 2019, it has been largely influenced by multi-organ and system involved that leads to severe mortality rate in the wide population. Most of the cases causes Acute respiratory distress syndrome, heart failure, renal failure, liver damage, shock, and multi-organ failure have precipitated death. COVID-19 is therefore crucial in the clinical management of patients.

The main aims of this article to add onto the emerging of medical knowledge on COVID-19, encapsulating its multi-organ failures and its related issues.

Keyword: Coronavirus Disease 2019 (Covid 19); Acute Respiratory Distress Syndrome (ARDS); Gadto Intestine (GI)

Introduction

Covid-19 stands for Corona virus disease of 2019. It was first reported in the WUHAN city china in the year 2019 December. Later on it is transmit through air various continent and causes severe death in various age population. initially mainly affect the respiratory system causes breathing difficulty and then later stage affects the multi organs of the body. Disturbances of coagulation and vascular endothelium are common but may not lead to symptoms in early stages. They contribute to injury to multiple organs. Cardiac and renal dysfunction is common among the patients who die. Injury to the organs may become apparent long after the acute infection has subsided. Different organs may be affected at different times. Chronic injury may occur. Rehabilitation can be long and difficult.

Risks management

Respiratory effect

In COVID-19 patients cases, the most common clinical features initially affected were fever, fatigue, dry cough, anorexia, dyspnea, and sputum production. Other cohort studies have reported a similar range of clinical findings like Headache, sore throat and rhinorrhea, anosmia [1,7].

Acute Respiratory Distress Syndrome (ARDS) and among these, 65% rapidly worsened and died from multiple organ failure. In a study focusing on the associated risk factors, ARDS was greatly associated with older age, diabetes mellitus, and hypertension and also lower zone consolidation (chest x-ray).

Cardiovascular effect

The exact mechanism of cardiovascular system involvement. In COVID-19, cardiac problems can occur in the absence of pulmonary or various other complications.

Ischemic cardiac injury can occur coronary artery disease (CAD) during covid. The primary cause of plaque rupture and thrombosis. The last one is due to inadequate oxygen content. For acute coronary syndrome, due to plaque rupture, antiplatelet formation and anticoagulation formation.

For older patients, CAD or hypertension, heart failure may be caused.

Myocarditis is more likely the cause in younger patients. Arrhythmias due to inflammation, myocarditis, hypoxemia, metabolic abnormalities, or medications [1,2].

COVID-19 can also have adverse effects on cardiovascular, causing or aggravating damage to the heart [3-5].

Gastrointestinal involvement

In COVID-19 Gastrointestinal (GI) symptoms include loss of appetite, nausea, vomiting, diarrhea, discomfort and pain. These symptoms with or without other such as fever, myalgias, and cough due to an overactive immune system and causing liver damage [10].

Renal effects

In COVID-19 virus is found in cells of glomerular, tubular epithelium and podocytes. Acute kidney injury is commonly secondary abnormalities including diabetes, hypertension, chronic kidney disease, hypoxemia, and coagulopathy. It can cause drastic hypoperfusion and rhabdomyolysis [9,11].

Effect on brain

In COVID-19 affects cerebral cortex and brain stem. Some patients have meningitis and encephalitis indicating viral invasion of the central nervous system (CNS) and Neurological manifestations causes include dizziness, headache, impaired consciousness including confusion, delirium, and inability [6].

Psychological effects

Many psychological problems causes financial difficulties and social isolation. The major risk is among persons with dementia, mental illness, and psychological problem. Friendliness and support professionals is beneficial and helpful remedy for the post treatment people. Some patients who recover from COVID-19 causes mental health illness, anxiety, mental stress, and post-traumatic stress disorder [12] in future, may be development of Alzheimer's or Parkinson's disease.

Conclusions

Covid19 adversely affect virtually every system of the body like Inflammation, platelet activation, more coagulability, endothelial dysfunction blood vessels, stasis, hypoxia, and muscle immobilization contribute to the complications. The lungs infection, Acute coronary disease, heart failure, and myocarditis. Smell less and tasteless are observed mostly noted in first wave of covid. GI and Psychological problems are common. Patchy erythematous rash (butterfly rash) is the most common skin.

Acknowledgment

Acknowledging this could help in the management of individual patients, minimizing the risk of decompensation. Along side the rapid pace at which scientific results are shared, to add onto the ever-emerging landscape of medical knowledge on COVID-19.

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