

High Risk Population For COVID 19

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Abstract

COVID-19 is a new type of corona virus that causes the disease. 'CO' is for corona, 'VI' for viruses, and 'D' for illness. This disease was previously referred to as '2019 novel corona virus' or '2019-nCoV. Corona virus is the contagious disease (COVID-19) is arising from newly discovered. The COVID-19 virus gets people of all ages infected. However, research to date shows that two classes of people are at greater risk of being strongly struck by COVID-19. The older people and others with existing health problems. WHO stresses that, in order to protect others, everyone must protect themselves from COVID-19. Old age people and individuals with underlying disabilities such as heart problems, asthma, chronic lung disease and cancer are more vulnerable to severe disease. Men is at a higher risk than females for COVID-19. **Conclusion** According to this short communication article, two groups of people are at higher risk of developing severe COVID-19 disease. Old age people and individuals with underlying disabilities such as heart problems, asthma, chronic lung disease and cancer are more vulnerable to severe disease. These peoples have to take more precaution to prevent covid -19 infections.

Key words- chronic respiratory disease, elderly people, greater risk people, heart disease, 2019 –novel corona virus

Introduction

COVID-19 is a new type of corona virus that causes the disease. 'CO' is for corona, 'VI' for viruses, and 'D' for illness. This disease was previously referred to as '2019 novel corona virus or '2019-nCoV'.¹ In more than 200 countries in the world, the Corona Virus Outbreak 2019 (COVID-19) pandemic is the latest epidemic.³⁶ The COVID-19 is a rapid succession pandemic. Fear has taken control of the whole planet. The number of those afflicted has risen and the death toll has reached a disturbing level. In this time of crisis, competent management of the afflicted, regular deaths, self-care and quarantines requires a lot of bravery to face the reality.³⁷

Corona virus is the contagious disease (COVID-19) is arising from newly discovered. The COVID-19 virus gets people of all ages infected. However, research to date shows that two classes of people are at greater risk of being strongly struck by COVID-19. The older people and others with existing health problems. WHO stresses that, in order to protect others, everyone must

protect themselves from COVID-19. Old age people and individuals with underlying disabilities such as heart problems, asthma, chronic lung disease and cancer are more vulnerable to severe disease. Men is at a higher risk than females for COVID-19.²

Corona virus disease (COVID-19) is a newly discovered corona virus-related contagious disease. Many Individuals contaminated with COVID-19 may succeed mild to moderate respiratory problems and recover without having to take any special care. If a individual infected has cough or sneezes, virus COVID -19 diffused mainly by droplets of saliva or nasal flushing, so it is necessary to practice the respiratory good manners (such as coughing with a bend elbow).³

COVID-19 is a corona virus outbreak that originally occurred in Wuhan, Hubei Province, China in December 2019 but has now grown into a rapidly spreading pandemic across the world.⁴

As of 17 April 2020, more than 2 Mio. COVID-19 cases have now been recorded to WHO, and more than

135,000 people have lost their lives.⁵

13,835 confirmed cases in India with 452 deaths by the Ministry of Health and Family Welfare, there are 11,616 active cases with 1,766 cured /discharged cases. (Ministry of Health and Family Welfare 2020)⁶

The COVID-19 virus gets people of all ages infected. However, research to date shows that two classes of people are at greater risk of being highly influenced by COVID-19. There are older people and others healthcare problems underlying them. WHO stresses that everyone must shield himself from COVID-19 to shield others.²

The illness causes respiratory disease (such as flu) with symptoms like cough, nausea, and trouble breathing in more extreme cases. We should protect ourselves by constantly washing our hands, avoiding touching our face and eviting near touch with the unwell people (1 meter or 3 feet)⁷

Elderly people and those with underlying medical problems such as heart disease, diabetic mellitus, chronic lung disease and cancer are more likely to develop serious diseases.²

Italian data corroborate population groups previously identified at higher risk of serious illness and death Such categories are elderly people over 70 years old and persons having medical conditions such as obesity, diabetic mellitus, chronic lung disease and cancer .Men is at a higher risk in certain classes than females. Chronic obstructive pulmonary disease.⁸

There are different parts of our population that are most susceptible to COVID-19 secondary severe acute respiratory infection (SARI). Which include the following.

Old age people more than 65 years

An older adult, aged 65 and elder people are at increased risk for severe COVID-19 disease and the capacity of their immune systems to combat infection declines and thus make us more susceptible. Corona virus might affect any community the elderly people is the greater risk of serious illness. 8 out of 10 deaths recorded in the United States occurred in adult's age of 65 years and older death threat is the highest for those ages of 85 years or older. Older adult Immunology are

becoming weaker with age, making it more difficult to fend off infections. Older adults more often have chronic deaths which may raise the risk of serious diseases.⁹

More than 95% deaths occurred in 60 years or elder people. More than 50% deaths occurred in 80 years or older. One positive report showed that those people more than age of 100 years who were admitted to hospitals for COVID-19 and now they have completely recovered. It's clearer that the healthier people were before the pandemic plays a crucial role. Those aged people who are healthily are less at risk.¹⁰

Researcher concluded that with elderly people, the body has fewer T cells, which has the property for producing virus-fighting chemicals. By adolescence the thymus gland is producing tenfold fewer T cells than it did in childhood, by age 40 or 50, there is another tenfold drop.¹¹

Research study suggested that more than 60 years elderly people and specially those aged more than 65 years old are at significantly higher risk of severe disease, requiring respiratory support, and death from Covid-19 than younger age groups.¹²

During the disease or when in quarantine, older adults, those who are in isolation who have the neurological disability may have anxious, afraid, worried, irritated, frustrated, angry who withdrawn. Using informal networks such as social services and health care providers to provide psychological assistance. Educate them about COVID-19 in a straightforward way and show them how elderly people with / without cognitive disability can reduce the risk of infection in their own words.³⁸

Aged people with heart disease are younger than 62 years of age or more than 80 years of age.³⁹

Individuals with underlying medical conditions:

Serious heart problems

Severe heart complications, like heart failure, coronary artery disease, cardiac parenthoods disorder, cardiomyopathy and lung hypertension, can present a higher risk to people from COVID-19 for serious illness. Unlike other viral illnesses including flu, COVID-19 can disrupt the respiratory system and make it more difficult

for the heart to function. For people with cardiac insufficiency and other severe specifications.⁹

Observations may clarify Older men, tobacco consumers / smokers and those with hypertension are vulnerable also illustrate the significance of recognizing smoking as a possible risk category for COVID-19. COVID-19 may develop serious heart problems including cardiac failure, myocardial infarction and embolism it's may cause cerebro vascular accidents. They also caution that treatments with COVID-19 may interact with drugs used to manage existing heart conditions in patients.¹³

Researcher point out that, some conflicting theories about antihypertensive medication making patients susceptible to the Novel Corona virus. Be assured that common antihypertensive medication not raise patients' risk of infection. It is advised not to stop the antihypertensive medication, hence hypertension is a higher risk factor and it may lead to more complications in case of infection."¹⁴

Researcher evaluated that 45 recent reports pertaining to COVID-19 and cardiovascular complications and found that the corona virus can cause lasting heart impairments. Many patients who develop severe COVID-19 complications already have underlying heart issues. Researcher evaluated that over 72,000 patients with COVID-19 found that about 22 percent of patients who died had cardiovascular co morbidities.¹⁵

Research study showed that those patients who were suffering from cardiovascular problems and/or development of acute myocardial injury are associated with significantly worse outcome in covid 19 patients.¹⁶

Lung diseases – Chronic respiratory obstructive disease (COPD), asthma, lung fibrosis and cystic fibrosis. People has chronic lung disorders are suffering from inadequate ventilation due to a number of conditions which include inflammation, blocked or airways clogged, alveolar defects and other structural problems. Viral diseases exasperate the lung disease at the root and can cause breathing failure, septicemia, and acute respiratory distress syndrome (ARDS).⁹

Meta-analysis concluded that those patients who having a history of COPD, they are more prone to get

covid -19 infection. Encouraged to patients for adopting more restrictive measures for minimizing potential exposure to SARS-CoV-2 and contact with suspected or confirmed cases of COVID-19.¹⁷

American Lung Association concluded that above 35 million Americans suffering from chronic lung disease, and researcher said that these patients having greater risk for severe implications if they were to contact the virus.¹⁸

Corona virus disease 2019 (COVID-19) can cause respiratory, physical, and mental dysfunction in patients. Hence, pulmonary rehabilitation is important for both admitted and discharged patients of COVID-19.¹⁹

Researcher said that those patients who having chronic respiratory problems these patients has to take extra precaution during the middle of COVID-19. "Because the virus attacks the lungs, patients with chronic lung disease such as asthma, COPD, and pulmonary fibrosis are more susceptible to the COVID-19 infection,"¹⁸

Diabetes

Diabetes, in that dependent, independent diabetic mellitus or diabetic in pregnancy may put people at increased risk of COVID-19 serious illness. Hyperglycemia, or impaired blood glucose regulation, is affecting the immune system. Vascular failure may impede inflammatory reaction locally and antibiotic supersorption.⁹

Those patients who are suffering from diabetes are among those greater-risk categories that, when they get the virus, can become seriously ill .²⁰

Infection with COVID-19 is a double challenge for diabetes patients.²¹

Hospitalization and mortality rate of the COVID-19 infection is increased due to diabetes.²² comparative study concluded that ICU and non ICU patients with COVID-19 The incidence of intensive care patients with diabetes appears to be double increasing.²³ Mortality in people with diabetes seems to be about threefold higher compared to the general COVID-19 mortality in China.^{22,23}

Those patients who having diabetes are indeed a greater-risk group of serious illnesses. In the previous SARS, diabetic mellitus was also a causative factor for serious illness and death.²⁴

Statistics indicate that India has the second largest number of people with Diabetes globally. In the current scenario of lockdown, while we all are taking necessary precautions like social distancing and staying home to prevent the rapid spread of COVID-19, managing Diabetes may seem quite challenging.²⁵

People with Diabetes are not more likely to get COVID-19 than the general population. However, COVID-19 can cause more severe symptoms and complications in some people living with Diabetes.^{2,26}

Immunoengaged

Some conditions and treatments can lead to a person's immune system weakened, including treatment for cancer, bone marrow or liver transplants, HIV immune deficiencies with or without small cell count CD4, and excessive usage of corticosteroids and other immunodeficiency's drugs. People with compromised immune systems have reduced their ability to fight infectious diseases.⁹

Who is immunocompromised is at greater risk of respiratory infections than the average person.²⁷

Research concluded that elderly people with certain co-morbidities and those with immunocompromised may be at greater risk of succeeding severe illness. An immune system helps the body to fight off infections. Hence it is important that the immune system is working efficiently to fight infection such as that given by the SARS-CoV-2.²⁸

One case report concluded that COVID-19 affecting an immunocompromised women. A 60 yrs women was admitted to the emergency department on 10 March 2020 due to breathing difficulty and high grade fever, consistent with COVID-19.²⁹

Chronic renal disease treated with dialysis

Chronic dialysis-treated renal disease can increase a person's risk for serious COVID-19 illness. Patients with dialysis are more vulnerable to infection and serious illness due to compromised immune systems;

medications and kidney failure control procedures; and conditions which coexist like diabetes. Those patients who were suffering from renal disease and other severe associated conditions are at greater risk for more severe illness.⁹

Dialysis patients and those patients who are on immunosuppressive medicines may have weaker immune systems, making it harder to fight infections.³⁰

High Obesity

Extreme adiposity identified as 40 Body Mass Index (BMI) or higher, puts people at greater risk of COVID-19 complications.⁹

Extreme obesity raises the likelihood of a severe respiration condition called Acute Respiratory Failure Syndrome (ARDS), (ARDS), which is a significant complication of COVID-19 and may cause problems with the ability of a doctor to provide critically ill patients with respiratory assistance. Individuals with extreme adiposity can have several serious chronic conditions and underlying health problems which may increase. A study of 3,615 COVID-19 patients who visited an academic hospital in New York shows that obesity even among relatively younger patients has increased the risk of severity. For example, patients who were extremely obese (BMI > 34 kg / m²) and were under 60 years of age were 3.6 times more likely to be admitted to ICU than patients in the same age group who had less than 30 years of BMI 47.³¹

In China, data showed from 383 patients having obesity was associated with a 142% greater risk of succeeding severe pneumonia associated with COVID-19. One study showed that more than 4,000 patients with COVID-19 in New York City found that severe obesity was a higher risk factor for hospitalization, 85% of obesity patient's required mechanical ventilation, compared with 64 % of patients without the disease. In addition, 62% of obesity patients died from COVID-19 compared to 36% of those without obesity. Evidence to date suggests that obesity is associated with a greater risk of succeeding severe corona virus disease symptoms and complications 19 (COVID-19), independent of other diseases such as heart disease.³²

Liver Diseases

People with liver disease may have a higher risk of COVID-19 severe disease. Chronic hepatitis like cirrhosis of liver may cause increase the risk of serious COVID-19 disease.⁹

A recent publication concluded that 54 percent of patients in a single center in China hospitalized for COVID-19 had elevated gamma-glutamyl transferase (GGT). The expression ACE2 is enriched in cholangiocytes, indicating that COVID-19 may potentially cause a higher risk of biliary injury over hepatocyte injury, as evidenced by these elevations of the GGT.³³

Cohort study concluded that 1,099 cases of COVID-19 in China showed that 21 (2.1%) had pre-existing hepatitis B. The overall ALT rise was 21.3 per cent (158/741) and the AST rise 22.2 per cent (168/757) respectively. Extreme patients have a higher likelihood of elevation of ALT relative to non-serious patients (28.1% vs. 19.8%) and elevation of AST (39.4% vs. 18.2%). 10.5 per cent (76/722) of patients in total 50.³⁴

Pregnancy – – There is insufficient information about risk and transmission during pregnancy and breast feeding at the time of this writing.⁹

One research study found that a sign of placental damage in pregnant women with COVID-19, this damage actually affects birth outcomes. Most women with the novel corona virus who had these abnormalities gave birth to healthy babies' at-term. Pregnant women those who were more than 35 years old, obesity and those who having pre-existing medical conditions, like hypertension and diabetic mellitus, were also at higher risk of occurring serious illness.³⁵

Conclusion

According to the short communication, two groups of people are at higher risk of developing severe COVID-19 disease. Old age people and individuals with underlying disabilities such as heart problems, asthma, chronic lung disease and cancer are more vulnerable to severe disease. These peoples have to take more precaution to prevent covid -19 infections.

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