



# **CARPER RETROSPECTION: The Novel Corona virus Disease 2019 (COVID-19) – Carper Retrospection of Current Evidence and Nursing consideration**

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## **ABSTRACT**

Corona virus disease 2019 is phrase as COVID-19 is pandemic disease caused by severe acute respiratory syndrome corona virus 2 or SARS-CoV-2 it can spread from mild to sufficient to cause of death. The disease was first papulared in december 2019 in Wuhan, the capital of China's Hubei province. The COVID-19 disease which unfurl from infected person to healthy one by droplet, hand shaking, coughing, sneezing, so it is risk of having COVID-19 through mucosa( Mouth and Nose) or through the conjunctiva and even it transmits through indirect contact with surfaces in the immediate environment or with objectives used on the infected person. People may be risk with COVID-19 for 1-14 days before developing symptoms which termed as subclinical infections or silent disease, like cough, fever, tiredness, difficulty in breathing. It can be tested through cultures of nose and throat and there is no specific treatment for corona virus disease, only a symptomatic treatment is available to functioning of vital organ of the body. Recently researchers coined that convalescent plasma which boost their ability to fight against the corona virus. It can be prevented by maintaining personal hygiene, social distance between people, animal and in the hospital by maintaining sterilization techniques for the covid-19 objects and fallowing protocols of corona virus disease.

**Index Terms-** COVID-19, SARS-CoV-2, Subclinical Infection, Pandemic

## Introduction:

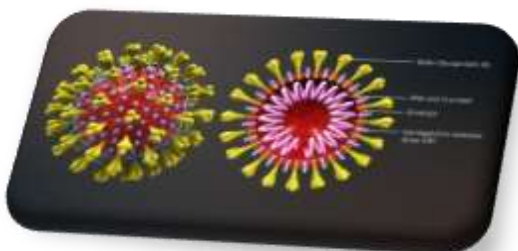
Corona virus disease (COVID-19) is an infectious disease caused by a newly discovered corona virus that is SARS-CoV-2.<sup>1</sup> This disease have family of viruses that can cause illnesses such as the common cold, severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS).<sup>2</sup> Which will be mint by culture swab test of throat and blood investigation and recently convalescent plasma can be given to people with severe COVID-19 to boost their ability as anticipation to the virus.<sup>3</sup> the spread of corona virus can be prohibited by alcohol-based hand sanitizer which contains at least 60 percent alcohol which kills the virus on the surface of the hand and prevents the transmission to the next person.<sup>4</sup>

## Definition:

- Corona virus is defined as common virus that infects humans, typically leading to an upper respiratory infection.<sup>5</sup>
- Corona viruses are a group of viruses that cause diseases in mammals and birds and humans which leads to common cold while more lethal varieties can cause SARS, MERS, and COVID-19. <sup>6-7</sup>
- Corona viruses are family covid virus which literally affect the respiratory tracts and causes to common cold, bronchitis, pneumonia, severe acute respiratory syndrome (SARS), and COVID-19. <sup>8</sup>

## Incidence:

- Still through the world this disease acting on human like monster and day by day the cases are increasing.
- February 20, 2020 there are a total of 75 995 confirmed cases, including 2239 fatalities in China.
- Hong Kong: 68; Macao: 10; and Taiwan: 26, and 1200 confirmed cases, including eight fatal ones outside China.<sup>9</sup>
- The western state of Maharashtra reported the highest number of corona virus (COVID-19) cases as of April 16, 2020, with 2,916 cases.
- The capital city of Delhi and the southern state of Tamil Nadu trailed behind at 1,578 and 1,242 cases respectively. As of April 16, there were a total of 12,380 confirmed infections across India.
- The country went into lockdown on March 25, making it the largest lockdown in the world, restricting 1.3 billion people.<sup>10</sup>



**Fig: 1**

**Structure of corona virus**

## Causes

Common human CoVs and its family like SARS-CoV, SARS-CoV-2, and MERS-Co Virus <sup>11</sup>

## Transmission

✚ Transmission of Corona virus to humans may occur as follows

- Direct contact with infected people or animals.
- Infected seafood
- Through coughing
- Sneezing
- Direct contact with contaminated bodies. <sup>12</sup>

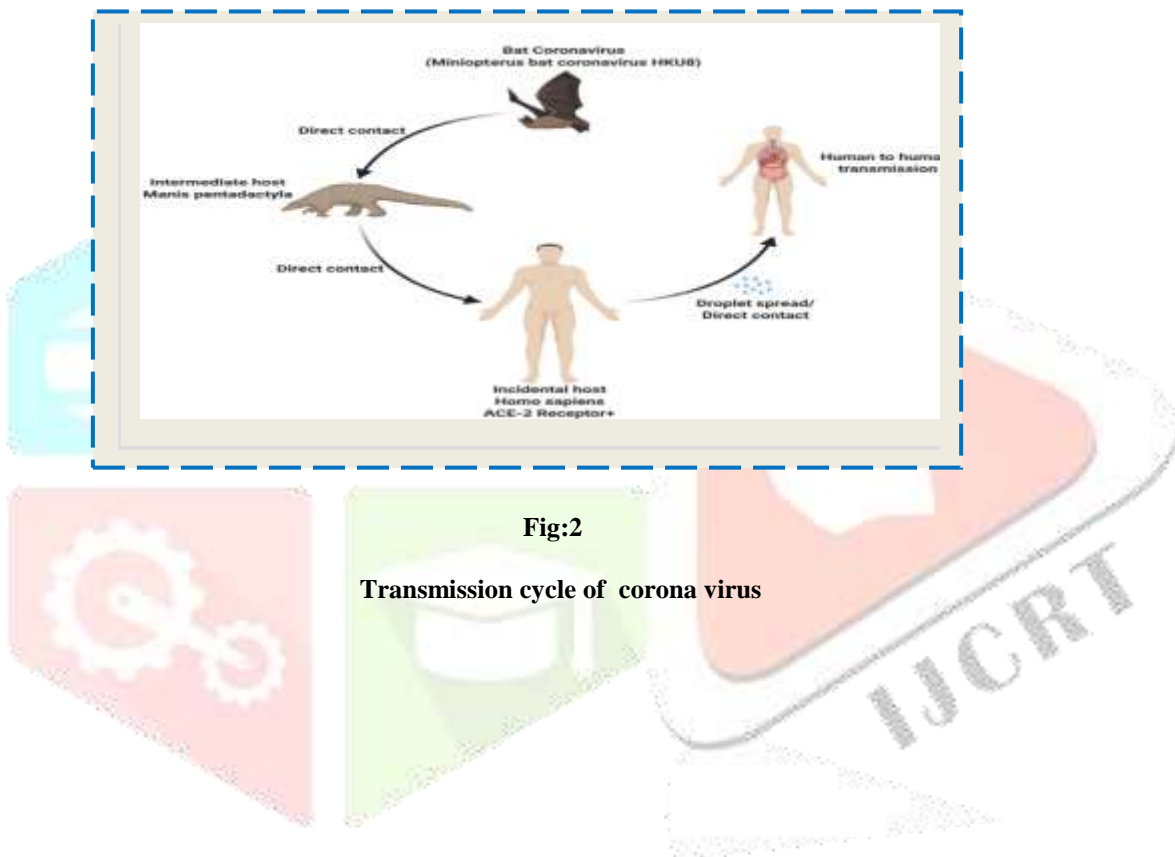
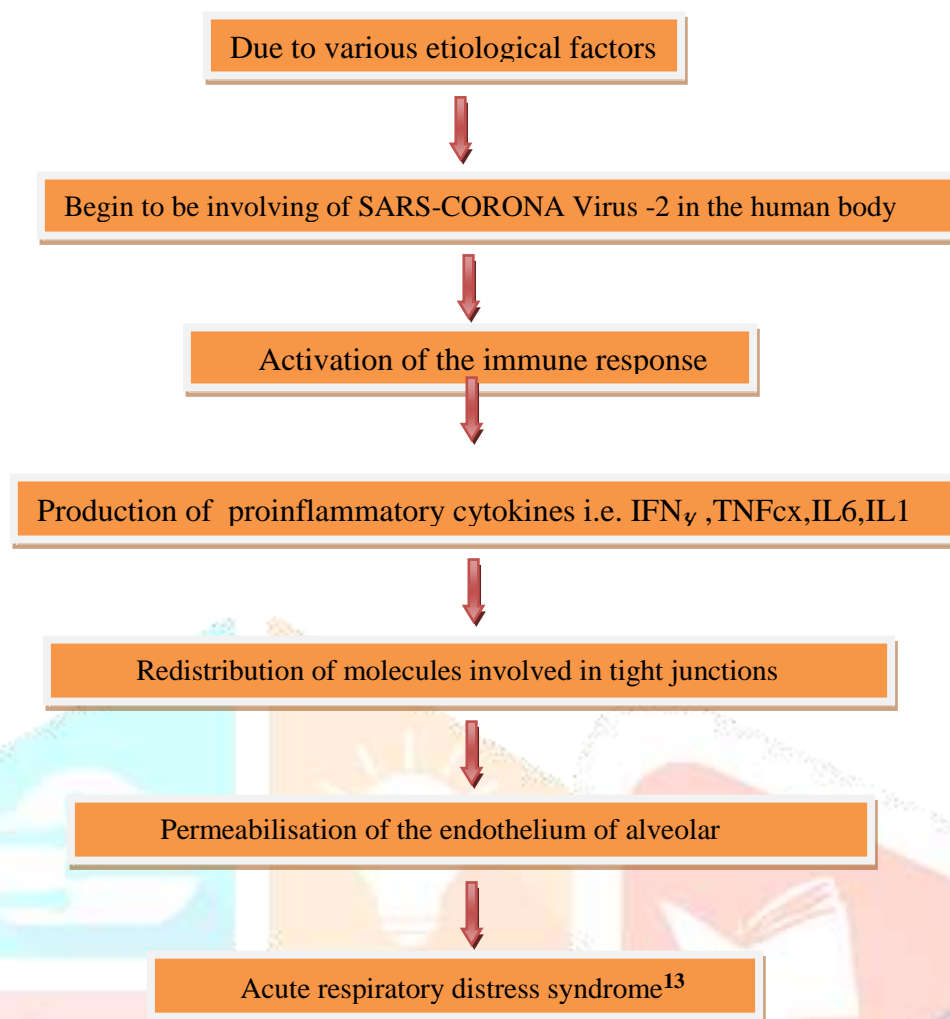


Fig:2

Transmission cycle of corona virus

## Pathophysiology



**Fig:3**

### Pathophysiology of corona virus in the body

## Clinical Manifestation

- Fever,
- Tiredness, and
- Dry cough. Some patients may have
- Aches and pains,
- Nasal congestion,
- Runny nose,
- Sore throat or
- Diarrhea.
- Some people become infected but don't develop any symptoms and don't feel unwell.<sup>14</sup>

## Diagnostic evaluation

- History collection regarding client travel history and history of close contact with any kind of suspected corona virus patient
- Long swab to take a nasal sample and sputum test.<sup>15</sup>

## Complication

- Moderate Pneumonia
- Severe Pneumonia
- Acute Respiratory Distress Syndrome (ARDS)
- Sepsis
- Septic Shock <sup>16</sup>

## Prevention of Corona Virus

### ➤ Clean your hands often

- Wash your hands often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.
- If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry.
- Avoid touching your eyes, nose, and mouth with unwashed hands.

### ➤ Avoid close contact

- Avoid close contact with people who are sick
- Stay home as much as possible
- Put distance between yourself and other people.
- Remember that some people without symptoms may be able to spread virus.
- Keeping distance from others is especially important for people who are at higher risk of getting very sick.
- Cover your mouth and nose with a cloth face cover when around others
- You could spread COVID-19 to others even if you do not feel sick.
- Everyone should wear a cloth face cover when they have to go out in public, for example to the grocery store or to pick up other necessities.
- Cloth face coverings should not be placed on young children under age 2, anyone who has trouble breathing, or is unconscious, incapacitated or otherwise unable to remove the mask without assistance.
- The cloth face cover is meant to protect other people in case you are infected.
- Do NOT use a facemask meant for a healthcare worker.
- Continue to keep about 6 feet between yourself and others. The cloth face cover is not a substitute for social distancing.

### ➤ Cover coughs and sneezes

- If you are in a private setting and do not have on your cloth face covering, remember to always cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow.
- Throw used tissues in the trash.
- Immediately wash your hands with soap and water for at least 20 seconds. If soap and water are not readily available, clean your hands with a hand sanitizer that contains at least 60% alcohol.

### ➤ Clean and disinfect

- Clean AND disinfect frequently touched surfaces daily. This includes tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, and sinks.
- If surfaces are dirty, clean them. Use detergent or soap and water prior to disinfection.
- Then, use a household disinfectant. Most common EPA-registered household disinfectant external icon will work. <sup>17</sup>

## NURSING MANAGEMENT

### Nursing Diagnosis 1

Impaired Tissue Integrity related to infection and side effect of drug.

### Goal

Maintain normal tissue integrity and minimize infection.

### Intervention

- Assess site of impaired tissue integrity and its condition.
- Determine etiologies like acute or chronic wound, burn, dermatological lesion.
- Observe the characteristics of wound, like color, size (length, width, and depth), drainage, and odor.
- Assess the patient's level of distress.
- Know signs of itching and scratching.
- Observe the site of impaired tissue integrity for color changes, redness, swelling, warmth, pain, or other signs of infection.
- Demonstrate a sterile dressing technique for wound care.
- Administer antibiotics as per doctor advice.
- Teach the patient to avoid rubbing and scratching on a wound and trim the patient nails.
- Encourage the patient for good diet that meets nutritional needs of the patient.
- Check every 2 or 3 hours for proper placement of footboards, restraints, traction, casts, or other comfort devices.
- Educate patient about proper nutrition, hydration, and to maintain tissue integrity.
- Teach the patient regarding skin and wound assessment as well as ways to monitor for signs and symptoms of infection, its complications, and healing process.
- Encourage the patient to use pillows and pressure-reducing devices. <sup>18</sup>

### Nursing Diagnosis 2

Impaired Swallowing related to absent or decreased gag reflex.

### Goal

Maintain normal swallowing.

### Intervention

- Assess ability to swallow by positioning examiner's thumb and index finger on patient's laryngeal protuberance. Ask patient to swallow and feel larynx elevate.
- Evaluate the strength of facial muscles.
- Look for coughing or choking while eating and drinking.
- Before each mealtime, provide adequate rest period to the patient.
- Provide oral care before feeding.
- If patient has impaired swallowing, meet the speech pathologist for bedside evaluation.
- For impaired swallowing, use a health team comprising a rehabilitation nurse, speech pathologist, dietitian, physician, and radiologist.
- Stick the suction equipment at patient bedside, and suction the patient as needed.
- Ensure the patient is awake and look for the sequenced directions before attempting to feed.
- Maintain the patient in high-Fowler's position while having food.
- Encourage the patient to feed him/herself as early.
- Educate patient, family, and all caregivers about rationale for food consistency and choices <sup>19</sup>.

### Nursing Diagnosis 3

Hyperthermia related to infection.

#### Goal

Maintain normal body temperature

#### Intervention

- Monitor the patient's HR, BP, and especially, the tympanic or rectal temperature.
- Determine the patient's age and weight.
- Monitor fluid intake and urine output.
- Monitor the serum electrolytes, especially serum sodium.
- Adjust and monitor the room temperature.
- Administer the antipyretic medications as prescribed by the physician.
- Non-invasive: cooling mattress, cold packs applied to major blood vessels.
- Evaporative cooling: cool with a tepid bath; do not use alcohol.
- Modify cooling measures based on the patient's physical response.
- Raise the side rails of the patient bed every time.
- Provide high caloric diet to the patient.
- Educate patient and family regarding signs and symptoms of hyperthermia.
- Discuss the significance of informing future healthcare providers of the malignant hyperthermia risk; recommend a medical alert bracelet or similar identification <sup>19</sup>.

### Nursing Diagnosis 4

Acute Pain related to presence or accumulation fluid in peritoneal cavity.

#### Goal

Minimize pain. Drain the fluid from peritoneal cavity.

#### Intervention

- The nurse administers analgesic agents as prescribed.
- The nurses routinely assess the frequency, intensity, and duration of the pain to determine the effectiveness of the analgesic agent.
- The nurse works with the patient to help manage pain by suggesting non-pharmacological methods for pain relief such as position changes, imagery, distraction, relaxation exertion, backrub massages, and periods of rest and relaxation.
- Check the weight of the patient.
- Check the abdominal Girth.
- Start abdominal tapping for removal of excess fluid from the abdomen <sup>20</sup>.

### Conclusion

There are hundreds of corona virus most of which circulate in the animals only seven of these viruses infect humans and four of them cause symptoms of the common cold. The new corona virus infection first detected in wuhan, china in December 2019. There after it start to spread throughout the world by international travelers and so many country were undergone for the complete lock down , sealed down to prevent transmission and its pandemic due to there is no specific treatment for the corona. Still research is going on throughout the world for the corona vaccine until and unless we get specific treatment all the people in the world we must follow the lockdown for our better future of the individual, family, society and the country.

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