



Clinical syndromes associated with COVID-19 infection

1- Uncomplicated illness:

- Patient with uncomplicated upper respiratory tract infection.
- Non specific symptoms such as fever, cough, sore throat, nasal congestion, malaise, headache.
- The elderly and immune compromised may present with a typical symptoms.
- Patient don't have any signs of dehydration, sepsis, or shortness of breath.

2- Mild pneumonia:

- Patient with pneumonia without signs of severe pneumonia

3-Severe pneumonia:

- Patient with fever, or suspected respiratory infection plus one of :
- Respiratory rate ≥ 30 breath/m.
- Severe respiratory distress.
- $SPO_2 \leq 90\%$ on room air.
- Confusion, drowsiness, convulsion in children.
- Systolic blood pressure ≤ 90 mmHg or diastolic ≤ 60 mmHg.

4- Acute respiratory distress syndrome:

- New or worsening respiratory symptoms within one week of known clinical insult.
- Chest imaging (X-ray, CT Scan, or lung ultrasound).
- Origin of edema not fully explained by cardiac failure or fluid over load.
- Oxygenation $\leq 90\%$ on room air.



5- Sepsis:

- A life threatening organs dysfunction, altered mental status, difficult or fast breathing, low oxygen saturation, reduced urine output, tachycardia, weak pulse, thrombocytopenia, acidosis, impaired LFT (hyperbilirubinemia).

6- Septic shock:

- Persistent hypotension despite volume resuscitation require vasopressors to maintain mean arterial pressure ≥ 65 mmHg and serum lactate level ≥ 2 mmol/l.
- Or hypothermia.

Immediate implementation of appropriate IPC measures

1- At triage:

- Give suspect patient a medical mask and direct him to separate area, isolation room if available.
- Keep at least one meter distance between suspected patients and others.
- Instruct all suspected patient to cover nose and mouth during coughing or sneezing with tissues or flexed elbow for others.
- Perform hand hygiene after contact with respiratory secretions.

2- Apply droplet precautions.

3- Apply contact precautions.

4- Apply airborne precautions when performing aerosol generating procedures



Early supportive therapy and monitoring

- Give supplementary oxygen therapy immediately to patients with SARI and respiratory distress, hypoxia, or shock.
- Use conservative fluid management in patients with SARI when there is no evidence of shock.
- Give empirical antimicrobials to treat all likely pathogens causing SARI. Give antimicrobials within one hour of initial patient assessment for patients with sepsis.
- Don't routinely give systemic corticosteroids for treatment of viral pneumonia or ARDS outside of clinical trials unless they are indicated for another reason.
- Closely monitor patients with SARI for signs of clinical deterioration, such as rapidly progressive respiratory failure and sepsis and apply supportive care interventions immediately.
- Understand the patient comorbid condition/s to tailor the management of critical illness and appreciate the prognosis. Communicate early with patient and family.

Collection of specimens for laboratory diagnosis

- Collect blood cultures for bacteria that cause pneumonia and sepsis, ideally before antimicrobial therapy .DO NOT delay antimicrobial therapy to collect blood cultures
- Collect specimens from both the upper respiratory tract(URTI; nasopharyngeal and oropharyngeal)and lower respiratory tract(LRT; Expectoated sputum, endotracheal aspirate, Broncho alveolar lavage) for n COV testing by RT-PCR, Clinicians may elect to collect only LRT samples when these are readily available (for example in mechanically ventilated patients).
- Serology for diagnostic purposes is recommended only when RT-PCR is not available.
- In hospitalized patient with confirmed n COV repeat URT and LRT samples should be collected to demonstrate viral clearance. The



frequency of the specimens collection will depend on local conditions but should be at least every 2 or 4 days until there are two consecutive negative results in a clinically recover patient at 24 hours a part.

Management of hypoxemic respiratory failure and ARDS

- Recognize severe hypoxemic respiratory failure when a patient with respiratory distress is failing standard oxygen therapy.
- Endotracheal intubation should be performed by a trained and experienced provider using airborne precautions,.
- Implement mechanical ventilation using lower tidal volumes (4-8 ml /kg predicted body weight, PBW) and lower inspiratory pressure (plateau pressure \leq 30 cmH₂O).
- In patient with severe ARDS, prone ventilation for more than 12 hours per day is recommended.
- Use a conservative fluid management strategy for ARDS patients without tissue hypo perfusion.

Management of septic shock

- Recognize septic shock in adult when infection is suspected or confirmed and vasopressors are needed to maintain MAP \geq 65mmHg and lactate \geq 2mmol/L in absence of hypovolemia and in children with any hypotension or 2 to 3 of the following; altered mental state, tachycardia or bradycardia, tachypnea, oliguria, hyperthermia, hypothermia, mottled skin or petechial or purpuric rash.
- In resuscitation from septic shock in adult give at least 30ml/kg isotonic crystalloid in the first 3 hours, and in children give 20 ml/kg as a rapid bolus and up to 40-60 ml/kg in the first 1 hour.
- Administer vasopressor when shock persist during or after fluid resuscitation , the initial blood pressure target is MAP \geq 65mmHg in adults and age appropriate targets in children.



Prevention of complication

- Reduce days of invasive mechanical ventilation.
- Reduce incidence of ventilators associated pneumonia.
- Reduce incidence of VT.
- Reduce incidence of catheter related infection.
- Reduce incidence of pressure ulcers.
- Reduce incidence of stress ulcers and GI bleeding.
- Reduce incidence of ICU related weakness.

Specific anti-Novel-CoV treatments and clinical research

- There is no current evidence to recommend any specific treatment.