

COVID-SARI* Management Guideline

SUGGESTED INITIAL VENTILATOR SETTINGS

- SIMV/VC
- Vt 4-8 ml/kg (ideal body weight)
 - Commence with 6 ml/kg
 - Go up to 8 if dyssynchrony or pH <7.15
 - Go down to 4 if Plat > 30 mmHg
- PEEP - Two PEEP regimes in table at bottom of page
 - Higher PEEP regime for the most severe cases
- RR 15-20
- Aims
 - PO2 55-70
 - SO2 88-92%
 - Pplat ≤ 30
 - Driving Pressure ΔP ≤15
- Permissive hypercapnia is OK: PCO2 ≥ 7.2

*SARI

Severe Acute Respiratory Infection

ADJUVANTS TO VENTILATION

- Deep sedation
- Prone positioning
 - Strong recommendation for patients with severe ARDS
 - 12-18 hours per day
 - May need many contiguous days of proning
- Restrictive fluid regime
 - Strong recommendation from experience to date
 - These patients are very prone to volume-induced pulmonary oedema
 - Use vasopressors in preference to IV fluids once initial (modest) fluid resus has occurred
- Neuromuscular blockade
 - NOT first line management
 - Consider infusion of Cisatracurium in patient with refractory hypoxia
- Routine use of recruitment maneuvers is not recommended
- Steroids are NOT recommended
 - No evidence of benefit, and probably harm
 - Higher rate of HAP/VAP
- Anti-viral therapies are NOT recommended
- Antibiotics
 - Antibiotics should still be given, as routine, in the initial empiric management of any patient with acute respiratory failure
 - There seems to be a moderate rate of secondary bacterial infection
- Inhaled NO and prostacyclin
 - There is no evidence of benefit with either of these

[illegible]

Some General Observations from international experience with severe COVID-19 infection

- Lung compliance seems to be preserved, unlike standard ARDS
- COVID-ARDS lungs are like sponges, so be “dry” wrt IV fluids
- Don’t back off on mandatory ventilation at the first sign of improvement
 - Patients often relapse
- Prone positioning seems to be very effective
 - May need 18 hours per day for many contiguous days
- Routine CT scan is not indicated in most patients
 - High risk spreading contagion
 - Results unlikely to change management
- Bronchoscopy
 - Little data on utility of bronchoscopy
 - Don’t need it for diagnostic samples as tracheal aspirates are sufficient
 - Potentially significant risk of aerosolization when doing it
 - So seems prudent not to perform routine bronchoscopy
- Co-infections
 - Reasonable number of co-infections found
 - Be vigilant for development of VAP

CARDIOMYOPATHY

- Mortality seems to be commonly associated with development of acute heart failure
- Can have rapid development of cardiogenic shock
 - From normal LV with preserved EF
 - To shocked patient with EF ~10%
 - High rate of lethal arrhythmias – VF/VT and asystole
 - Not known if this is a coronary-artery related process or an inflammatory myocarditis
- Consider regular assessment with cardiac US
- Considerations for cardiac arrest (No guidelines yet)
 - CPR is a high aerosolization risk procedure
 - Before providing resus for cardiac arrest ensure PPE is properly fitted
 - Conventional data regarding survival from cardiac arrest in older patients (>70):
 - Non-shockable (PEA/asystole) cardiac arrest - very low (~2%)
 - Shockable (VF/VT) cardiac arrest - 40-45%
- Considerations for Reus plans in older patients with severe COVID-19 infection
- To balance benefit to patients vz risk to rescuers
 - “For DCR for VF”
 - “Not for CPR”