

# MGH Treatment Guide For Critically Ill Patients with COVID-19

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# MGH TREATMENT GUIDE FOR CRITICALLY ILL PATIENTS WITH COVID-19

## PRESENTATION

### NOTABLE SX

- ~65-80% Cough
- ~45% Febrile initially
- ~15% URI Sx
- ~10% GI Sx
- Acute worsening after early mild sx

### HIGH RISK FOR SEVERE DZ

- Age >55
- Comorbid diseases:
  - Pulm, cardiac, renal
  - Diabetes, HTN
  - Immunocompromise

### LABS INDICATING SEVERE DZ

- D-dimer >1000
- CPK > 2x ULN
- CRP>100, LDH >245
- Troponin elevated/uprending
- Abs lymphocyte count <0.8
- Ferritin >300

## DIAGNOSTICS

### DAILY LABS

- CBC with diff (trend lymphocyte ct)
- CMP
- CPK

### RISK STRAT Q2-3 DAY PRN

- D-dimer
- Ferritin/CRP/ESR
- LDH
- Troponin, EKG

### ONE TIME TEST FOR ALL PTS

- HBV, HCV, HIV testing
- Influenza A/B, RSV
- Additional resp viral per ID guide
- COVID-19 (if not already performed)

## RESPIRATORY FAILURE

### CONSIDER EARLY INTUBATION

**\*\*AVOID USING HFNC or NIPPV\*\***

**WARNING SIGNS:** INC FiO<sub>2</sub>, DEC SaO<sub>2</sub>, CXR WORSE

### LUNG PROTECTIVE VENTILATION

- Vt 4-6 ml/kg predicted body weight
- Plateau pressure <30
- Driving pressure (P<sub>plat</sub>-PEEP) <15
- Target SaO<sub>2</sub> 90-95%, PaO<sub>2</sub>>60
- Starting PEEP 8-10 cmH<sub>2</sub>O



### CONSERVATIVE FLUID STRATEGY

No maintenance fluids, diuresis as tolerated by hemodynamics/Creatinine



### PEEP TITRATION

Best PEEP by tidal compliance or ARDSnet low PEEP table



### PRONE

Early consideration if cont. hypoxemia or elevated airway pressures



### ADDITIONAL THERAPIES

- Paralytics for vent dyssynchrony, not routine
- Inhaled NO: up to 80 ppm (no epoprostenol)

IF WORSENING

IF IMPROVING

### ECMO CONSULT

if continued hypoxemia or elevated airway pressures

### VENT LIBERATION

- Daily SAT/SBT when appropriate
- ABCDE bundle

PAGER NUMBERS

(examples: ICU Consult, Infectious Disease, ECMO)

## HEMODYNAMICS

- MAP >65
- Norepinephrine first choice pressor
- IF WORSENING:
  - Consider myocarditis/cardiogenic shock
  - Obtain POCUS echo, EKG, trop, CVO<sub>2</sub> (formal TTE if high concern)

## CHANGE TO USUAL CARE

- **MINIMIZE** staff contact in room
- **NO** routine daily CXR
- **HIGH THRESHOLD** for bronchoscopy
- **HIGH THRESHOLD** to travel
- **BUNDLE** bedside procedures
- Appropriate guideline-based isolation for aerosol generating procedures:
  - bronchoscopy
  - intubation/extubation
  - **AVOID** nebs, prefer MDIs

## THERAPEUTICS

### ALL ICU ADMISSIONS:

- Low threshold for empiric abx
- Tracheal aspirate for intubated pts
- **WITH ID GUIDANCE:**
  - Consider hydroxychloroquine and statin
  - Remdesivir through clinical trial

### IMMUNE MODULATION

- Immunomodulatory therapies only in consultation with ID and critical care attending
- **NO STEROIDS** for resp failure, consider only in s/o additional indication