

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
- Anosmia
- Acute worsening after early mild sx

INCREASED RISK FOR SEVERE DZ

- Age >55
- Comorbid diseases:
 - Cardiac, pulm, renal
 - Diabetes, HTN
 - Immunocompromise

LABS INDICATING SEVERE DZ

- Elevated D-dimer
- LDH >245
- Abs lymphocyte count <0.8

DIAGNOSTICS

DAILY LABS

- CBC with diff (esp. lymphocyte ct)
- CMP
- PT/PTT
- Fibrinogen
- D-dimer

MONITOR FOR WORSENING DISEASE OR DRUG TOXICITY PRN

- Triglycerides
- Ferritin
- EKG
- CPK
- LFTs
- CRP

ONE TIME TEST FOR ALL PTS

- Tracheal aspirate if intubated
- Additional tests for trial enrollment as needed
- Additional testing per ID guidance

RESPIRATORY FAILURE

CONSIDER EARLY INTUBATION IN ICU

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

WARNING SIGNS: INC FiO₂, DEC SaO₂, CXR WORSE

LUNG PROTECTIVE VENTILATION

- Vt 4-6 ml/kg predicted body weight
- Plateau pressure <30
- Driving pressure (Pplat-PEEP) <15
- Target SaO₂ 90-96%, PaO₂>60
- Starting PEEP 8-10 cmH₂O



CONSERVATIVE FLUID STRATEGY

- Post resuscitation: diuresis as tolerated by hemodynamics/Creat, NO maintenance fluids



PEEP TITRATION

- ARDSnet low PEEP table
- Best PEEP considered w/ ICU attending input



PRONE

- Early if cont. hypoxemia (P:F<150) or elevated driving/plateau pressure
- Supine ~qAM, longer proning duration allowed



ADDITIONAL THERAPIES

- Paralytics for vent dysynchrony, not routine
- Inhaled NO (no epoprostenol)

IF
WORSENING

IF STABLE OR
IMPROVING

ECMO CONSULT

if continued hypoxemia
or elevated airway
pressures

PATIENCE

Anticipate possible
prolonged intubation

PAGER NUMBERS

ICU CONSULT:26955 ECMO:29151 BIOTHREATS:26876

HEMODYNAMICS

- Norepinephrine first choice pressor
- IF WORSENING:
 - ? myocarditis/cardiogenic shock
 - Obtain POCUS, EKG, trop, lactate, CVO₂ (formal TTE if high concern)

USUAL CARE

- Empiric abx per usual approach
- Sedation PRN vent synchrony
- Daily SAT/SBT when appropriate
- ABCDEF Bundle

CHANGE TO USUAL CARE

- **NO ROUTINE DAILY CXR**
- **VTE PROPHYLAXIS** as per hematology guidelines
- **MINIMIZE** staff contact in room
- **HIGH THRESHOLD** for bronchoscopy
- **HIGH THRESHOLD** to travel
- **BUNDLE** bedside procedures
- **AVOID** nebs, prefer MDIs
- Appropriate guideline-based isolation for aerosol generating procedures including intubation/extubation

THERAPEUTICS

ALL ICU ADMISSIONS

- Clinical trial enrollment if eligible
- Examples of investigational tx:
 - Remdesivir
 - Hydroxychloroquine
 - Tocilizumab
- **NO ROUTINE STEROIDS** for COVID-19, consider in s/o additional indication