MGH Treatment Guide For Critically Ill Patients with COVID-19

Updated 3/19/20

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/uptrending
- 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 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 90-95%, PaO2>60
- Starting PEEP 8-10 cmH20

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CONSERVATIVE FLUID STRATEGY

No maintenance fluids, diuresis as tolerated by hemodynamics/Creatinine

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PEEP TITRATION

Best PEEP by tidal compliance or ARDSnet low PEEP table

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PRONE

Early consideration if cont. hypoxemia or elevated airway pressures

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ADDITIONAL THERAPIES

- Paralytics for vent dysynchrony, 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, CVO2 (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

A living document by Divison of Pulmonary and Critical Care in collaboration with the Dept. of Anesthesia,Critical Care, and Pain Medicine and Respiratory Care. May be updated or modified as situation evolves. Version created 3/19/20