MM 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- often 5-10 days from initial symptoms, **respiratory deterioration can be precipitous**.

HIGH RISK FOR SEVERE DISEASE

- Age >55, high BMI, Asthma
- Comorbid diseases:
  -Pulmonary, cardiac, renal
  -Diabetes, HTN
  -Immunocompromised state

LABS INDICATING SEVERE DISEASE

- D-dimer > 1000
- CRP > 100
- Ferritin > 300
- Absolute lymphocyte count <0.8

DIAGNOSTICS

DAILY LABS

- CBC with diff (trend lymphocyte ct)
- CMP
- CPK
- D-dimer
- Ferritin
- CRP
- LDH
- Troponin
- EKG Once on admission, then PRN to evaluate QTc if on specific meds

ONE TIME TEST FOR ALL PATIENTS

- Respiratory Viral PCR panel
- HBV. HCV. HIV testing
- SARS-CoV2 (if not already sent)

RESPIRATORY FAILURE

CONSIDER EARLY INTUBATION IN ICU

HHFNC for select patients must be in NPR

WARNING SIGNS: INC **FiO2,** DEC **SaO2, CXR** WORSE

LUNG PROTECTIVE VENTILATION

- Vt 6 ml/kg predicted body weight
- Plateau pressure <30 when possible
- Driving pressure (Pplat-PEEP) <15 when possible
- Target SaO2 90-96%, PaO2 > 60
- Starting PEEP 10 cmH20 – High PEEP strategy

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CONSERVATIVE FLUID STRATEGY

- Diuresis, goal net negative 500 to 1000 cc daily
- NO maintenance fluids

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HIGH PEEP TITRATION

Best PEEP by compliance or ARDSnet HIGH PEEP table

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PRONE POSITION

Early if hypoxemia; P/F Ratio ≤ 150 (PROSEVA) or < 100

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RESCUE THERAPIES

- NMB for vent dysynchrony, not routine
- Inhaled NO 10 ppm; Recruitment maneuvers

IF WORSENING ↓

ECMO CONSULT
If worsening hypoxemia
EOLIA criteria:
P/F < 50, FiO_2 > 0.8, 3 hrs
P/F < 80, FiO_2 > 0.8, 6 hrs

DAILY QUALITY BUNDLE

- **Daily SAT/SBT when appropriate**
- **Extubate in NPR**
- **If HHFNC, stay in NPR**
- **ABCDE bundle**

HEMODYNAMICS

- Norepinephrine first vasopressor
- ***IF WORSENING:***
  - Consider myocarditis/cardiogenic shock
  - Obtain POCUS echo. EKG, trop. scV02 (formal TTE if high concern)
  - Consider possible Pulmonary Embolus

CHANGE TO USUAL CARE

- NO ROUTINE DAILY CXR
- MINIMIZE staff contact in room
- BUNDLE bedside procedures
- HIGH THRESHOLD for bronchoscopy
- HIGH THRESHOLD for travel
- Appropriate guideline-based isolation for aerosol generating procedures:
  - Bronchoscopy
  - Intubation/extubation
  - AVOID nebs, prefer MDIs

THERAPEUTICS

ALL ICU ADMISSIONS

- Empiric antibiotics for CAP/HAP
- WITH ID GUIDANCE, consider:
  - Hydroxychloroquine
  - Anti-IL 6 therapy
  - Remdesivir, clinical trial

IMMUNE MODULATION

- Immunomodulatory therapies with ID consultation & ICU attending
- Consider Steroids for ARDS: Methylprednisolone (HR, 0.38; 95%CI, 0.20-0.72, Wu et al, JAMA Intern Med, March
- Steroids for septic shock: Hydrocortisone 200 mg daily (50 mg q6h vs. 8.3mg/hr drip)

Michigan Critical Care Collaborative Network

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Author(s): Michigan Medicine ICU Directors

Institution or Source: Michigan Medicine

Notes/Summary

Adapted from Massachusetts General Hospital document.