

Initial Evaluation and Treatment of Multisystem Inflammatory Syndrome in Children (MIS-C)

Evaluation for Possible MIS-C

Initial Assessment:

- History and Physical exam
- Assess for history of COVID-19 exposure within last 4 - 6 weeks **OR**
- Current or previous positive COVID-19 PCR, serology, or antigen test
- **Assess for sepsis/shock**
  - Sepsis Crawler alert

**Inclusion Criteria:**

- Patients <21 yo presenting with Fever  $\geq 38^{\circ}\text{C}$  **AND**
  - $\geq 2$  of the following organ systems involved:
    - Cardiac
    - Renal
    - Pulmonary
    - Hematology
    - GI: pain, V/D, anorexia, loss of taste
    - Derm: Rash, Oral mucosal changes
    - Neuro: Headache/irritability/lethargy/AMS

**OR**

- One or more of the following:
  - Shock (compensated or hypotensive)
  - Evidence of cardiac dysfunction
  - End organ involvement

**OR**

- Features of complete or incomplete Kawasaki Disease

**Exclusion Criteria:**

- Alternative plausible diagnosis

**Compensated shock:**  
persistent tachycardia despite antipyretics, BP may be normal or have wide pulse pressure, intact peripheral perfusion or brisk cap refill

**Hypotensive shock:**  
tachycardia, hypotension and/or wide pulse pressure, delayed or flash peripheral perfusion

Does the pt have either compensated or hypotensive shock?

Suspect MIS-C with Compensated or Hypotensive Shock

- Fever/history of fever  $\geq 38.0^{\circ}\text{C}$  for  $\geq 1$  day **PLUS** meets inclusion criteria

\*Provider discretion should be used when initiating MIS-C workup, determining low versus high suspicion and patient disposition.

Suspect MIS-C without Shock

- Fever/history of fever  $\geq 38.0^{\circ}\text{C}$  for  $\geq 3$  days **PLUS** meets inclusion criteria
- **OR** Provider Discretion\*

- Initiate *EDP Sepsis* or *Sepsis Inpatient* and *EDP MIS-C* powerplans
- Obtain Istat VBG
- Send Tier 1 and Tier 2 labs
- Antibiotics per Sepsis powerplan
- Obtain ECG, CXR, and ECHO
- Frequently reassess after fluids to avoid fluid overload

**Initiate EDP MIS-C Powerplan**

\*For low suspicion of MIS-C start with tier 1 labs progress to tier 2 labs if lab results increase suspicion or patient ill appearing/high suspicion of MIS-C

**Tier 1 Labs:**  
CBC, BMP, LFTs, CRP, ESR, Blood Cx Other testing as clinically indicated for fever workup (UA/Urine Cx)

**Tier 2 Labs:**  
Troponin, NT-proBNP, ECG, D-dimer, Ferritin, Fibrinogen, CPK, PT, PTT, INR, LDH, Lactate, VBG, Triglycerides, UA, COVID-19 PCR

Admit to PICU

\*Considered admission for further observation while completing the diagnostic evaluation, especially if the pt. displays any of the following:

- Abnormal vital signs (tachycardia, tachypnea)
- Respiratory distress of any severity
- Neurologic deficits or change in mental status (including subtle manifestations)
- Evidence of even mild renal or hepatic injury
- Markedly elevated inflammatory markers
- Abnormal EKG, NT-proBNP, or troponin

Are labs and physical exam reassuring?\*

Are labs concerning and/or is pt. ill appearing?\*

Does the pt have any evidence of shock or cardiac dysfunction?

Should the pt. be admitted to PICU?

Discharge home with:

- PCP follow up in 24-48 hrs
- **OR**
- Return to ED for fever  $\geq 5$  days and/or new signs/symptoms

Admit pt. to Medical Unit