

Management of Multisystem inflammatory syndrome in children (MIS-C)

1. Normotensive, well appearing kids concerning for MIS-C

Inclusion criteria:

- Fever x 3 or more days plus 2 of the following:
- GI symptoms- vomiting, diarrhea, abdominal pain
- Rash (oral, hands, feet)
- Conjunctivitis/mucus membrane changes
- Headache, altered mental status
- Extremity changes- hand/foot swelling, erythema
- Unilateral (>1.5 cm) cervical LAD
- High potential for exposure or known COVID positive within the last 4-6 weeks

Initial lab workup:

- CBC with diff
- CMP
- ESR
- CRP
- COVID PCR

The following tests are also very useful but prioritize the labs above

- Troponin
- BNP
- Ferritin
- COVID antibodies (Order a Miscellaneous test and put "SARS-CoV-2 Antibody, IgG, LabCorp code 164055" in the comment)
- UA
- EKG
- Blood culture
- Other testing (including RVP) as clinically indicated

If labs and physical exam are reassuring: (ESR < 40, CRP < 30)*, (ALC > 1000, Plts >150, Na >135)** Then d/c home with close follow up within 24-48 hours. *ESR and CRP should be primary determinants of inflammation **Clinician should use judgment in interpreting these tests.

If inflammatory markers are elevated strongly consider Consult to Cone PICU physician and admit.

2. Ill appearing or hypotensive children with possible MIS-C

Inclusion criteria:

- Fever x 24 hours
- Evidence of cardiac dysfunction/hypotension, shock
- Plus 2 or more clinical features listed previously

Suggested Workup:

- CBC with diff
- CMP
- ESR
- CRP
- COVID PCR
- Troponin
- BNP
- Ferritin
- COVID antibodies (Order a Miscellaneous test and put "SARS-CoV-2 Antibody, IgG, LabCorp code 164055" in the comment)
- UA
- EKG
- Blood culture
- D-dimer
- Coags
- Lactate
- Triglycerides
- Cytokine profile
- Save one tube if possible
- EKG Stat
- CXR

Treatment:

- Aggressive fluid resuscitation of 10 - 20 mL/kg with assessment between each bolus.
- At 30 - 40 mL/kg, start vasoactives - additional fluid resuscitation to goal of 40-60 mL/kg in the 1st hour Broad spectrum antibiotics (Vanc and ceftriaxone, consider doxycycline if concern for tick borne illness, consider clindamycin if concern for toxic shock, consider flagyl for significant GI symptoms (or meropenem))
- Vasopressors- consider early use, most kids will need norepinephrine +/- milrinone
- Methylprednisolone 1 mg/kg/dose (max 60 mg) IV BID if highly suspect MIS-C

- GI prophylaxis if starting steroids
- Consult to PICU (if at Cone) and transfer