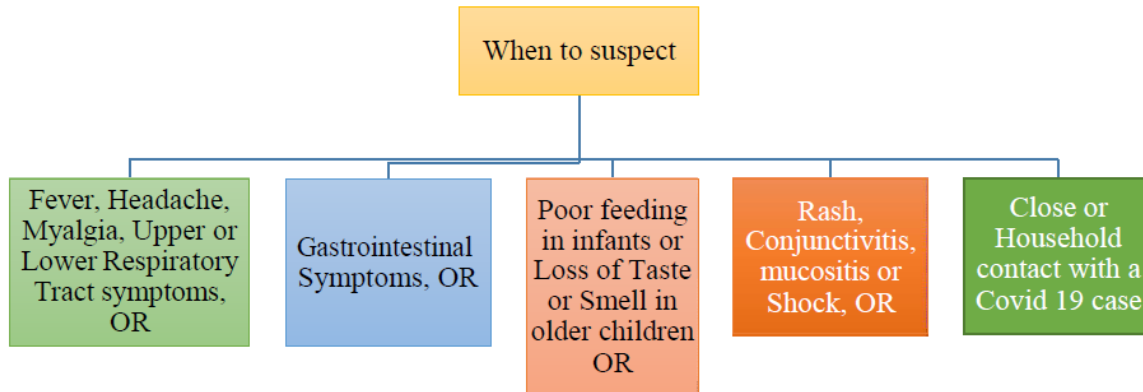




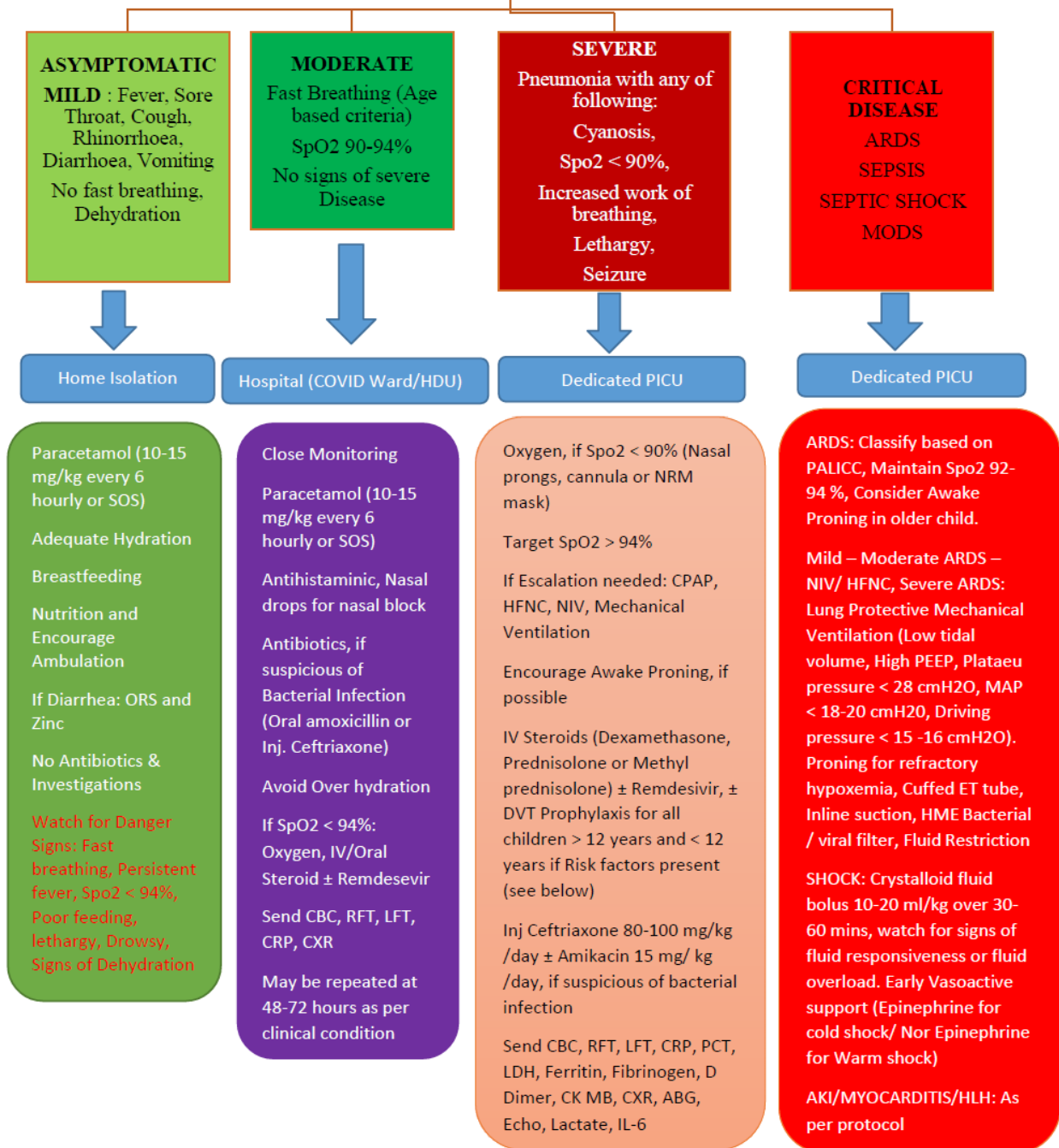
## COVID 19 MANAGEMENT IN CHILDREN AND ADOLESCENTS



Whom to Test	When to Test	Which Test
<ul style="list-style-type: none"><li>• All suspected cases</li><li>• Prior to Procedure or Hospitalization</li><li>• Close or Household contact with Covid 19 case</li></ul>	<ul style="list-style-type: none"><li>• As soon as Possible after symptoms onset</li></ul>	<ul style="list-style-type: none"><li>• <b>Rapid Antigen Test:</b> Low sensitivity, If negative, RT PCR should be done</li><li>• <b>RT-PCR</b> in Nasopharyngeal or Oropharyngeal swab</li><li>• <b>Antibody Test:</b> If features of MIS-C</li></ul>



## Classification of Disease Severity





<b>Steroids</b>	Dexamethasone 0.15 mg/kg (max 6 mg) IV or Oral Oral prednisolone 1 mg/kg/day (max 40 mg) Or Methyl Prednisolone 1-2 mg/kg/day Duration: 5-10 days	In Moderate if SpO <sub>2</sub> <94%. Severe, critical and rapidly progressive disease Avoid using in first 3-5 days of onset of symptoms
<b>Remdesivir</b>	>40 kg: 200 mg Day 1, 100 mg OD 3.5- 40 kg: 5 mg/kg on day 1, 2.5 mg/kg OD Duration: 5-10 days	Severe Disease, Use within 7-10 days of symptom onset Avoid if AST/ALT > 5 times, Crcl < 30 ml/min/m <sup>2</sup>
<b>Anticoagulation (LMWH)</b>	Prophylactic: 0.5 mg/kg SC BD Therapeutic: 1 mg/kg SC BD  Contraindication: Active Bleeding, Platelets < 50,000	Severe and critical disease, Children with 1 or more risk factor for VTE D-dimer > 5 times of normal Established Thrombosis
<b>Tocilizumab (off label)</b>	8 mg/kg (max 800 mg) IV over 4 hours, can be repeated if no response in 8-24 hours	Severe and Critical disease, preferably within 24-48 hours of progressive symptoms with raised inflammatory markers No active bacterial, fungal or tubercular infection
<b>Other Drugs</b>	Azithromycin, Ivermectin, Hydroxychloroquine, Favipiravir, Lopinavir/Ritonavir	Not Recommended
<b>Note: Consider Upgrading Antibiotics in Severe &amp; Critical disease if no improvement after optimal management.</b>		

#### Risk factor for thrombosis

Obesity, Adolescent, Central venous catheter, Nephrotic syndrome, Mechanical ventilation, Prolonged PICU Stay, Malignancy, Congenital or acquired Cardiac disease, Previous or family H/O VTE, Hemoglobinopathies, Post Splenectomy, Thrombophilia, Cystic Fibrosis Exacerbation

**If Home monitoring not possible, Admit children with co-morbidities with mild disease:**

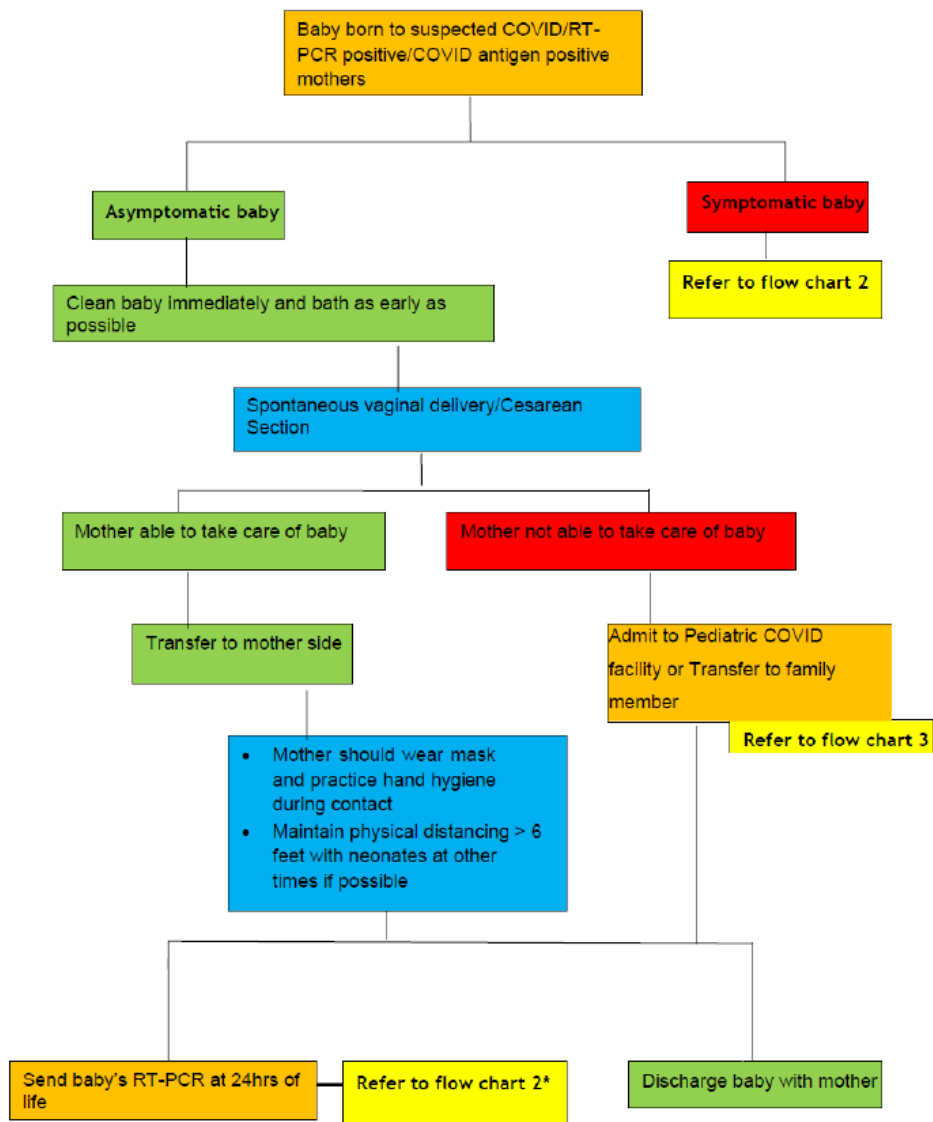
- Chronic Lung Disease
- Hemodynamically significant Heart Disease
- Chronic Kidney Disease
- Neurological Disorder
- Hemoglobinopathies
- Immunodeficiency Disorders

#### Discharge Criteria

- 10 Days after symptom onset,
- Resolution of clinical symptoms >72 hours and
- SpO<sub>2</sub> > 94% on room air for > 72 hours
- Hemodynamically Stable
- Negative RT PCR not required for discharge
- Followed by Home Isolation for 5-7 days

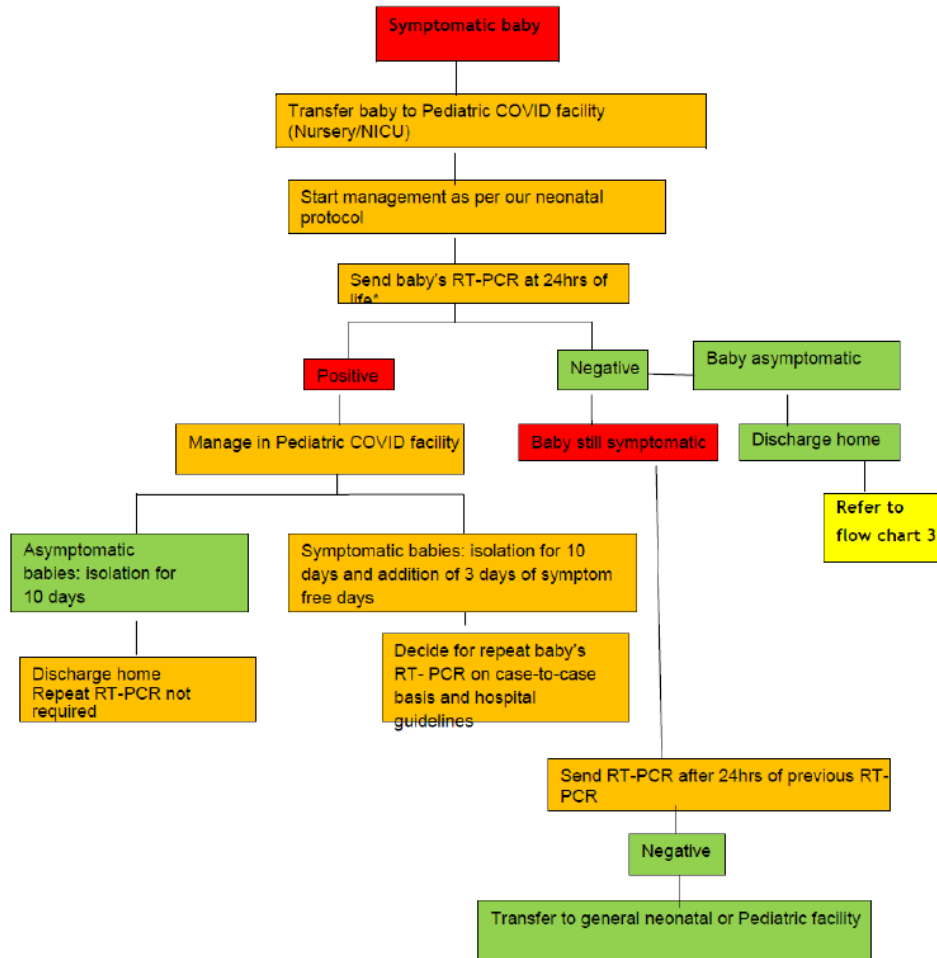


**Flowchart 1: Approach to baby born to suspected/RT-PCR positive/COVID antigen positive mothers**



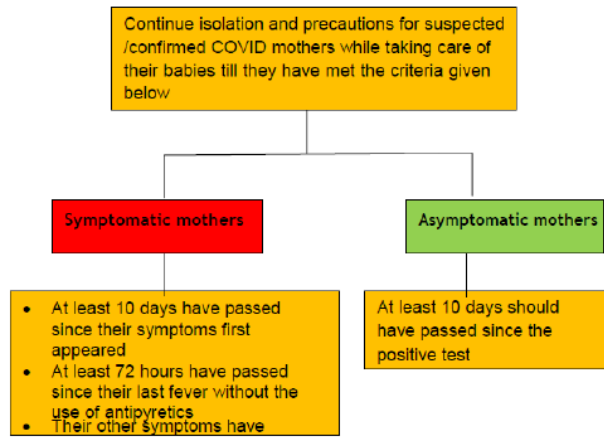


Flow chart 2: Approach to a symptomatic baby born to suspected/RT-PCR positive/COVID antigen positive mothers





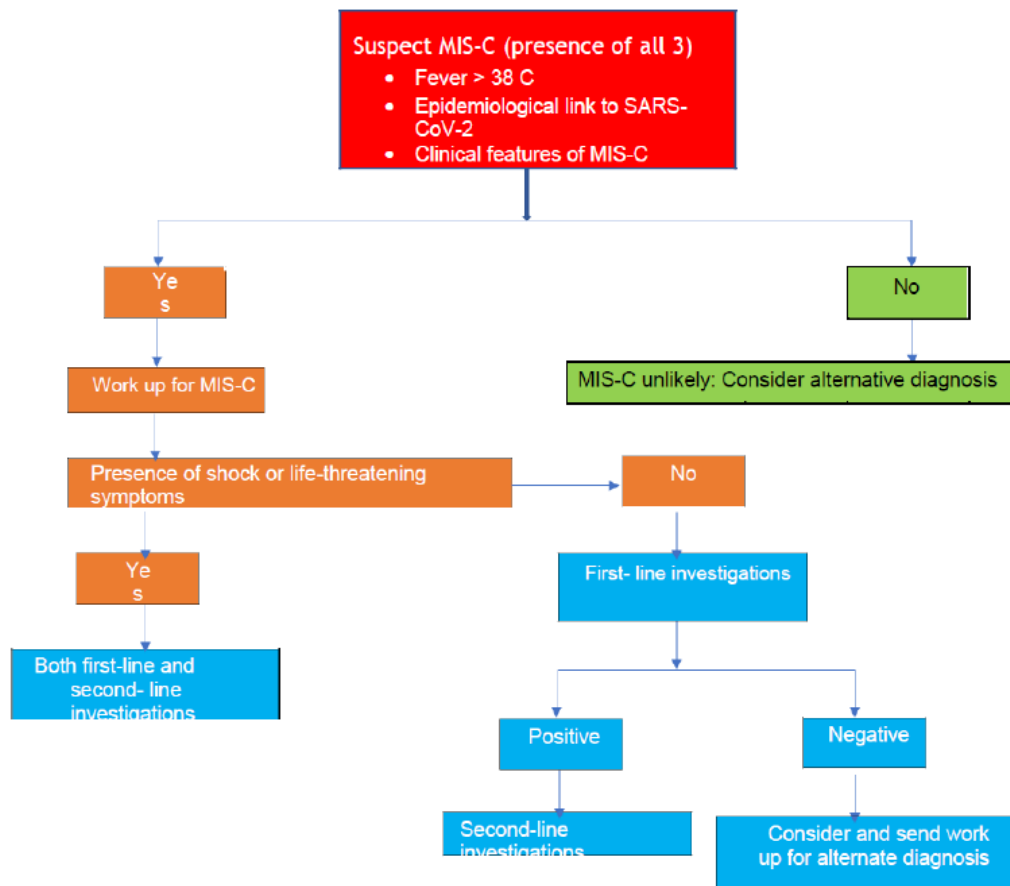
**Flow chart 3: Discontinuing isolation and precautions guidelines for suspected or confirmed COVID mothers**





Management of Multiple Inflammatory Syndrome in Children (MIS-C)  
NEPAS Guidelines (Updated 24 May, 2021)

Definition of MIS-C (WHO)	
	<ul style="list-style-type: none"><li>• Children and adolescents (0-19 years) with fever &gt; 3days</li></ul>
	AND: 2 of the following:
	<ol style="list-style-type: none"><li><b>1. Rash or bilateral non-purulent conjunctivitis or mucocutaneous inflammation signs (oral, hands or feet).</b></li><li><b>2. Hypotension or shock</b></li><li><b>3. Features of myocardial dysfunction, pericarditis, valvulitis, or coronary abnormalities (including ECHO findings or elevated Troponin/NT-proBNP)</b></li><li><b>4. Evidence of coagulopathy (by PT, PTT, elevated d-Dimers)</b></li><li><b>5. Acute gastrointestinal problems (diarrhea, vomiting, or abdominal pain)</b></li></ol>
AND	<ul style="list-style-type: none"><li>• Elevated ESR, C-reactive protein, or procalcitonin</li></ul>
AND	<ul style="list-style-type: none"><li>• No other obvious microbial cause of inflammation, including bacterial sepsis, staphylococcal or streptococcal shock syndromes</li></ul>
AND	<ul style="list-style-type: none"><li>• Evidence of COVID-19 (RT-PCR, antigen test or serology positive), or likely contact with patients with COVID-19</li></ul>

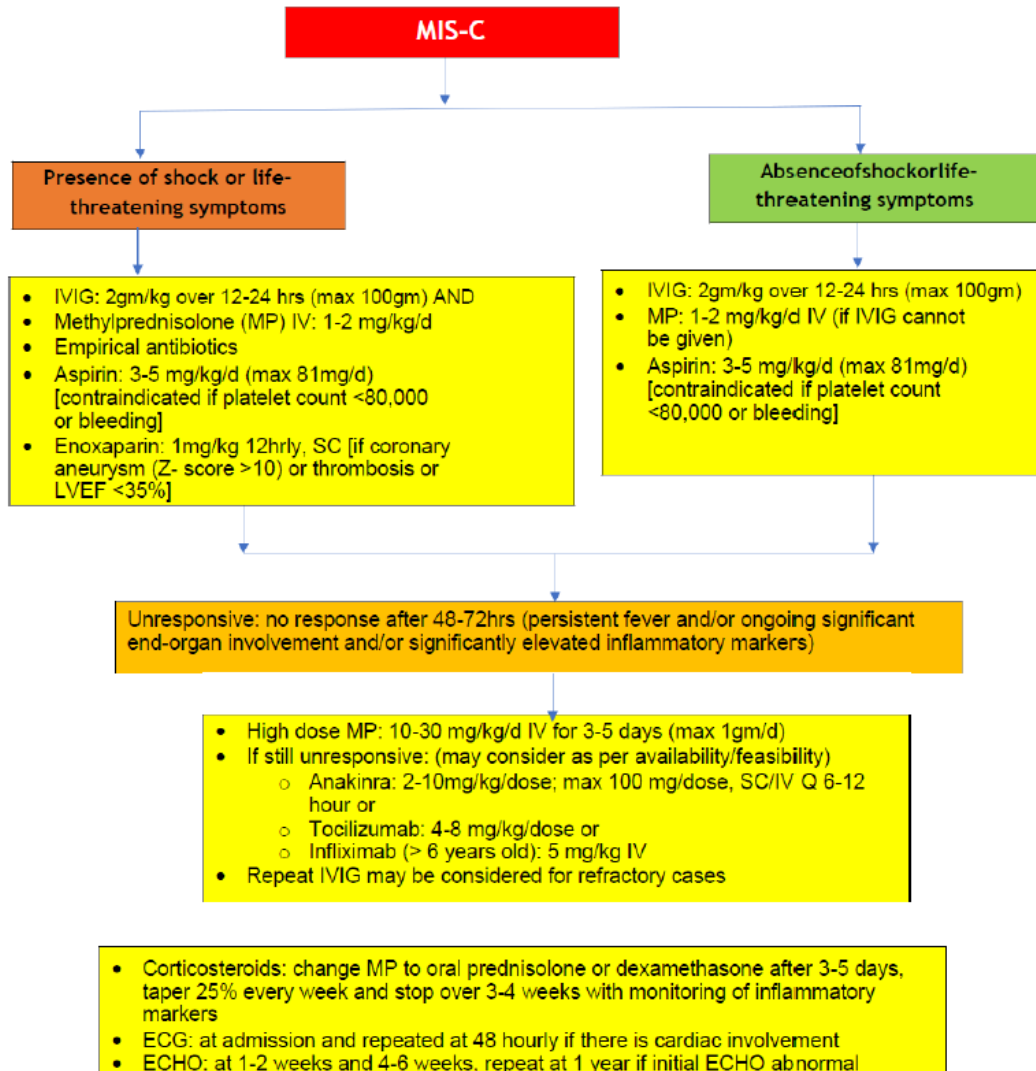


**First line investigations:** CBC, LFT, RFT, Blood gas analysis, Blood glucose, CRP and or ESR, SARS-Co-2 serology, RT-PCR Consider and send investigations for other infections: Malaria, Dengue, Blood C/S, Scrub typhus, Leptospirosis, etc **Positive first line investigations:** CRP>5mg/dl and or ESR >40 mm/hr **PLUS** ALC <1000/ $\mu$ L, or Platelets<150,000/ $\mu$ L, or Na<135mEq/L, or Neutrophillia, or Hypoalbuminemia

**Second line investigations:** Cardiac (ECG, ECHO, BNP, Troponin T), inflammatory markers (Procalcitonin, PTINR, aPTT, D-dimer, Fibrinogen, LDH, Triglyceride, IL-6, Ferritin), Peripheral blood smear

**Note:** Investigations should be sent as per its availability/feasibility at the treating center







**List of Contributors:**

**Dr. Sumit Agrawal**

**Dr. Om Krishna Pathak**

**Dr. Sangita Basnet**

**Dr. Puja Amatya**

**Dr. Biraj Parajuli**

**Dr. Sandeep Singh**