



CME Information

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Name of Faculty or Presenter	Reported Financial Relationship
Arron Berry, RN, BSN, CCRN, PHRN, CFRN	None

Arron Berry has indicated that she will not be referencing the unlabeled or unapproved use of agents in today's presentation.

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CME Information

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COVID19.dkbmed.com



Learning Objectives

- Discuss symptoms and patient presentation of the acutely ill pediatric patient with COVID-19
- Discuss management of the acutely ill pediatric patient with COVID-19
- Discuss symptoms and patient presentation of the acutely ill pediatric patient with MIS-C
- Discuss management of the acutely ill pediatric patient with MIS-C



Thank You

This activity is supported by educational grants from Gilead Sciences, Inc., Regeneron, and Eli Lilly and Company.

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Please see **COVID19.DKBmed.com** for additional resources and educational activities



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Pediatric Covid-19 Statistics

- 2.5 million cases
- 12.6% of all cases
- Most common source of exposure from a family member
- Increased risk with underlying conditions
- Less illness severe than adults
 - 0.2-2.8% of hospital admission
 - Low percentage require ICU admission (3.3% of pediatric cases)
 - Low mortality (0.07% of total Covid deaths)



[https://www.nationaljewish.org/patients-visitors/patient-info/important-updates/coronavirus-information-and-resources/patient-care/covid-19-\(coronavirus\)-and-kids](https://www.nationaljewish.org/patients-visitors/patient-info/important-updates/coronavirus-information-and-resources/patient-care/covid-19-(coronavirus)-and-kids)



Presentation in the Peds Covid Patient

- Fever
- Respiratory signs/symptoms
 - Cough
 - Nasal congestion
 - Dyspnea
- GI signs/symptoms
 - Nausea, vomiting, diarrhea, abdominal pain
 - Loss of appetite
- Headache, fatigue

Radiologic and Lab Findings

- CXR
 - Patchy lesions
- Chest CT
 - Ground glass opacities
 - Halo sign
- Inflammatory markers
 - D-dimer, procalcitonin, CK, interleukin-6



<https://pubmed.ncbi.nlm.nih.gov/32134205/#&gid=article-figures&pid=figure-1-uid-0>

Management of the Peds Covid Patient

- Supportive therapy
 - Respiratory support
 - Fluid and electrolyte support
- Thromboprophylaxis
- Remdesivir only FDA-approved treatment
- Management of co-infection
 - Viral and bacteria
 - Influenza
- Glucocorticoids

Multisystem Inflammatory Syndrome in Children (MIS-C) CDC Case Definition

- An individual aged <21 years presenting with feverⁱ, laboratory evidence of inflammationⁱⁱ, and evidence of clinically severe illness requiring hospitalization, with multisystem (≥ 2) organ involvement (cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic or neurological); AND
- No alternative plausible diagnoses; AND
- Positive for current or recent SARS-CoV-2 infection by RT-PCR, serology, or antigen test; or COVID-19 exposure within the 4 weeks prior to the onset of symptoms

MIS-C Statistics

- 1,659 cases
- 26 deaths
- Majority of cases 1-14 years (average 8-9)
- Develop 2-4 weeks after Covid infection
- Positive for antibodies, but negative PCR at diagnosis
- Majority require admission to an ICU (as high as 70%)

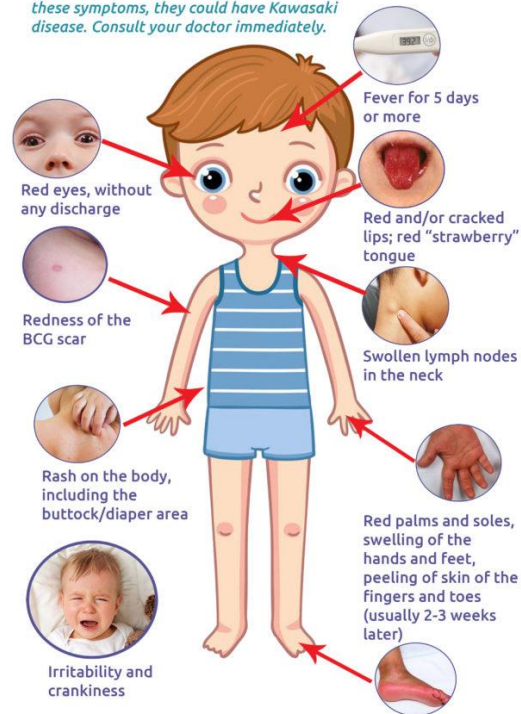


Presentation in MIS-C Patient

- Kawasaki disease-like features
- Respiratory signs/symptoms
 - Dyspnea
 - Cough
- GI signs/symptoms
 - Abd pain, vomiting and diarrhea
- Shock

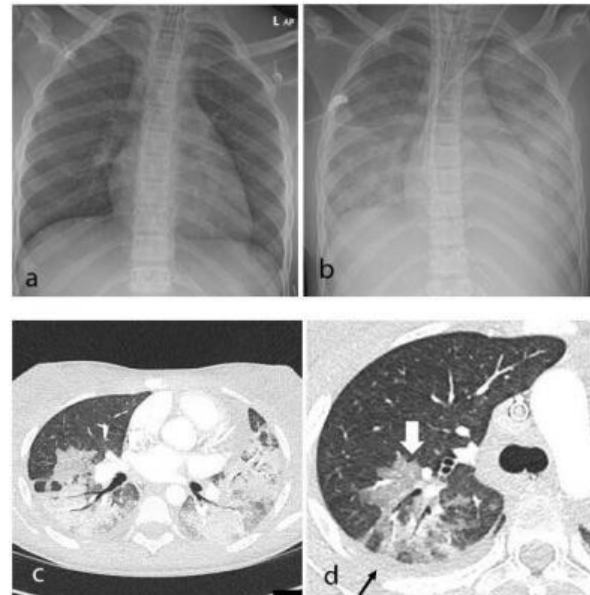
SYMPTOMS OF KAWASAKI DISEASE

If your child has a fever and shows 4 of these symptoms, they could have Kawasaki disease. Consult your doctor immediately.



Radiologic and Lab Findings

- CXR
 - Cardiomegaly, pulmonary edema, pleural effusions, opacities
- Chest CT
 - ARDS pattern, PE (small)
- Echo/cardiac imaging
 - Left ventricular systolic dysfunction with depressed ejection fraction
 - Coronary artery dilation
- Inflammatory markers
- Cardiac markers



<https://www.itnonline.com/content/new-study-looks-post-covid-19-emerging-disease-children>

Management of the MIS-C Patient

- Supportive therapy
 - Respiratory support
 - Hemodynamic support
- Anti-inflammatories
 - IVIG and corticosteroids
- Anti-platelets and anticoagulation
- Monitoring kidney function
- Close monitoring of cardiac and vascular involvement



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Are there any special steps that should be taken in pediatric patients for managing mild to moderate COVID-19 at home?

COVID19

Keeping Up with a Moving Target



Question 2





Thank You!

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