COVID-19 Clinical Update

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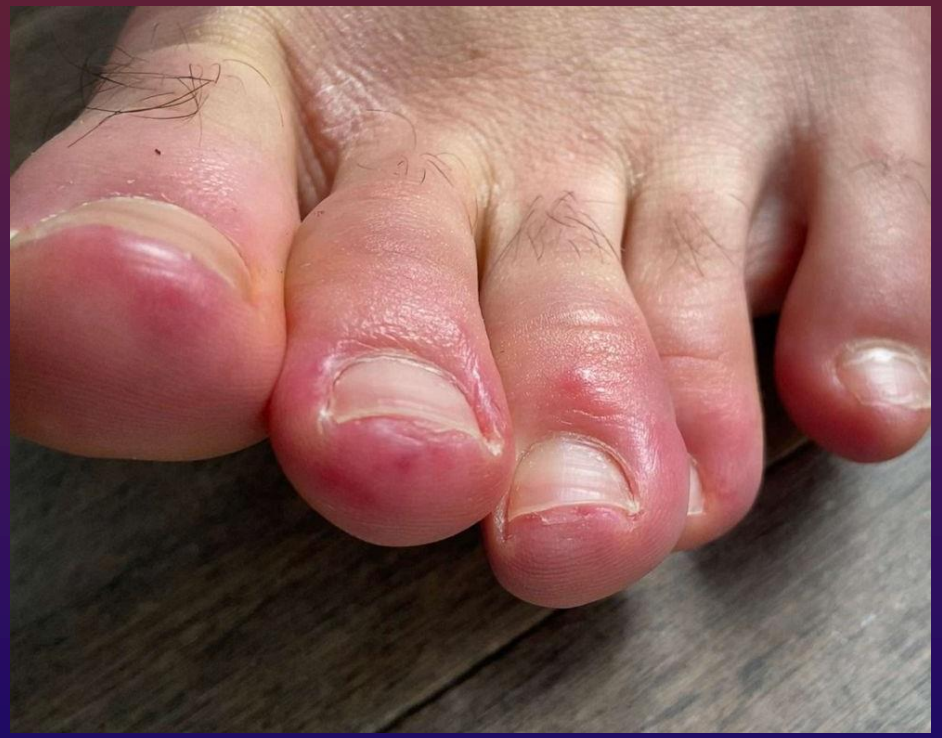
Disclosures

Clinical Presentation Symptom Update
COVID Toes

Rabin, NY Times, 5/1/2020

- Chilblain like lesions
- Painful, red, swollen
- First reported Spain, Belgium, Italy
- Good prognosis



COVID-19 and Kawasaki Disease

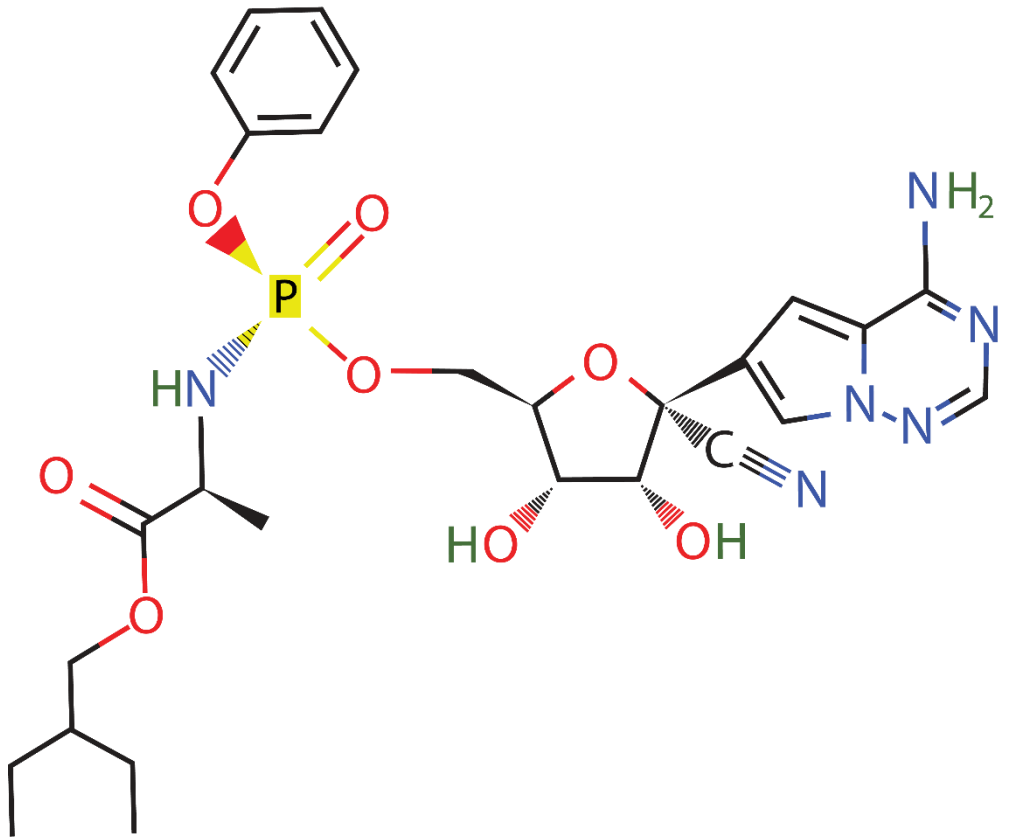
- Original Case Report: Jones et al, Hospital Pediatrics, 2020
  - 6 month old female with fever, fussiness, refusal to eat, HR 200 bpm, blotchy rash, conjunctivitis, cracked lips, prominent tongue papilla, and hand swelling.
  - ECHO normal, SARS-CoV-2 PCR positive→ Treated with IVIG and recovered
- NYC Health 5/4: reported 15 children with Pediatric Multi-System Inflammatory Syndrome Potentially Associated with COVID-19
  - Kawasaki Disease with or without shock
    - More than half required pressors and 5 required mechanical ventilation
    - Recommend consultation with ID/Rheumatology/Crit Care and Rx with IVIG

Testing update

- **Cepheid Xpert:** Larger IHS sites
- **Abbott ID NOW:** Smaller IHS sites
  - No new published correlation updates
  - GIMC Correlation between Cepheid and Abbott:
    - 49 tests performed from simultaneous wet (Cepheid) and dry swabs (Abbott)
    - 12 positives identified by Cepheid and 11 by Abbott (92% sensitive)
    - Accuracy 98.9% (10% variation would reject test)

Remdesivir

Remdesivir



Chemical structure drawing by Kenton Unruh, Ph

Remdesivir

- Nucleotide analogue RNA Polymerase Inhibitor: metabolized to ATP analogue intracellularly and completes with ATP for incorporation
- Mechanism: Possible delayed chain terminator like entecavir
- Kills: Ebola, SARS-CoV and MERS
- Dose: 200 mg IV x 1 then 100 mg IV daily x 5-10 days
- Adverse Events: elevated LFTs, diarrhea, rash, renal impairment and hypotension in the Grein et al, NEJM, 4/10/2020 study

The Remdesivir Study we have been waiting for…

- Adaptive COVID-19 Treatment Trial (U of Nebraska + 67 sites)
  - 1063 patients with COVID-19 enrolled (US, Europe, Asia)
  - Measured time to recovery (hospital discharge or back to work) & mortality
    - 31% improvement recovery time: 11 d with drug, 15 without ($p<0.001$)
    - Improved mortality rate: 8% with drug, 11.6% without drug ($p=0.059$)

Remdesivir

- FDA gave Emergency Use Authorization 5/1/2020
- "Distribution of the authorized remdesivir will be controlled by the United States (U.S.) Government for use consistent with the terms and conditions of this EUA"
- Approved for adults or children with:
  - Lab confirmed diagnosis
  - O2 Sat ≤ 94% on room air
  - Requiring supplemental oxygen, mechanical ventilation or ECMO

Remdesivir_ NPTC Emerging Treatments Update.pdf - Adobe Acrobat Reader DC

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Indian Health Service
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COVID-19 Emerging Treatments Update

May 5, 2020

Remdesivir (GS-5734™)
-EMERGENCY USE AUTHORIZATION-

Mechanism of Action[1,2]: Broad spectrum antiviral; inhibits RNA synthesis. Remdesivir demonstrates evidence of in vitro activity against SARS-CoV-2 and in vivo in animal models. Early exploratory analysis suggested remdesivir may improve outcomes for patients admitted to the hospital with severe disease.

Current Status[3]: Remdesivir is not FDA approved. On May 1, 2020, the FDA issued an Emergency Use Authorization (EUA) for remdesivir. Use is permitted for the treatment of suspected or laboratory confirmed COVID-19 in adults and children hospitalized with severe disease, defined as oxygen saturation ≤ 94% on room air or requiring supplemental oxygen or requiring invasive mechanical ventilation or requiring ECMO.

Availability[3-5]: Not commercially available. Distribution of remdesivir under the EUA is controlled by the U.S. government for use consistent with the terms and conditions of the EUA. The manufacturer will supply remdesivir to authorized distributors, or directly to a U.S. government agency, who will distribute the drug to hospitals and other healthcare facilities as directed by the U.S. government, in collaboration with state and local government authorities, as needed.

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More COVID-19 Training

- CDC: https://www.cdc.gov/coronavirus/2019-ncov/hcp/index.html
- ACP Physician Handbook: https://www.acponline.org/clinical-information/clinical-resources-products/coronavirus-disease-2019-covid-19-information-for-internists
- UW Protocols: https://covid-19.uwmedicine.org/Pages/default.aspx
  - UW IDEA Program: https://covid.idea.medicine.uw.edu/
  - NIH Guidelines: https://covid19treatmentguidelines.nih.gov/
- Brigham and Women's Hospital: covidprotocols.org