Solving Healthcare Minicast: COVID-19: Lessons from Seattle; Information for Healthcare Professionals

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Guest: Dr. Nicholas Mark, MD, Pulmonary/Critical Care Physician in Seattle, Washington

ONE SENTENCE SUMMARY: DR. NICHOLAS MARK, A PULMONARY & CRITICAL CARE PHYSICIAN IN SEATTLE, GIVES IMPORTANT RECOMMENDATIONS AND PRECAUTIONS FOR HEALTHCARE PROFESSIONALS DEALING WITH THE COVID-19 OUTBREAK.

Key Takeaways

Patient Interaction

When donning personal protective equipment (PPE) to care for patients with suspected COVID-19, **practice is key**. The importance of PPE– and, above all, proper PPE protocol– cannot be stressed enough.

- As of right now, **droplet precautions** are appropriate; enhanced droplet (airborne) precautions when performing aerosolizing procedures (intubation, etc.).
- Lessons from managing Ebola have shown us that it's the moments that are easy to forget, like taking off a mask with contaminated gloves, that gets healthcare professionals sick.
- "Have someone help you," says Dr. Nicholas Mark. Don't be macho about PPE negligence.
- If you are in a center where you haven't seen many patients yet, **now is the time** to practice as both the wearer and the assistant.

- With visiting access restricted, patients are going through a very difficult time. Now more than ever, **compassion and caring** are so important.
  - It is a great time to get palliative care involved and find someone who can spend quality time with them.
  - If your resources permit it, organizing a collection drive for technology like tablets that allow patient to videocall their family can make a world of difference.

Patient Presentation

When seeing patients with potential COVID-19, there are several important aspects of presentation to keep in mind, says Dr. Mark:

1. Fever is NOT a reliable indicator to rule infection in or out. Only half of patients may have it upon presentation, and only 85% will have it at all.
2. Cough is a common presentation and dyspnea somewhat common; an upper respiratory infection picture upon presentation is **rare**.
   a. 10-15% of patients will present with gastrointestinal symptoms such as diarrhea; there is some evidence from China that **these patients do worse**.
3. Since most cases are now community-acquired, a travel history **cannot be used to increase or reduce suspicion of infection**.
4. Patients may deteriorate mildly or rapidly.

Investigations

Dr. Mark offers some pearls about investigations for COVID-19:

1. One very common finding from a blood count is leukopenia (specifically, lymphopenia).
2. Procalcitonin, as in most viral infections, is usually low, but there are rare cases of patients with a superinfection where it is high. A low value is highly suggestive, but a high value cannot rule it out.
3. **Many patients have normal imaging,** especially at initial presentation.
    a. In those that do show abnormalities, **hazy, ground glass peripheral opacities** are the usual finding on chest x-ray.

Treatment advice

1. As per most guidelines, **fluid-sparing resuscitative strategies** work best.
2. AVOID using BiPAP and high-flow nasal cannulas due to high risk of aerosolization, if possible, but no not withhold if necessary (eg, COPD exacerbation).
    a. Must be done in a negative-pressure chamber with enhanced droplet precautions.
3. For patients who are intubated and on a ventilator, most physicians currently use a high-PEEP strategy, then progress through the "7 Ps" of hypoxic respiratory failure treatment (paralytics, proning, etc.)
4. ECMO is possible in scenarios where your center has a few cases and you have the resources to support it. But if you have dozens of patients, it may become difficult to manage.

Recommended Medications

1. The principle drug that Dr. Mark currently uses is the antiviral nucleotide analogue **remdesivir**, which, although not FDA-approved, can be gotten through compassionate use or through a clinical trial from the manufacturer.
2. Some others have tried the immunosuppressive drug tociluzimab, and the manufacturer has made the drug available.
3. There is limited evidence for the antimalarial chloroquine.

As a bottom line, Dr. Mark emphasizes that no one really knows what works best; the most responsible thing to do is trying to enrol patients in clinical trials so that they can, at the very least, contribute to the body of knowledge about that drug.

What NOT to do:

1. In China there was considerable use of oseltamivir; it inhibits a protein that COVID-19 does not have, says Dr. Mark, and there is no evidence it is effective.
2. Both the World Health Organization and Centres for Disease Control and Prevention recommend NOT to unilaterally use corticosteroids on patients with COVID-19.
    a. In certain cases, such as concomitant COPD or pressor-refractory shock, they may be useful, but it is important to evaluate on a case-by-case basis.

Further Readings

- Read the latest recommendations for healthcare professionals by the CDC here: https://www.cdc.gov/coronavirus/2019-ncov/hcp/index.html
- Read about BiPAP and COVID-19 from the World Association of Societies of Anaesthesiologists here: https://www.wfsahq.org/resources/coronavirus
- Ontario Public Health Website: https://www.publichealthontario.ca/
- Canadian Public Health Website: https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html

Shownotes by Michael Pratte