Case Presentation: ‘Non-specific Viral Illness?’

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Case Presentation: History of Present Illness

- A previously healthy 54-year-old male presented to the Emergency Department at his local hospital with a chief complaint of “I feel terrible”.
- He reports that he was in his usual state of health until 4 days ago, when he experienced sudden onset of fever, headache, malaise and body aches.
- Yesterday, he began having nausea, vomiting, abdominal pain and watery diarrhea.
- He has been unable to keep any food or liquids down, which prompted his visit to the ED.

Case Presentation

- The patient is originally from Afghanistan but immigrated to the US 22 years ago.
- He currently resides in a small community outside of Atlanta with his wife and 2 teenage children.
- He works from home as a software engineer.
- They have 1 dog, 1 cat and 3 hamsters as pets
- He does not smoke, drink alcohol or use recreational drugs
- Travel history was not assessed

Case Presentation: Physical Exam

- Notable Physical Exam Findings:

Temp: 39.2°C BP: 105/55 P: 118 R: 20 O_2: 98% on room air

- Alert, appears tired and uncomfortable, using the bedside commode in the ED room frequently
- Dry mucous membranes
- Anicteric sclera
- Tachycardia
- Mild diffuse abdominal tenderness

Case Presentation: Laboratory and Radiology

- Initial labs obtained demonstrated normal WBC and hemoglobin
- Platelets: 70 (150-400 x10E3/uL) ↓
- Potassium: 2.2 (3.5-5.1 mmol/L), Magnesium: 0.9 (1.8-2.5 mg/dL) ↓
- Creatinine: 1.8 (0.6-1.3 mg/dL) ↑
- AST: 500 (15-41 U/L), ALT: 650 (7-52 U/L) ↑
- Rapid PCR for SARS-CoV2: negative
- Chest X-ray and Abdominal X-ray: normal

Case Presentation

- The patient remained in the Emergency Department for 36 hours due to lack of bed availability, but was eventually admitted to a general medical unit with a diagnosis of ‘non-specific viral illness’.
- The patient’s fevers continued, so the Infectious Diseases consult service was contacted on hospital day 2 to assist with the evaluation.
  - On further questioning, the patient reported that he traveled to Afghanistan to visit family 3 weeks ago and returned to the US 1 day prior to onset of symptoms.
  - While he was in Afghanistan, his uncle, who works in a slaughterhouse, became ill and is now hospitalized in Kandahar.
  - Prior to taking him to the hospital, the patient helped care for him at home. His uncle is still in the hospital, and he heard that he ‘is not doing well’ but is unsure of any specific diagnosis.

Case Presentation

- The Infectious Diseases team uses several on-line resources to review current outbreaks in Afghanistan, including those associated with animal contact
- The ID team contacts Infection Control to share their concerns about the possibility of a special pathogen infection in this patient given his travel history, clinical presentation and sick contact.
- The patient is placed in contact and airborne isolation
- The Infection Control Medical Director contacts the local health department, and also calls the main number at Emory University Hospital since she knows that they are the Regional Special Pathogen Treatment Center (RESPTC).

Case Presentation: Follow-up

- The patient's wife called his family in Afghanistan and discovered that his uncle died at the hospital earlier this morning, and he was diagnosed with Crimean-Congo hemorrhagic fever.

- The determination is made to transfer the patient to the Serious Communicable Diseases Unit (SCDU) at Emory for further care, where the diagnosis of CCHF is confirmed via PCR

- He is treated with aggressive supportive care and an investigational therapeutic agent, and eventually recovers from his illness and is discharged home.

Takeaways

- Patients infected with special pathogens, including CCHF, may present with a very non-specific constellation of signs and symptoms, resembling more common diseases
- It is important to obtain an epidemiologic history, including travel history, sick contacts, etc. on all patients
  - This should be done on **initial** presentation, and clearly documented in the Electronic Health Record (EHR) so all providers can review the information.
  - Can use EHR flags, pre-existing travel programs
- Use resources and decision support to determine current outbreaks, correlate with epidemiologic history and symptoms

Takeaways

- Utilize Infection Control (and Infectious Diseases, if available) for guidance and PPE posture.
  - Ensure there are existing and accessible protocols for evaluating patients with suspected special pathogen infections

- Know your points-of-contact at your Regional Special Pathogen Treatment Center (RESPTC) and local health department

- This patient was hospitalized and visited several settings (ED waiting room, ED, floor, radiology) prior to concerns surfacing for a special pathogen infection and utilization of appropriate PPE.
  - This likely resulted in many exposures that will need to be investigated.

References

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- ProMED (International Society for Infectious Diseases) https://promedmail.org
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