CORONAVIRUS DISEASE 2019 (COVID 19) AND ACUTE PANCREATITIS

Nicole Lopez Canizares M.D.,Omkaar Jaikaran, D.O., Dr. Michael Timoney, M.D.
Department of General Surgery, New York University Langone Health Brooklyn

Background

- Acute pancreatitis is associated with a variety of etiologies, including several viral infections.
- SARS-CoV-2, the virus responsible for the COVID-19 pandemic, was initially thought to be primarily responsible for respiratory illness, but as the disease has become more prevalent, it is clear that COVID-19 is a multisystem disease with a wide array of clinical manifestations.

Introduction

- Coronavirus is an enveloped, non-segmented positive-sense, single-stranded RNA viruses. SARS-CoV-2 belongs to the genus Betacoronavirus.
- It is widely known to cause disease of the respiratory, cardiovascular, hematological, and gastrointestinal systems.
- SARS-CoV-2 clinical manifestations range from an asymptomatic presentation to multiorgan dysfunction secondary to the immune-mediated inflammatory response vs cytokine storm
- While the most common presenting symptoms of COVID- 19 include fever, cough, and dyspnea, a patient with mild respiratory disease might present later as other organ systems become involved.

Case Description

Our patient is a 27-year-old male with no known past medical history who presented with ten days of shortness of breath and cough with associated fever, chills, and diarrhea. The patient reported a close sick contact confirmed to have COVID-19. While the patient noted improvement to the fever and chills, he developed progressive abdominal pain over the last three days prior to presentation to the emergency room. He described the pain as sharp epigastric pain radiating to the right side and back that was made worse with coughing. He endorsed anorexia and denied nausea or vomiting. Patient presented with normal vitals signs. Initial workup was significant for lipasemia of 2,831 U/L along with SARS-COV-2 detection.

The patient was admitted with pancreatitis which was suspected to be secondary to a viral etiology and was managed with intravenous fluids and slow advancement of oral intake. The patient was subsequently enrolled in a randomized controlled trial for hydroxychloroquine and was cleared for discharge home on hospital day three.

Discussion

Pancreatic cells express an elevated concentration of ACE2 receptors, the gateway for SARS-CoV. Studies have demonstrated the presence of the virus in the pancreas, as well as other organs expressing the previous receptor. High level of suspicion is needed when a patient is presenting with COVID-19 infection and abdominal pain, as this virus has been implicated in cases of idiopathic pancreatitis in the setting of COVID 19 infection.

Conclusions

Pancreatic injury has several etiologies including many viral pathogens and has been associated with COVID-19. As we continue to learn more about SARS-COV2 and its various disease manifestations it is important to consider COVID-19 as a possible cause of pancreatic injury in the patient with pancreatitis.

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