

## **Acute appendicitis possibly related to COVID-19 infection.**

Category: Medicine & Medical Specialties, Poster Presentation

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[Supplemental Video](#)

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### Introduction:

COVID-19 infection and pandemic restrictions have led to delay in the hospital presentations of acute appendicitis, thereby causing an alarming increase in complicated appendicitis. Although fecalith is a common cause of appendiceal obstruction, lymphoid hyperplasia and infectious processes also lead to lumen obstruction causing appendicitis. Viruses as an etiology of appendicitis in immunocompetent patients is well established with different strains of viruses like adenovirus, cytomegalovirus, Epstein - Barr virus and enterovirus.

### Case Presentation:

A 41 years old female patient presented to ER with complaints of 1-week history of diffuse abdominal pain. She was paraplegic after her spine tumor removal and had scoliosis. Her surgical history was significant for cholecystectomy. She denied fever, chills, dyspnea or diarrhea. She was tachycardic on presentation, but vitally stable otherwise. Abdominal examination revealed diffuse tenderness without signs of peritonitis. Her initial laboratory workup showed leukocytosis of 11,800. Electrolytes and liver function tests were normal while lipase was 58. Her SARS-CoV2-RNA PCR test was positive. A contrast CT of the abdomen and pelvis showed an appendix which was distended up-to 12 mm with intraluminal fluid without adjacent inflammatory fat stranding. There were nonspecific fluid containing loops of small bowel and right colon which was consistent with viral illness. She was admitted for management of acute appendicitis.

She was managed with intravenous hydration, ceftriaxone and metronidazole, with which she improved clinically, hence surgical intervention was deferred. She was observed for three days during which time there was complete resolution of symptoms. Patient's lack of respiratory symptoms led to withholding steroids and remdesivir.

### Final Diagnosis:

Acute Appendicitis possibly related to COVID infection.

### Follow up and Discussion:

Studies have demonstrated the role of virus in inflammation of peyers patches through uptake of antigens from the gut lumen by extending dendrites into epithelium, thereby producing an immune response. Coronavirus infects the gut, and is uptaken by these lymphoid peyers patches. Hyperplasia of these peyers patches causes obstruction of appendicular lumen and triggers appendicitis.

### Learning Objectives

1. Although enteritis with diarrhea has been proven to be the commonest gastrointestinal manifestation of coronavirus infection, instances like this demonstrate appendicitis as a potential complication of COVID-19 infection.
2. While surgical intervention is the gold standard in the management of appendicitis, occasionally clinical improvement with conservative management, calls for a non-surgical management.