

HYPOTHERMIA IN COVID INFECTION: A Case Review & Report

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Background

SARS-Cov2 has many presenting symptoms. Meta-analyses have been conducted showing the most common symptoms of COVID infection are fevers, cough, and myalgia. Hypothermia is extremely rare, in fact, there was only one case report of hypothermia due to COVID infection reported in 05/2020 which had an unfavorable outcome. We present a case of a 27-year-old African American female with complaints of chills, nausea, vomiting, diarrhea, myalgia, and fatigue worsening over two days. She was hypothermic, hypotensive, and tachycardic upon arrival to the ED.

Case Presentation

A 27-year-old African American female with complaints of chills, nausea, vomiting, diarrhea, myalgia, and fatigue worsening over two days. She had no past medical history or sick contacts. She was hypothermic, 92°F, hypotensive, 59/25, and tachycardic, 127, upon arrival to the ED. She had a chest Xray and a non-contrast CT of the chest, abdomen, and pelvis which were unremarkable (image 1-3). Her labs were significant for hemoconcentration, elevated inflammatory markers, and neutropenic leukocytosis (WBC 26.7) and (abs Neutro 18.2) and lactic acidosis (5.2). She was treated with Cefepime and Vancomycin and aggressive fluid resuscitation with IV normal saline per surviving sepsis protocol.

Her COVID PCR resulted as positive, while the remainder of her sepsis and rapid flu work up remained negative. She suffered from multiple metabolic derangements including hypothermia, hyponatremia and a metabolic acidosis. She never became hypoxic and her symptoms and labs improved vastly without any typical COVID treatment (Remdesivir or Steroids). A V/Q scan was performed to rule out a DVT/PE after an elevated D-Dimer (1.32) and an Echocardiogram showed a severely hypokinetic right ventricle and LVEF at 55-60%. This was negative, however due to the severity of the patient's illness she was started on therapeutic Lovenox at 1mg/kg Q12h dosing. Current COVID guidelines recommend cautious fluid resuscitation with concern for worsening ARDS. However, she responded to fluid resuscitations and was discharged home three days later without ever developing respiratory symptoms.

This atypical presentation of COVID19 with hypothermia was treated with an equally atypical manner of aggressive fluids resulting in a positive outcome.

Results & Imaging



Discussion

In December 2019, a cluster of pneumonia was reported in Wuhan, Hubei China for the first time [1]. A corona virus was identified as the pathogen – SARS Cov 2 and the disease it caused called Covid 19. The disease emerged in China and spread rapidly throughout the world. SARS-Cov2 has many presenting symptoms. Thus, multiple meta-analyses were conducted showing the most common symptoms of COVID infection are fevers, cough, and myalgia. Hypothermia is extremely rare, in fact, there was only one case report of hypothermia due to COVID infection reported in 05/2020 which had an unfavorable outcome. In our case, our patient's first symptoms were tachycardia, nausea, vomiting, hypotension and hypothermia. She did not suffer from fever, cough, or myalgias as is most typical. Despite a thorough workup of her numerous metabolic abnormalities aside from a positive PCR for COVID 19 no other source of infection could be found.

Hypothermia is defined as a drop in body temperature below 35 °C. Acute causes of hypothermia include accidental hypothermia due to exposure to cold weather or cold-water immersion. Other causes of hypothermia can be metabolic, drugs, sepsis, and lesions in the posterior part of the hypothalamus. In about 10% of patients with sepsis, hypothermia instead of hyperthermia can be observed with the same elevated inflammatory cytokines. In our case while antibiotics were initially started to cover for sepsis, no bacterial infection was found and antibiotic coverage was stopped. Blood cultures, sputum cultures and urine cultures all were negative for acute infection. In our patient the nasal infection occurred without any typical symptoms of Covid 19. Here, we report the case of a patient with Covid-19 infection with atypical features characterized by hypothermia.

References:

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