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## Case Report

# Coronavirus Disease 2019 Suspicion: A Case Report Regarding a Male Emergency Medical Service Pilot With Newly Diagnosed Sarcoidosis



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## A B S T R A C T

A 38-year-old emergency medical service Bell 214 male pilot with a dry cough, fever, anorexia, fatigue, and sweating for the past 3 days; an oral temperature of 38°C; blood pressure of 105/65 mm Hg; heart rate of 94 beats/min; respiratory rate of 21 breaths/min; and pulse oximetry of 93% on room air was suspicious for coronavirus disease 2019. Surprisingly, reverse transcription polymerase chain reaction was negative, but bilateral hilar adenopathy was reported in his chest radiography as a new challenge. The pathologic report of the adenopathy biopsy was noncaseating sarcoid-type granulomas. Serologic tests showed a serum angiotensin-converting enzyme level of 58 nmol/mL/min. The bronchoalveolar lavage fluid CD4/CD8 ratio was 3.68. The bronchoalveolar lavage findings provided an accurate sarcoidosis diagnosis, and a high-resolution computed tomographic scan revealed stage 1 pulmonary involvement. Because of the pulmonary involvement, clinical manifestations, use of inhaled fluticasone, and need for longer and accurate follow-up and to protect against coronavirus disease 2019, he has been temporarily suspended until the final assignment.

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These days the world involved in the coronavirus disease 2019 (COVID-19) outbreak and rapid transmission, especially emergency medical teams with morbidity and mortality, needs early accurate diagnosis and patients to be quarantined for cutting the transmission chain.<sup>1</sup> Pilots of emergency medical services are at high risk, and taking care of their health and protecting them are very important.<sup>2</sup>

## Case Report

The patient is a previously healthy, 38-year-old emergency medical service Bell 214 male pilot who went to an air medical clinic with the chief complaints of a dry cough, fever, anorexia, fatigue, and sweating for 3 days. He denied other symptoms, tobacco or medication use, and significant past medical history. His total flight time was 810 hours, and he passed his last air medical checkup 128 days ago. His vital signs included the following: an oral temperature of 38°C,

blood pressure of 105/65 mm Hg, heart rate of 94 beats/min, respiratory rate of 21 breaths/min, and pulse oximetry of 93% on room air. A full clinical examination did not reveal any other problems. He saw active duty in the COVID-19 outbreak with a flight time of 52 hours air transferring suspected or confirmed patients.

With concerns about his health and spread of the virus, based on his clinical manifestations, the air medical examiner suspected COVID-19 and requested reverse transcription polymerase chain reaction (RT-PCR) for severe acute respiratory syndrome coronavirus 2 RNA (nasopharyngeal specimen). He was grounded and quarantined with prescriptions for diphenhydramine and naproxen and was instructed to follow up in the next 72 hours or sooner if worsening or new symptoms arose. The RT-PCR test was negative, so chest radiography was performed in accordance with the symptoms present. Surprisingly Bilateral hilar adenopathy was reported; therefore, the diagnosis and treatment process changed. The pathologic report of the specimen obtained from the adenopathy biopsy was noncaseating sarcoid-type granulomas. Serologic tests showed a serum angiotensin-converting enzyme level of 58 nmol/mL/min. The bronchoalveolar lavage fluid CD4/CD8 ratio was 3.68. All findings provided an accurate sarcoidosis diagnosis, and a high-

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resolution computed tomographic scan revealed stage 1 pulmonary involvement. After a full investigation, he had no other systemic involvement and was treated with inhaled fluticasone. Because of the pulmonary involvement, clinical manifestations, use of Fluticasone Inhaled Spray 250mcg/dose (1 puff a day), and need for longer and accurate follow-up and to protect against COVID-19, he has been temporarily suspended until the final assignment.

### Discussion

Unfortunately, similar symptoms in different diseases may lead to a misdiagnosis or delay in diagnosing important diseases, which can cause irreparable personal and social harms such as disability or death. After sufficient exposure to COVID-19–infected agents, symptoms present as fever, cough, fatigue, anorexia, shortness of breath, sputum production, and myalgias.<sup>3</sup> Diagnosis requires the detection of severe acute respiratory syndrome coronavirus 2 RNA by RT-PCR. Detection is better in nasopharynx samples compared with throat samples.<sup>4</sup>

COVID-19 presentations are very similar to acute sarcoidosis, which is rare but is a very troublesome disease for pilots; its diagnosis may be confusing, leading to a delay in treatment. Sarcoidosis is more common in the white population and typically has spontaneous

remission within 2 years.<sup>5</sup> Based on medical aviation regulations, because of the high probability of brain, heart, and lung involvement and treatment complications, pilots with sarcoidosis need a full systematic assessment and follow-up with no allowance to fly until follow-up completion and therapy cessation. However, they have a very low chance of returning to flying, even with restrictions.<sup>6,7</sup>

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