Could it be COVID-19? Atypical presentations in a pandemic

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Dear Editor,

We write in the midst of the COVID-19 global pandemic to share and stimulate discussion on the diagnostic challenge presented by novel coronavirus. The diverse and atypical symptoms attributed to COVID-19 infections require a high degree of suspicion in almost all patient presentations.^{[1],[2],[3]} This clinical ambiguity is amplified in the face of testing limitations,^[4] with delays in results and poor sensitivity, as well as atypical presentations of other conditions, as we encountered in this case.

Recently, a patient in their sixties arrived by emergency medical services to our rural hospital. They presented with agitation and delirium of such severity that the administration of both chemical and physical restraint was required for ambulance egress. The patient was febrile (37.9), tachycardic (110), normotensive, normopneic (SpO₂96%) with convincing cellulitis of the leg. Collateral history identified no preceding sick contacts or travel, and a history of fibromyalgia with no routine medication use.

After initial assessment in the negative pressure room, the patient was admitted to hospital with (1) droplet precautions, (2) IV fluids and (3) IV antibiotics for cellulitis. Altered sensorium persisted; head CT was negative. Blood and urine cultures, toxicology, chest X-ray [Figure 1], electrocardiogram and troponin were negative. The delirium lingered 4 days into admission while, interestingly, the fever resolved, and cellulitis, neutrophilia and markedly elevated CRP were decreasing. The possibility of atypical presentation of COVID-19 infection was again considered; nasopharyngeal swab however proved negative.{Figure 1}

On day 5, the patient developed a new fever of 38.7 degrees, prompting repeat investigations and a second COVID-19 swab. Chest X-ray [Figure 2] showed new patchy ground-glass left-upper lobe pneumonia. An oral macrolide was added along with salbutamol and tiotropium in light of the patient's 15 pack-a-year smoking history.{Figure 2}

The patient's respiratory status declined slightly in the following day with new cough, exertional shortness of breath and decreasing oxygen saturation to 92% on room air. A third chest X-ray [Figure 3] suggested multifocal pneumonia with COVID-19 in the differential. Fortunately, the patient improved over the ensuing 2 days; however, discharge preceded the results of the second COVID-19 swab, which, ultimately, proved to be negative. Given the clinical possibility of COVID-19 (1) public health was involved in discharge planning and (2) hospital occupational health was alerted to ensure that staff surveillance occurred if deemed appropriate.{Figure 3}

The COVID-19 pandemic has made clinical decision-making challenging. This case demonstrates the importance of a high index of suspicion in admitted non-COVID-19 patients, and repeated appropriate investigations to assist in further clarifying diagnoses. It raises the question of how best to manage patients who, during a pandemic, have clinical findings very suggestive of a contagious disease but have negative and/or pending swabs on discharge, and unconvincing contact or travel history within the context of increasing community spread.

Clinical management in the face of diagnostic uncertainty is something we understand well in rural and remote settings. In the absence of confirmatory testing, treatment decisions during a pandemic must be made that ensure patient and community well-being. In our case, consultation with public health helped guide outpatient management and follow-up of this patient with COVID-19-like atypical pneumonia – at their recommendation, the patient was instructed to remain in self-isolation until 24 h symptom free. It will be important for rural clinicians to share strategies and challenges in this evolving clinical landscape, as COVID-19 considerations continue to permeate most aspects of care.

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