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Delaying escalation of care for a COVID-19 patient

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Background

Since being reported on December 31 2019, COVID-19 rapidly escalated to a pandemic. Specifically in Detroit, as of March 28th 2020, there were 1075 cases and 23 deaths. The great number of patients rapidly overwhelmed various health systems in the metro Detroit area. Rapid identification of the disease is vital as preliminary reports have shown that multiple ED and clinic visits are associated with worse outcomes, likely due to delayed treatment. Our report describes the course of a COVID-19 patient who required multiple visits prior to diagnosis, and rapidly deteriorated.

Case Report

A 63-year old African American man presented to his PCP with sore throat, cough, and body aches. Patient endorsed symptoms for 4 days, no sick contacts, and flu swab was negative. Patient was diagnosed with a viral syndrome and prescribed rest and symptomatic care. The following day he went to the ED with worsening symptoms and hypotension and was sent home. The next day, patient went for a CXR (Figures 1A and 1B) where he developed SOB.

Due to his distress and presence of bilateral pneumonia, he was sent to the ED to rule out COVID. At the ED, patient endorsed a fever, SOB, and chills. His past medical history included asthma, hypertension, and diabetes. On exam, he was febrile but hemodynamically stable. Patient was ill-appearing, with decreased breath sounds on the left. Labs showed leukopenia, lymphopenia, and an AKI. COVID testing was sent. Patient was admitted, with airborne plus precautions, and antibiotics were started. On hospital day 3, patient became persistently febrile and hypotensive. ABG was done which showed a PaO2 of 55.9. Due to worsening respiratory status, patient was intubated and transferred to the MICU. CXR was repeated and showed worsening airspace opacities bilaterally, and small pleural effusions. (Figure 2A, B) COVID test came back positive and treatment began with Hydroxychloroquine, and use of Remdesivir pending. On hospitalization day 7, patient received Remdesivir and tocilizumab, with hopes that reduced systemic inflammation would lead to improvement of his ARDS.

Figure 1: Chest x-ray prior to admission showing left rather than right opacities consistent with atypical pneumonia. A: AP view B: lateral view

Figure 2: Hospital Day 3 CXR showing worsening airspace opacities within the lungs bilaterally, concerning for worsening multifocal pneumonia. As well as likely bilateral small pleural effusions.

Case Report

During a pandemic it is critical to practice with a high index of suspicion in order to escalate care as soon as it is necessary. We further highlight the worse prognosis that patients face, when they require multiple office or ED visits prior to admission.

Our report describes the course of a COVID-19 patient who required multiple visits prior to diagnosis, and rapidly deteriorated. Our patient had a standard presentation with cough, fever, body aches and sore throat, indicating that the possibility of COVID as the cause for the patient’s presentation should have been considered. During a pandemic it is vital to practice with a high index of suspicion. The importance of prompt identification of the illness becomes even more salient considering that current treatment approach is primarily symptomatic management, due to lack of clinically effective curative treatments. It may seem overly simplified, but the sooner a patient is able to receive these services, the more likely they are to recover. While our patient had multiple risk factors for deterioration due to COVID, such as HTN, and T2DM, our patient had two opportunities for escalation of care and identification of his underlying pathology that could have improved his prognosis. Further, our report is in line with preliminary findings that African Americans and patients who require multiple ED visits have more rapid deterioration and a more severe clinical course.

Discussion

Our report elucidates the importance of rapid identification of a patient with COVID. Our patient had a standard presentation with cough, fever, body aches and sore throat, indicating that the possibility of COVID as the cause for the patient’s presentation should have been considered. During a pandemic it is vital to practice with a high index of suspicion. The importance of prompt identification of the illness becomes even more salient considering that current treatment approach is primarily symptomatic management, due to lack of clinically effective curative treatments. It may seem overly simplified, but the sooner a patient is able to receive these services, the more likely they are to recover. While our patient had multiple risk factors for deterioration due to COVID, such as HTN, and T2DM, our patient had two opportunities for escalation of care and identification of his underlying pathology that could have improved his prognosis. Further, our report is in line with preliminary findings that African Americans and patients who require multiple ED visits have more rapid deterioration and a more severe clinical course.

Learning objectives

• During a pandemic it is critical to practice with a high index of suspicion in order to escalate care as soon as it is necessary
• We further highlight the worse prognosis that patients face, when they require multiple office or ED visits prior to admission
• Rapid identification of high-risk patients is even more vital for illnesses, like COVID, that lack definitive treatment and rely on supportive care
• Future work should be done to develop tools to identify high-risk patients in the office or ED

Sample Bibliography

5. Gubareva LV, Estes NL, Gubareva MA, et al. Multifocal pneumonia. As well as likely bilateral small pleural effusions. Figure 2: Hospital Day 3 CXR showing worsening airspace opacities within the lungs bilaterally, concerning for worsening multifocal pneumonia. As well as likely bilateral small pleural effusions.

Table 1: Trend of labs and markers associated with increased morbidity and mortality for COVID patients

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