



CASE REPORT

When Influenza A and COVID-19 Infections Co-exist: A Case Report

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Introduction

Since the first case of COVID-19 infections was reported to the World Health Organization (WHO) Country Office in China on December 31, 2019, the infection has spread all over the world and was declared a global pandemic by WHO on March 11, 2020. The United States has been hit hard by the outbreak, and as of April 26, 2020 [1], more than 965,000 confirmed cases and 54,850 deaths were reported in the US alone [2]. The flu season in the United States typically occurs in the fall and winter, with most of the cases diagnosed between December and February [3]. Despite that, the exact timing and duration of flu seasons can vary from year to year, with seasonal activity lasting as late as May and cases reported year-round [4]. We present a patient who has been infected with both influenza and COVID-19 viruses simultaneously, aiming to increase awareness among physicians to the possibility of concurrent infection with these two viruses.

Case Report

A 55-year-old man, who presented to our emergency department complaining of pleuritic chest pain for two days before admission. At the time of evaluation, he endorsed the presence of minimal sore throat and dry cough in the absence of fever, shortness breath, recent travel, or contact with sick people. His vital signs were within normal limits and physical examination was positive for right-sided scattered wheezes but otherwise unremarkable. In the emergency department he had a chest X-ray which showed right perihilar airspace opacity and tested positive for influenza A. He was admitted

to our service as a case of influenza pneumonia. The patient was started on Tamiflu® (oseltamivir phosphate, 75 mg twice daily), ceftriaxone and azithromycin and after two days of treatment, he spiked a fever of 102.6 F. His labs at the time showed lymphopenia with an absolute lymphocyte count of 500 cells/mm³. Repeated chest X-ray did not show any changes from the previous one. He was started on a broad spectrum antibiotic for possible bacterial super-infection and COVID-19 by PCR was done to rule out possible co-infection. His COVID 19 PCR test came back positive and broad-spectrum antibiotics were stopped. Patient clinical condition remained stable and he was discharged home.

Conclusion

Based on early reports from china, co-infection with other respiratory pathogens in patients with COVID-19 was considered rare [4], although on April 15, 2020 and based on analysis of 1217 specimens tested for SARS-CoV-2, of which 116 tested positive, Kim et al. in their research letter reported co-infection rate to be 20.7% with a co-infection incidence for influenza A and B of 2.6% and 0.7% respectively [5]. Interestingly, during the first 15 weeks of 2019, a total of 57651 influenza cases were reported to Center of Disease Control (CDC) compared to 54013 cases in the same period of 2020 [6]. After analyzing the reported cases during the period of 11-15 week we noticed a significant drop of more than 50% in cases number in 2020 when compared to 2019 (8305 vs. 16157 cases, respectively) [6]. While it remains unknown if this drop is real or it merely reflects testing underutilization, as the number of influenza tests per-

formed is not being reported by CDC. Differentiating between COVID-19 and influenza infections might be difficult if based solely on symptoms, due to the similarity of clinical presentation [4,7]. Giving the current widespread prevalence of COVID-19 infection around the globe and giving the availability of treatment for influenza infection, physicians should be aware of the possibility of co-infection with appropriate utilization of available resources.

References

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