

Mycoplasma Pneumoniae Pneumonia during COVID Pandemic

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ABSTRACT

A 69-year-old male presented to hospital with fever, followed by dry cough, persistent asthenia and impaired general condition of 1-week duration. On initial examination patient was dyspnoeic & tachycardic with type-1 respiratory failure, Initial Blood analysis showed elevated inflammatory markers and chest X-ray images were suspicious of bilateral COVID-19 pneumonia. Covid-19 antigen test and real-time reverse transcription PCR were sent which turned out to be negative. But in view of high clinical suspicion of COVID-19 he was admitted to ICU and treatment was initiated with Azithromycin, corticosteroids, Low Molecular Weight Heparin and Oseltamivir. Repeated tests for SARS-CoV-2 were negative. Thoracic high resolution CT showed features of interstitial lung disease pattern possibly of infective virology etiology (Co RADS category-5) with overall percentage of lung involvement is approximately 75% by visual assessment. To Rule out other infectious pathogens cultures and atypical pneumonia panels were sent which came to be positive for Mycoplasma Pneumonia. Conservative management was continued for him and became symptomatically better. Context of this case report is that clinical presentation of COVID-19 is not specific Nowadays, in this SARS-CoV-2 community pandemic time we cannot forget that other entities can mimic its clinical features and miss the appropriate diagnosis.

Keywords: Mycoplasma Pneumoniae Pneumonia, COVID Pandemic, COVID-19 pneumonia

BACKGROUND

The pandemic of coronavirus disease 2019(covid-19) caused by severe acute respiratory syndrome coronavirus 2 has become a public health emergency in the state of Kerala, India. Here we report a rare case of Mycoplasma pneumonia with typical symptoms and chest CT finding of COVID -19. It is necessary to identify pathologies with a similar clinical presentation in order to define the differential diagnoses, especially in patients presenting with repeatedly negative diagnostic tests.

CASE PRESENTATION

A 69 year old male with no co morbidities came to the emergency room with complaints of fever, dry cough, breathlessness and sore throat for past 1 week. There was no history of contact with SARS-CoV-2 patients and all family members were asymptomatic. A rapid antigen test for SARS-CoV-2 was performed on the 3rd day of onset of symptoms in a private laboratory showing a negative result. On 4th day he was then taken to a local community hospital for medical advice where he was treated

symptomatically and discharged. Next day he developed fever spikes and breathlessness again and dyspnoea was worsening on following days following which he was brought to our hospital, which is a tertiary level hospital where an intensive care unit (ICU) facility is available. On clinical assessment in emergency department, he was conscious oriented, haemodynamically stable but dyspnoeic.

Vital signs were within the normal range except for fever (38.5°C) & hypoxia maintaining 95% saturation with 5L Oxygen via face mask. Physical examination revealed a mildly impaired general condition, no hepatosplenomegaly, No lymphadenopathy nor meningism. He denied smoking, diarrhoea, dysgeusia or anosmia, He is an occasional alcohol drinker.

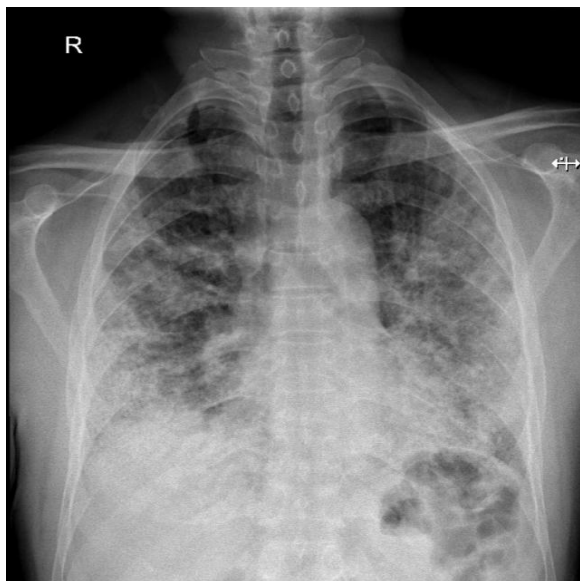


Figure 1 X-ray Chest



Figure 2 CT- CHEST



Figure 3 CT CHEST

His Covid -19 antigen test and Real-time RT-PCR assays were rechecked on the day of admission and reported negative. Chest radiography (figure 1) showed

interstitial infiltrates in both lungs and laboratory examination revealed the following: Leucocytes: 13.61 K/uL; neutrophils: 78.2%; lymphocytes: 9.7%; haemoglobin: 14.8 g/dL; platelets: 460 K/uL; international normalised ratio: 1.22; lactate dehydrogenase: 370 U/L; Urea-19.2; Creatinine-0.87; ferritin: 363 ng/mL; C reactive protein: 103.97 mg/dL;. In view of high clinical suspicion of COVID-19 he was admitted to intensive care unit and was started on Azithromycin, corticosteroids, Low Molecular Weight Heparin, Oseltamivir and advised awake proning. Thoracic high resolution CT showed features of interstitial lung disease pattern possibly of infective virology etiology (Co RADS category-5) with overall percentage of lung involvement approximately 75% by visual assessment (Figure-2, 3). To Rule out other infectious pathogens, cultures and atypical pneumonia panel (*Mycoplasma*,

Legionella, Coxiella, *Chlamydia pneumoniae*, adenovirus, Respiratory syncytial virus, Influenza A & B, Parainfluenza 1, 2 & 3) were sent which came to be positive for Ig M Mycoplasma Pneumonia.

Treatment

Once the presumptive diagnosis of Mycoplasma Pneumonia was made, he was continued on Azithromycin and other supportive measures.

Outcome and Follow-up

In the following 72 hours, patient's clinical status improved, fever spikes started decreasing and respiratory parameters improved, and the oxygen support to <30%. HE was discharged by 7th day of in hospital admission and the patient was kept on follow up and at 1 month SARS-Cov2 IgG and IgM antibodies were tested using VIDAS SARS-CoV2 IgG &IgM and was found to be negative.

DISCUSSION

Although, initially, Kerala's strategies in containing COVID-19 was a success, the state has seen a surge in cases post-Onam (festival in Kerala) and has reported maximum number of new cases in late-October 2020. COVID-19 has a heterogeneous clinical presentation in different population, most infected people will develop mild to moderate illness and recover with symptomatic management and home quarantine, but 12-15% of cases progress to severe disease, and about 5-6% become critically ill.

In a critically ill patient, the treatment is often empirical according to the initial provisional diagnosis, while awaiting a definitive microbiological result. There have been several cases reported all over the world where, In spite of patients with high clinical suspicion of Covid-19, The test results tends to remain negative initially but later confirmed positive after repeated tests done serially (1), In our case, the new onset hypoxia (type-1 Respiratory failure) with

laboratory and clinical data suggested high suspicion of COVID-19, so he was managed as per National Clinical Management Protocol for COVID-19⁽⁷⁾⁽²⁾, with a transitional good response. But with repeatedly negative test results with more sensitive and specific microbiological tests (RT-PCR) an HR-CT scan was done in order to establish the aetiology and find the extent of damage to the lungs, which showed extensive Bilateral approximately 75% areas of predominant subpleural and peripheral ground glassing and consolidation with features of interstitial lung disease pattern suggesting possibility of infective viral etiology of CO-RADS category-5⁽³⁾. There studies suggesting chest CT may have higher sensitivity in diagnosing of COVID-19 than RT-PCR, and may have a role as the first step in diagnosis and follow-up to clinical response⁽³⁾.

Despite high suspicion of covid-19 etiology, Diagnostic work-up was completed with serological testing for other atypical pneumonia which lead to the crucial diagnosis of Mycoplasma pneumonia⁽⁴⁾. **Mycoplasma pneumoniae** usually causes a mild to moderate illness, and the mortality is quite low. However, **severe** cases do occur, and these cases require early administration of anti-mycoplasma agents and corticosteroids⁽⁵⁾. The clinical presentation of Mycoplasma Pneumoniae Pneumonia (MPP) is non-specific and resemble to the prodromal symptoms of a viral infection effecting the respiratory tract; however, exudates or lymphadenopathy are rarely seen in MPP, Most commonly, patients present with pulmonary symptoms like fever, cough, breathlessness, myalgia or extrapulmonary symptoms like Diarrhoea, Earache, skin rashes etc.. The gold standard for serological diagnosis of Mycoplasma Pneumonia is a four-fold change in antibody titers over time (IgM antibody titers rise earlier than do IgG antibodies). The sensitivity of IgM assays increases with the duration of symptoms, approaching more than 70-80% after 16 days of symptoms.

Mycoplasma does not have a cell wall, which makes the choice of antibiotics restricted to those that act on the bacterial ribosome to inhibit protein synthesis (6). These antibiotics include macrolides, tetracyclines, ketolides & streptogramins. Among the drugs Azithromycin (macrolide) remains the drug of choice, with better tolerance and a longer half-life than the others, which allows for a shorter course of treatment. In our case, the final diagnose of Mycoplasma Pneumonia was made and treatment with macrolide showed improvement in his clinical condition.

CONCLUSION

Nowadays, in the context of SARS-CoV-2 community pandemic, we cannot forget that COVID-19 clinical presentation is not specific and other entities like atypical pneumonia can mimic its clinical features. it is necessary to identify pathologies with a similar clinical-analytical presentation in order to define the differential diagnoses, especially in patients presenting at atypical ages or with repeatedly negative diagnostic tests.

Notes on Patient Consent

Patient consent obtained.

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