



## The First Case Definition of Suspected Case of COVID-19 by WHO: Whether it was Incomplete?

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### Editorial

A 32-year-old Filipino male presented to our hospital on February 1<sup>st</sup>, 2020 with 10 days history of fever, dry cough, body ache and shortness of breath. Initially, he was admitted to the floor and started on antibiotics for community acquired pneumonia. His chest X-ray revealed bilateral pneumonia. Initial lab investigations revealed white cell count 7,300, neutrophils 86%, lymphocytes 9.6%, platelet count 1,75,000, C-Reactive protein 123 mg/l, procalcitonin 0.07 ng/ml, creatinine 0.98 mg/dl, serum sodium 131 mEq/l and negative upper respiratory infectious panel. He was given oxygen through nasal cannula. On subsequent day, he was shifted to intensive care unit in view of worsening oxygenation.

Based on initial clinical picture and lab findings, the diagnosis of viral/atypical pneumonia was made, and patient was shifted to ICU negative pressure isolation room. We planned to send testing for novel coronavirus as his upper respiratory infectious panel which tests for viral and atypical pathogens were negative but as the patient did not meet the case definition of suspected coronavirus disease at that time, the sample for novel coronavirus could not be sent [1]. The case definition of suspected case at that time included patient with respiratory symptoms consistent with the coronavirus disease along with history of travel and/or residence in specific geographical location or history of contact with confirmed or probable case. Though respiratory symptoms which could not be explained by any other diagnosis were present in our patient but there was no history of travel, residence or contact.

Patient condition continued to deteriorate over next few days in terms of worsening of chest X-ray and his oxygen requirement continued to increase. Again, we planned to send sample for coronavirus testing, but it could not be sent this time also in view of absence of epidemiological link. Finally, he was intubated on fifth day of admission in view of worsening dyspnea and hypoxia. At this point, testing for novel coronavirus was requested third time and discussed with epidemiologist and subsequently sample was sent. We received the positive report for novel coronavirus after few hours.

Patient condition continued to worsen on ventilator, so he was shifted to a center where ECMO facility was available. As per information, patient was discharged from hospital after about 120 days of hospital stay which included more than 90 days on ventilator and more than 60 days on ECMO.

Though it was included later in the case definition of suspected case by WHO, we think case definition of suspected case must also include those patients who present with typical symptoms and the symptoms cannot be explained by any other diagnosis irrespective of their travel, residence or contact history, as in our patient who presented with typical symptoms and his upper respiratory infectious panel testing was negative and there was no epidemiological link in terms of contract, travel, or residence history [2].

Moreover, such considerations should be the part of case definition from the very beginning for diseases which has the epidemic or pandemic potential, in which human to human transmission is possible and where asymptomatic state is quite common since relying on the epidemiological link to meet the requirement of case definition of suspected case can be misleading particularly when it is difficult to identify contact if contact remains asymptomatic.

### References

- WHO. Global Surveillance for human infection with novel coronavirus (2019-nCoV): Interim guidance. 2020.
- WHO. Global surveillance for COVID-19 disease caused by human infection with the 2019 novel coronavirus: Interim guidance. 2020.