Case report: a COVID-19 reactivation case

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Abstract

The novel Coronavirus, named SARS-COV-2, is responsible of the COVID-19. It is a viral pneumonia that appeared in December 2019 in Wuhan, China, and is causing a pandemic. Most of patients present mild symptoms, but in many other patients, acute respiratory distress (ARDS) is more likely to be developed. The actual problematic is the appearance of cases with virus reactivation. We report a case of virus reactivation in a COVID-19 patient with ARDS.

Introduction

The novel Coronavirus, named SARS-COV-2, is responsible of the COVID 19. It is a viral pneumonia that appeared in December 2019 in Wuhan, China, and is causing a pandemic. COVID-19 could induce symptoms including fever, dry cough, dyspnea, fatigue in patients, and might result in severe acute respiratory syndrome (SARS) and even death in severe cases. The diagnosis of COVID-19 is usually done by PCR on nasopharyngeal and throat swab samples. As of today, the curative treatments are still debated. The actual problematic is the appearance of cases with virus reactivation. We report a case of virus reactivation in a COVID 19 patient with ARDS.
An orotracheal intubation had been performed and the patient was put under continuous sedation and mechanical ventilation for 8 days. The evolution was marked by a clinical and biological improvement, the inflammatory syndrome decreased (ferritinemia at 1050) and the lymphocyte account increased (at 1100). Weaning of mechanical ventilation was started then, and the patient had been extubated after 8 days of mechanical ventilation. Ferritinemia at 8500 ng/mL, elevated CRP at 480 mg/L, elevated fibrinogen at 8.42g/L, and lymphopenia at 200.106/uL. A second SARS-COV-2 PCR was positive as well. A thoracic CT-Scan was performed (Figure 2), showing worsening of radiological images. Which indicated the possible reactivation of COVID-19. The patient died 10 days later due to multi-organ failure secondary to cytokine storm.

**Discussion**

Nowadays, The SARS-COV-2 is responsible of a worldwide pandemic. It is causing a large spectrum of disease, from mild cases to life-threatening. With a high risk of developing ARDS and/or multiple organ failure [1]. Patients with positive SARS-COV-2 RNA on respiratory tract specimens are considered COVID-19 positive. Therefore they are an infectious source, whether they are symptomatic or not [1]. The virus reactivation or reinfection is still poorly investigated. Most of the cases reported in literature, are asymptomatic, and have been detected during routine tests [1,2]. No case of ARDS patient has been reported [2]. We believe that our patient is a first case of possible reactivation in ARDS case. In favour of our assumption are the clinical and biological deterioration that might be due to a reactivation of the viral process and the cytokine storm. We can not exclude the possibility of false negative SARS-COV-2 PCR, in fact the result of the SARS-CoV-2 RNA test depends on the viral charge in the specimen [1]. Therefore, it is possible to have false negatives for oropharyngeal or nasopharyngeal swab tests. It could be explained by many factors, such as, the site of test, the operator’s experience, and the viral load. The Bronchoalveolar lavage fluid (BALF) specimen, although it has a high exposure risk, it is considered accurate. Moreover, SARS-CoV-2 RNA can be found in patient’s sputum, blood, or stool swab by RT-PCR. In order to maximize sensitivity it is more effective to multiply tests [1,2]. Finally, we recommend a larger cohort in order to investigate more the characteristics of the COVID-19 reactivation.

**Conclusion**

Covid 19 reactivation is a new concept and a real challenge for practitioners. It does need more investigation in order to improve our patients management.

**Competing interests**

The author declares no competing interests.

**Authors’ contributions**

The case report was written by Mohamed Anass Fehdi and Anas Erragh, the figures was assured by Amine Zerhouni and the references by Ouissal Aissaoui, the 1st review by Pr Afak Nsiri and the 2nd review by Pr Rachid Alharrar. All the authors have read and agreed to the final manuscript.

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