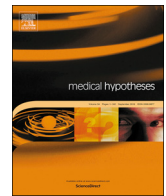




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## MDA5 should be detected in severe COVID-19 patients



The Novel Coronavirus-infected Disease (COVID-19), the global pandemic, has killed 198,842, according to WHO report (27 April 2020), and the global mortality is close to 7%. ARDS is the most important and direct reason to the mortality of COVID-19. What's terrible is that patients develop ARDS and “white lung” pattern from the first symptom, and the median time was only 8 days [1].

In the autopsy and pathological findings of the deceased patients [2], in addition to the lung, the kidney, heart, spleen, liver and vessels of the patient were involved. Even lots of skin manifestations have been reported [3,4]. Besides, a large number of immune-related inflammatory cell infiltration, and abnormal T cell expression were noted in those organs.

As a rheumatologist, those symptoms remind us a special rheumatic disease, anti-MDA5 associated dermatomyositis with rapidly progressive interstitial lung disease, which has the similar characteristics. Interestingly, MDA5 also play a critical role in the other two severe coronavirus infected disease happened in this century, MERS and SARS [5].

COVID-19 is a new disease caused by a novel coronavirus infection. However, there is no effective antiviral at present, and the vaccine still has a long way. Fortunately, a few medications have been demonstrated to having good efficacy. Some of them are anti-rheumatism drugs, such as hydroxychloroquine [6], tocilizumab [7]. The primary task of in treating COVID-19 aims to reduce mortality, which requires multi-disciplinary collaboration. Rheumatologists' advice should be taken into consideration when developing treatment plans. It's necessary to screen the MDA5 for the diagnosis and treatment in severe COVID-19 patients, due to the crucial role of MDA5 in coronavirus. Besides, rituximab and JAKi might be potential candidates in treating severe COVID-19 patients, since they had shown great efficacy in treating clinical amyopathic dermatomyositis with RP-ILD [8].

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### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.mehy.2020.109890>.

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