

**Letter to the Editor of COVID-19 Induced New-onset Psychosis: A Case Report from Oman**

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To the Editor

I have two comments on the interesting case report by Al-Busaidi et al<sup>1</sup> published in September 2021 issue of the *Oman Medical Journal*.

First, Al-Busaidi et al<sup>1</sup> described a case of a 46-year-old Omani patient with COVID-19-related psychosis. They addressed possible contributory factors for the condition, namely the relationship between brain circuitry and infection, the inadvertent iatrogenic effects of medications utilized in managing COVID-19, and diathesis-stress correlated with the catastrophe of the pandemic. We presume that the following point is plausibly contributory. Psychosis is a neurodevelopmental condition with a genetic predisposition. The major histocompatibility complex, which is one of the genetically diverse regions of the genome, encodes hundreds of genes essential to immunity and susceptibility to various disorders such as psychosis spectrum disorders. Indeed, certain human leukocyte antigens (HLA) variants are linked to the development of psychosis.<sup>2-4</sup> It is plausible that COVID-19 during the critical period of the infection might be particularly detrimental and directly interacts through unrecognized pathophysiological mechanisms with certain HLA variants and, thus, it increases the vulnerability of the genetically susceptible individuals to psychosis. Regrettably, Al-Busaidi et al<sup>1</sup> didn't take into consideration defining the HLA variant of the studied patient. In-depth studies are needed to verify the possible role of HLA genes in emerging COVID-19-induced psychosis.

Second, the case in question could truly expand the spectrum of the COVID-19-induced neuropsychiatric disorders reported in the literature.<sup>5</sup> Numerous risk and extrinsic factors were found to contribute to the emergence of the COVID19-related neuropsychiatric conditions. The risk factors included younger age, female gender, constrained resources, and antecedent psychiatric or physical illnesses. The extrinsic factors involved high infection and mortality rates, long lockdowns, low confidence in the government, and ineffective measures against social and economic aftermaths.<sup>5</sup> It is expected that COVID-19-induced neuropsychiatric cases, including psychosis are expected to rise globally as a result of continuing COVID-19 pandemic secondary to defective vaccination program against COVID-19 in many parts of the world and the emergence of new variants of COVID-19. We believe that the COVID-19 neuropsychiatric health pandemic would be the next to be faced after the vanishing of the COVID-19 pandemic. Therefore, implementing effective psychiatric surveillance and care and preventive measures to mitigate factors correlated with the occurrence of the COVID-19-induced neuropsychiatric conditions at the national level are deemed crucial.

## References

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