

A letter in Reply: COVID-19 Induced New-onset Psychosis

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We appreciate comments from Al-Mendalawi [1] on our case report [2] and on the merit of exploring cytokine and immunosuppression in the context of psychosis. In our case report, we overlooked the literature suggesting the potential role of cytokine and immunosuppression in the development of psychosis despite emerging evidence that cytokine profile might be critically associated with COVID-19/SARS-COV2 infection and its severity [3]. In line with Al-Mendalawi's assertion, COVID-19/SARS-COV2 has been widely established to trigger activation of central and peripheral cytokine which may result in "cytokine storms" [3] and weakening of the blood-brain barrier. Such pathological processes compromise the integrity of the brain circuits with all the consequences that can result, including the onset of obscured consciousness and something resembling psychosis [4]. Along with this, the occurrence of overt neurological events as a result of COVID-19/SARS-COV2 infection has been observed including triggering acute and ischemic strokes. The hallmarks of encephalopathy or encephalitis via brain scans have been documented [5,6]. It remains to be seen whether the observed psychosis results from a specific degradation of the brain circuits or is part of a global breakdown of the brain. More studies, therefore, are needed to examine how cytokine storm and operate at molecular, synaptic, local circuitries, and systems to 'produce' psychosis. If the hypothesis of the link between COVID-19 and neuroimmunology will withstand further scrutiny, then the potential of bringing psychoneuroimmunology into our quest to understand psychosis will open a new chapter for

studying psychiatric disorders. We are therefore grateful to Al-Mendalawi for bringing this matter to our attention.

References

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