

An Inflammatory Mediated Hypothesis of COVID-19 Psychosis

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Abstract : In this case report, we provide an example of an asymptomatic COVID-19 positive patient who presented with new-onset psychosis with severe paranoid delusions. He was seen in our ED after ingesting isopropyl alcohol which he reported was an attempt to escape presumed attackers, which at the time was logical to the patient. The patient's family had COVID-19 symptoms that corresponded to those typically observed from the Omicron variant. The patient was treated successfully, within ten days, with Risperdal twice-daily dosing resulting in the resolution of the patient's delusions and improved insight regarding the events that led to his hospitalization. In this work, we examine possible contributing factors to new-onset psychosis in the context of COVID-19, a phenomenon that is becoming increasingly notable in the literature. One area of importance is the already established inflammatory hypothesis of psychosis in which defects in the innate immune system, which result in its overactivation, may play a role in a typical first-episode psychosis, in addition to subsequent episodes. Given that COVID-19 is known to cause derangements in the innate immune system, such as cytokine storm reactions, this link may be critical in further understanding the etiologies of new-onset COVID-19 psychosis and its risk factors. Also included in this work is a brief review of antipsychotic interventions that have been described in the literature to date for the first episode of COVID-19-related psychosis. This will explore the potential of some antipsychotics to innately diminish the production of pro-inflammatory cytokines, further enhancing their usefulness in COVID-19 first-episode psychosis patients.

Keywords : COVID-19, first break psychosis, inflammatory hypothesis of psychosis, Risperdal

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