CMV seropositivity tied to cortical surface area in schizophrenia

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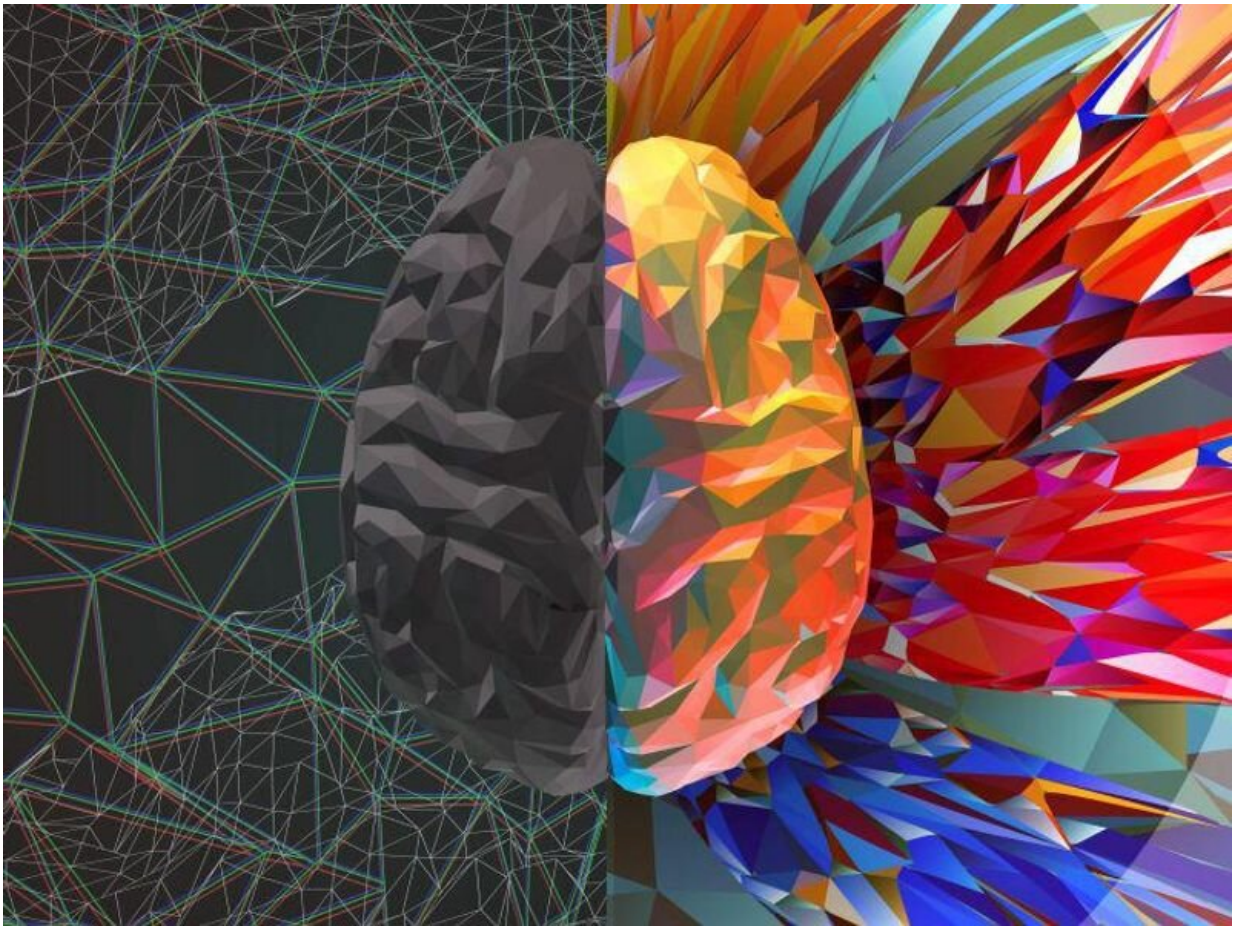

For adults with schizophrenia spectrum disorders, previous

cytomegalovirus (CMV) infection is associated with smaller total cortical surface area, according to a study recently published in *Schizophrenia Bulletin.*

Dimitrios Andreou, M.D., Ph.D., from the University of Oslo in Norway, and colleagues examined whether CMV exposure is associated with smaller cortical surface area or cortical thinning in a study involving 67 adults with schizophrenia spectrum disorders and 262 adult healthy controls. Solid-phase immunoassay techniques were used to measure circulating CMV immunoglobulin G antibodies. On T1-weighted magnetic resonance imaging scans, the total cortical surface area, regional cortical surface areas, and overall mean cortical thickness were measured.

The researchers identified a significant diagnostic group-by-CMV status interaction on the total surface area in the whole sample analysis. There was a significant association observed for CMV antibody positivity with smaller total surface area among patients, but not among healthy controls. Higher CMV antibody concentrations were also significantly associated with smaller total surface area in a post hoc analysis, and inverse associations were seen for CMV antibody positivity with 14 left and 16 right regional surface areas, which were mainly in the frontal and temporal lobes. There was no association observed for CMV infection with overall mean cortical thickness.

"We have shown that CMV seropositivity, reflecting previous CMV infection and current latency, is associated with smaller total cortical surface area and smaller regional surface areas mainly in the frontal and temporal lobe in patients with schizophrenia spectrum disorders," the authors write.

More information: Dimitrios Andreou et al, Cytomegalovirus Infection Associated with Smaller Total Cortical Surface Area in

Schizophrenia Spectrum Disorders, *Schizophrenia Bulletin* (2022). DOI: 10.1093/schbul/sbac036

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