Inflammatory biomarkers may impact risk of schizophrenia

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(HealthDay)—Specific inflammatory biomarkers may impact the risk of developing schizophrenia, with a protective effect noted for C-reactive protein (CRP) and a risk-increasing effect for soluble interleukin-6 receptor (sIL-6R), according to a study published online Nov. 1 in *JAMA Psychiatry*.

Fernando Pires Hartwig, from the University of Pelotas in Brazil, and colleagues performed a two-sample mendelian randomization study to examine whether inflammatory biomarkers impact the risk of developing schizophrenia. The authors used summary association results from large consortia of candidate gene or genome-wide association studies. Gene-inflammatory biomarker associations were estimated in pooled samples that ranged from 1,645 to more than 80,000 individuals, and gene-schizophrenia links were estimated in more than 30,000 cases and more than 45,000 ancestry-matched controls.

The researchers found that using 18 CRP genetic instruments, the pooled odds ratio estimate was 0.9 (random effects 95 percent confidence interval, 0.84 to 0.97) per twofold increment in CRP levels; the results were consistent using different methods of mendelian randomization and with a more conservative set of instruments. Per twofold increment in sIL-6R, the odds ratio was 1.06 (95 percent confidence interval, 1.01 to 1.12). Inconsistent estimates were seen for interleukin-1 receptor antagonist among instruments, with imprecise pooled estimates centered on the null.

"Our findings suggest a protective effect of CRP and a risk-increasing effect of sIL-6R (potentially mediated at least in part by CRP) on schizophrenia risk," the authors write. "It is possible that such effects are a result of increased susceptibility to early life infection."

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Editorial