

Elevated CRP may be response, not cause of disease

June 21 2016

Genetically raised levels of C-reactive protein (CRP, an inflammatory protein) are associated with protection against schizophrenia, according to a Mendelian randomization study published this week in *PLOS Medicine*. The study, published by Behrooz Z. Alizadeh of the University Medical Centre Groningen, The Netherlands, and colleagues, found a lack of association between CRP and a number of somatic and psychiatric disorders, suggesting that many disease-associated rises in CRP levels might be a response rather than cause of the disease.

Observational studies have shown that increased blood levels of CRP are associated with certain diseases, suggesting these diseases might be controlled with drugs that reduce CRP levels. Alizadeh and colleagues undertook a Mendelian randomization study, using genetic variants that affect CRP levels to determine if elevated CRP has a genetically predictable, causal relationship with 32 common complex disorders. The researchers report that genetically increased CRP was significantly associated with a reduced risk of schizophrenia (for 10% increased CRP, odds ratio [OR] 0.86 [95% CI 0.79-0.94]; p

Though this is one the largest studies on the topic, the reliability of these findings depends on the validity of the assumptions of Mendelian randomization, including the ability of the genetic scores to explain variations in CRP level. However, these findings suggest that interventions designed to lower CRP level are unlikely to decrease the risk of people developing the majority of common complex somatic and neuropsychiatric outcomes.

More information: Prins BP, Abbasi A, Wong A, Vaez A, Nolte I, Franceschini N, et al. (2016) Investigating the Causal Relationship of C-Reactive Protein with 32 Complex Somatic and Psychiatric Outcomes: A Large-Scale Cross-Consortium Mendelian Randomization Study. *PLoS Med* 13(6): e1001976. [DOI: 10.1371/journal.pmed.1001976](https://doi.org/10.1371/journal.pmed.1001976)

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