Anti-CMV Antibodies and Coronary Artery Disease

To the Editor:

Recently, Ridker et al published their observations about cytomegalovirus (CMV) and atherosclerosis. They found that “there is no evidence of a positive association between baseline IgG antibodies directed against CMV or HSV [herpes simplex virus] and the development of future MI [myocardial infarction] or thromboembolic stroke. Furthermore, we found no evidence of association between CMV or HSV exposure and concentration of CRP [C-reactive protein]”.

I would like to mention 2 important factors that were mentioned in the article but were not evaluated carefully:

1. The IgG level was measured only at study entry, and the follow-up continued for 12 years. It is true that an antibody titer (especially IgG) does not change “quickly”; however, it is a little extreme to assume that an antibody titer does not change over 12 years!

2. I would like to refer the authors to our study that was published recently. In this study, we wrote that “the results of our study demonstrated a similar prevalence of CMV seropositivity in patients with coronary artery disease and an age- and sex-matched control group; however, anti-CMV IgG antibody titer was higher in patients with coronary artery disease (52% of the patients had >1:800 anti CMV IgG titer, whereas only 16% of the control group had high antibody titer).”

I believe that antibody titer can differentiate between patients with coronary artery disease (high IgG titer, ≥1:800) and people who are seropositive (≥1:400) for anti-CMV IgG antibodies. The mechanism of action could be direct activation of smooth muscle cells in the vessel wall and/or chronic inflammation that triggers and activates a cascade of events that eventually cause atherosclerosis.

It would be interesting to measure inflammatory proteins and other markers of inflammation (such as vascular cell adhesion molecules) periodically (every 6 months) in people with high titers of anti-CMV IgG antibodies and to correlate these measurements with clinical events and outcome. For example, our study demonstrated that a high anti-CMV IgG antibody titer is associated with coronary artery disease and could predict restenosis after coronary balloon angioplasty.

Arnon Blum, MD
Cardiology Branch
National Institutes of Health
Bethesda, Md


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Arnon Blum

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