

Inflammatory Diseases Are Major Concern for Those on HIV Treatment

Treatments to reduce inflammation could help make HIV even less of a threat to health than antiretrovirals can alone.

December 22, 2017

For people with HIV on antiretrovirals (ARVs) who have a moderately compromised immune system, serious cases of illnesses related to inflammation are a central concern. Consequently, treatments that dampen inflammation may make HIV even less of a threat to health than ARV treatment can on its own.

Publishing their findings in the *Journal of Acquired Immune Deficiency Syndromes*, researchers analyzed data on 3,568 members of the control arms of the SMART or ESPRIT studies who were on ARV treatment for HIV and had a viral load between 300 and 500. The participants were followed for serious (grade 4) cases of various serious non-AIDS-defining health conditions, AIDS, cardiovascular disease (CVD), non-AIDS-defining cancer (NADC) and death. The researchers classified the grade 4 events based on whether they reflected inflammation-related disease or non-inflammation-related disease.

The researchers also looked at the participants' initial levels of an inflammatory marker known as interleukin-6 (IL-6) as well as a marker of coagulation (blood clotting) called D-dimer.

During a median follow-up of 4.3 years, 339 participants developed a grade 4 health event, for a rate of 2.29 percent per year, including 165 people who developed a grade 4 health event reflecting inflammation-related disease (for a rate of 1.07 percent per year). Overall grade 4 events were more common than AIDS (diagnosed in 54 participants), CVD (132 participants) and NADC (80 participants), health outcomes that developed in 252 participants all told, for a cumulative rate of 1.71 percent per year.

Forty-nine percent of grade 4 health events were those reflecting inflammation-related disease, including gastroenteritis (stomach flu), cirrhosis of the liver, acute kidney failure and acute pancreatitis. The most common grade 4 events not reflecting inflammation-related disease were depression, back pain, groin hernia and suicide attempt.

Grade 4 health events and AIDS were associated with similar risks of death.

Having a higher IL-6 level at the study's outset was associated with 1.19-fold increased risk of grade 4 health events for every comparative doubling of the inflammatory marker's level. And similarly, every comparative doubling of the baseline D-dimer level was associated with a 1.23-fold increased risk of grade 4 health events. The association between baseline IL-6 level and grade 4 health events was stronger for events reflecting inflammation-related disease (associated with a 1.38-fold increased risk for each comparative doubling of the initial level) compared with those reflecting non-inflammation-related disease (associated with a 1.11-fold increased risk for each comparative doubling of the initial level).

"Our findings showed that potentially life-threatening conditions associated with the activation of inflammatory and coagulation pathways due to HIV are more extensive than AIDS and [serious non-AIDS health events] which heretofore have been considered," the study authors concluded.

To read the study abstract, [click here](#).