Vitamin E Is Safe and Effective for Treating NASH in People With HIV

Non-alcoholic steatohepatitis, the more severe form of non-alcoholic fatty liver disease, is highly prevalent in the HIV population.

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People with HIV who have non-alcoholic steatohepatitis (NASH) and do not have viral hepatitis can safely and effectively treat the serious liver condition with vitamin E pills, according to a pilot study.

An inflammatory liver condition that leads to cell damage, non-alcoholic steatohepatitis is the more severe form of non-alcoholic fatty liver disease (NAFLD). NASH can lead to cirrhosis or liver cancer. There is currently no approved treatment for NAFLD or NASH.

In Canada, where the new vitamin E study was conducted, nearly half of those living with HIV have NAFLD, and one third have NASH. In theory, these rates, which are higher than those seen in the general population, are driven by the chronic inflammatory state caused by HIV as well as the use of antiretrovirals and high rates of metabolic health problems, including diabetes and high blood lipids, such as cholesterol and triglycerides.

Giada Sebastiani, an associate professor at McGill University's Faculty of Medicine and a scientist at the Research Institute of the McGill University Health Centre, and her colleagues conducted a study of vitamin E treatment among 27 people with HIV and NASH who did not have hepatitis B or C viruses (HBV or HCV).

"Vitamin E has been shown to improve fatty liver in the general population," Sebastiani said in a press release. "Here we provide evidence for its beneficial effect and safety in people living with HIV, who have a higher prevalence of fatty liver disease."

The diagnosis of NASH in the study population was based on the existence of NAFLD, which was diagnosed if individuals had a controlled attenuation parameter of at least 248 decibels per meter and significant death of liver cells, defined by having a level of the inflammatory biomarker cytokeratin 18 (CK-18) greater than 130.5 units per liter.

The participants were treated with 800 international units of oral vitamin E daily for 24 weeks and followed for an additional 24 weeks.

After the vitamin E treatment, the participants saw their liver health improve compared with tests conducted at the study's outset. Their ALT liver enzymes declined by a median of 27 units per liter, their controlled attenuation parameter scores declined by a median of 22 decibels per meter and their CK-18 scores declined by a median of 123 units per liter. Such improvements in liver health were more dramatic than what has been seen following vitamin E treatment among HIV-negative people with NASH.

The treatment was safe and well tolerated.

Because the study had no control group its results should be considered preliminary until more rigorous research, specifically a randomized controlled trial, can be conducted. Sebastiani is indeed hoping to conduct such a study.

To read a press release about the study, click here.

To read the study abstract, click here.

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