Egrifta Reduces Inflammation as Well as Gut Fat

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Egrifta (tesamorelin), a drug approved to reduce gut fat accumulation, also reduces cellular inflammation, according to a study published online April 21 in the journal *AIDS*. These data suggest that the drug might also help reduce the risk of cardiovascular disease in those who achieve significant gut fat loss.

Numerous studies have now confirmed that people are at significantly higher risk for cardiovascular disease (CVD) and diabetes when they accumulate fat primarily in the abdomen. This condition, called metabolic syndrome, is actually one of the strongest predictors of heart attacks as people get older. Fortunately, when people are able to reduce gut fat accumulation, their risk of CVD drops.

Metabolic syndrome is more than just gut fat accumulation, however. People with metabolic syndrome also usually have increases in markers associated with cellular inflammation. Such inflammation makes it difficult for the blood vessels to regulate blood pressure, placing additional strain on the heart. It also leads to the accumulation of plaques in the arteries, which can break free and lead to strokes.

Thus far, the drug Egrifta has been proved to reduce gut fat in people with HIV-related fat accumulation. What hasn't been reported is whether Egrifta therapy also helps reduce inflammation.

To explore this question, Takara Stanley, MD, and her colleagues from the Program in Nutritional Metabolism at Harvard Medical School in Boston, tested stored blood samples from key studies that led to Egrifta's approval by the U.S. Food and Drug Administration (FDA) in 2010. The primary inflammatory markers that Stanley and her team focused on were plasminogen activator inhibitor-1 (PAI-1) antigen and tissue plasminogen activator (tPA), both of which have been associated with cardiovascular disease in studies of HIV-negative people.

The analysis included 410 people: 273 who received Egrifta for at least 26 weeks and 137 who received a placebo. As has been reported before, treatment with Egrifta led to an average loss of gut fat of about 15 percent.

Stanley and her colleagues found that when Egrifta led to gut fat reductions, it also led to

reductions in PAI-1 and tPA. This held up even when the team controlled for factors such as age, gender and race. It also held up when the team controlled for a protein called insulin-like growth factor 1 (IGF-1), which can exert its own independent effect on inflammation.

Though longer term and larger studies will be needed to assess Egrifta's potential effect on the risk of cardiovascular disease, the authors point out that the results from their study are a hopeful sign.

They conclude: "These data also have potential clinical implications and suggest that use of tesamorelin in patients with HIV and excess abdominal fat accumulation may result in an overall improvement in critical inflammatory and fibrinolytic markers, which may improve overall cardiovascular risk."
