Experimental Lilly drug cuts genetic heart disease risk factor by 94% in trial

The drug, lepodisiran, reduced levels of lipoprotein(a), or Lp(a), by an average of 93.9 per cent versus placebo over six months after a single 400 milligram dose. There were 72 patients in the 400 mg arm of the study, while 69 received a placebo.

By Julie Steenhuysen

Chicago: The highest dose of an experimental drug developed by Eli Lilly significantly reduced levels of a genetically inherited risk factor for heart disease in a midstage trial, according to data presented at a major medical meeting on Sunday.

The drug, lepodisiran, reduced levels of lipoprotein(a), or Lp(a), by an average of 93.9 per cent versus placebo over six months after a single 400 milligram dose. There were 72 patients in the 400 mg arm of the study, while 69 received a placebo.

After a second 400 mg dose given at six months, participants saw an average reduction of nearly 95% over 12 months.

No serious adverse events related to the drug were reported.

"What we have is a drug that can lower lipoprotein(a) with very infrequent administration," study author Dr. Steven Nissen, a long-time cardiologist at the Cleveland Clinic, said in an interview. Nissen presented the results at the American College of Cardiology meeting in Chicago. They were also published in the New England Journal of Medicine.

Lilly's drug is one of several being tested to treat high Lp(a), a risk factor for heart disease that affects an estimated 1.4 billion people worldwide, including 64 million people in the United States.

Unlike LDL, the so-called bad cholesterol that can be treated with diet and statins, there are no approved treatments for Lp(a), and few individuals even know they have it.

Elevated Lp(a) can significantly increase the risk of heart attack, stroke, narrowing of the aortic valve, and peripheral artery disease, a buildup of fatty plaques in the arteries. Individuals of African ancestry are at highest risk.

Lilly has already moved lepodisiran into late-stage clinical trials.

While the drug reduced a cardiovascular risk factor, large trials are needed to prove that lowering Lp(a) actually cuts heart attacks and other adverse cardiovascular events, Nissen said.

Lilly is conducting a second Phase 3 trial to test whether lowering Lp(a) actually reduces those risks. Nissen said patient enrollment in that trial should be completed this year.

Other injectable treatments for Lp(a) in development include Silence Therapeutics' zerlasiran, Amgen's olpasiran and pelacarsen from Novartis.

Lilly is also testing muvalaplin, the only oral treatment for LP(a) in clinical trials.

Merck last week signed a licensing agreement with Jiangsu Hengrui Pharmaceuticals to test its experimental Lp(a) pill called HRS-5346. (Reporting by Julie Steenhuysen Editing by Bill Berkrot)

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