Experimental cholesterol-lowering drug effective at lowering bad cholesterol, study shows

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Twice-yearly injections of an experimental cholesterol-lowering drug, inclisiran, were effective at reducing low-density lipoprotein (LDL) cholesterol, often called bad cholesterol, in patients already taking the maximum dose of statin drugs, according to data of the ORION-10 trial presented Saturday, Nov. 16, at the American Heart Association's Scientific Sessions 2019.

High levels of LDL cholesterol—which builds up in the walls of the arteries, making them hard and narrow, thereby leading to blockages—causes increased risk of heart attacks and strokes.

"Maintaining low LDL over a sustained period is essential to reduce the risk of heart attacks and stroke," says R. Scott Wright, M.D., a Mayo Clinic cardiologist and principal investigator of ORION-10 trial.

ORION-10, a phase 3 placebo-controlled, double-blind, randomized study at 145 U.S. sites, enrolled 1,561 participants with established atherosclerotic cardiovascular disease (disease where plaque builds up in the arteries) and elevated LDL (greater than 70 milligrams per deciliters), despite maximum tolerated oral statin therapies. Participants received inclisiran or placebo by subcutaneous injections at baseline, and then at three months and every six months thereafter.

Inclisiran, developed by The Medicines Company, is a siRNA (small interfering RNA) drug and the only cholesterol-lowering medication in its class. The medication mimics a gene variant and prevents production of the protein PCSK9, which in turn lowers LDL.

Results showed that inclisiran dosed initially, and then again at three months and every six months thereafter, resulted in placebo-adjusted LDL reductions of 58% at day 510 and demonstrated time-averaged, placebo-adjusted LDL reductions of 56% from days 90 through 540.

"The data show that inclisiran dosed twice-yearly achieved durable and potent LDL reductions with an excellent safety profile, and no treatment-related liver or kidney side effects," Dr. Wright says. "Twice-yearly administration by a health care professional coincides with typical patient visits, which can help with medication adherence."

Provided by Mayo Clinic

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