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USEFULNESS OF EZETIMIBE IN THE MANAGEMENT OF DYSLIPIDEMIA AND NAFLD

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Abstract

Ezetimibe, a lipid-lowering drug, selectively binds to the cholesterol transporter, Niemann-Pick C1 like 1 (NPC1L1), which is present in the intestinal membranes and within the liver, thereby inhibiting intestinal cholesterol absorption and lowering blood and tissue cholesterol levels. Ezetimibe, as monotherapy decreases LDL-C by about 10–18%. When added to statin, ezetimibe results in greater reductions in LDL-C levels than with statin alone. Recently, the IMPROVE-IT trial demonstrated that ezetimibe reduces the rate of cardiovascular events in high-risk patients. In patients who cannot achieve LDL-C targets despite treatment with the maximal tolerated dose of a potent statin, ezetimibe is recommended to be added on to statin therapy. In addition to its hypolipidemic effect, it has been reported that ezetimibe is effective in attenuating the aminotransferases, hepatic steatosis and serum cholesterol level in patients with nonalcoholic fatty liver disease (NAFLD), which is defined by massive triglyceride accumulation in the liver, ranging from simple fatty liver (steatosis) to nonalcoholic steatohepatitis (NASH) and shares many risk factors with cardiovascular disease including obesity, type 2 diabetes mellitus, insulin resistance, inflammation and oxidative stress. Here we will briefly review the current evidence base for the use of ezetimibe as drug option for the management of the residual risk through further lipid modification. In addition, we will present our current efforts to investigate the molecular mechanism of ezetimibe for treatment of dyslipidemia and NAFLD.

Keywords

Ezetimibe, residual risk, low-density lipoprotein cholesterol, dyslipidemia, nonalcoholic fatty liver disease.