

Role of PCSK9 Inhibitors in Lipid Guidelines and Future

Yu Kataoka, MD, PhD, FESC, FACC, FJCC

Department of Cardiovascular Medicine, National Cerebral & Cardiovascular Center

yu.kataoka@ncvc.go.jp

Abstract

Recent studies demonstrated that proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitor substantially lowers LDL-C levels and reduces the occurrence of atherosclerotic cardiovascular events in subjects who received high-intensity statin. This suggests PCSK9 as an important therapeutic target to further reduce atherosclerotic cardiovascular risks. PCSK9 is a serine-protease which is associated with LDL metabolism. Pathophysiologically, two different subtypes exist in circulation; mature and furin-cleaved PCSK9. These subtypes differ in their ability to degrade LDL receptor and promote atherosclerosis. These observations indicate the importance to evaluate each PCSK9 subtype with regard to LDL metabolism and atherogenesis. Further studies will be required to elucidate how we could allocate PCSK9 inhibitor to appropriate patients.

Keywords

PCSK9, coronary atheroma, matured and furin-cleaved PCSK9, intravascular imaging