PCSK9 INHIBITORS: THE BREAKTHROUGH LIPID-LOWERING TREATMENT AT REAL-LIFE SETTING. A 2-YEAR REGIONAL LIPID CLINIC EXPERIENCE

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Abstract

Aim: Proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitors have been demonstrated to be safe and effective in low-density lipoprotein cholesterol (LDL-C) lowering and cardiovascular risk reduction. Data on clinical implementation of PCSK9 inhibitors in real life setting in Greece is limited. Thus, we report 2-year experience with PCSK9 inhibitors in clinical practice at a University Hospital Lipid Clinic.

Patients and methods: This is a retrospective study of patients who were first prescribed a PCSK9 inhibitor during 2016-2018. Patients had either established cardiovascular disease (CVD) and/or familial hypercholesterolemia (FH) and LDL-C level >100 mg/dL despite maximum tolerated high-intensity statin plus ezetimibe. Patient demographics, medical history, concomitant medications and laboratory results were documented during visits.

Results: We included 37 patients (mean age 52 years, 56.8% males). Of patients, 28 (76%) had established CVD and27 patients (74%) had FH. Concerning treatment, 33 patients (89%) were receiving high-intensity statin, while 35 patients (95%) were also on ezetimibe 10 mg. Addition of PCSK9 inhibitors (51% on evolocumab 140 mg per 2 weeks (Q2W), 22% on alirocumab 75 mg Q2W and 27% on alirocumab 150 mg Q2W) resulted in a reduction of total cholesterol by 42% and LDL-C by 59% after 2 months ($p<0.05$). These reductions remained unchanged after 1 and 2 years on treatment. Thirty patients (81%) achieved LDL-C treatment goal following PCSK9i treatment. Four patients (11%) developed minor adverse effects. No treatment discontinuation was reported.

Conclusion: In real-life setting addition of PCSK9 inhibitors to maximally tolerated lipid-lowering therapy resulted in reductions of LDL-C levels of the magnitude seen in clinical studies. These reductions were sustainable during a 2-year follow-up.

Key words: PCSK9 inhibitors, dyslipidemia, familial hypercholesterolemia, statins, cardiovascular disease, ezetimibe