New prospects in treatment of dyslipidaemia – putting patient compliance first

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Introduction: Dyslipidaemia is one of the leading cardiovascular risk factors. For a long time, successful treatment options were used, with statin therapy being the cornerstone. Nowadays, more and more new agents are being discovered and approved for the treatment of dyslipidaemia. This summary provides a brief overview of newly approved drugs and those still in development. Methods: For this review, online databases were searched using the keywords "dyslipidaemia", "statins", "PCSK9 inhibitors", "inclisiran" and "new agents".

Discussion: Statins have been used to treat dyslipidaemia for over 30 years. Studies have shown excellent results in lowering LDL cholesterol levels and reducing cardiovascular risk[1]. Therefore, statins have become the most important preventive therapeutics for high-risk patients. However, changes in people's lifestyles and the fast pace of life have presented us with new challenges and shown us that statins are not enough in some cases. The first monoclonal antibodies approved for the treatment of dyslipidaemia were the PCSK9 inhibitors evolocumab and alirocumab[1,2]. Studies have shown very good results in lowering blood LDL cholesterol levels, so PCSK9 inhibitors, given once weekly, have gradually become a second-line treatment option[2]. Recently, the EMA approved a new siRNA molecule called inclisiran that interferes with PCSK9 mRNA translation, thereby lowering LDL cholesterol levels. The main advantage of inclisiran is its dosing scheme of once every three months[3]. Volanesorsen is the first drug to target chylomicrons and lower triglyceride levels. The latest agent in the pipeline is evinacumab, an ANGPLT-3 inhibitor that has shown excellent potential in clinical trials[3].

Conclusion: The reduction in cardiovascular risk with PCSK9 inhibition and inclisiran therapy is not yet known, but its effect on lowering LDL cholesterol is evident. Conventional statin treatment requires everyday oral administration and highly motivated patients, whereas novel agents administered weekly or even monthly are putting patient compliance first.

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