After the survey, all patients desired to continue with iPCSK9.

Conclusion After 6–12 weeks of iPCSK9 treatment, all patients reduced LDL level except 1 who was non-adherent. The LDL reduction ranged between 54%–71% and all patients on evolocumab achieved a LDL <70 mg/dL.

The tolerability was excellent and only mild adverse events in about 8% of patients were experienced.

A high acceptance of both alirocumab and evolocumab was reported by all patients who would continue with iPCSK9 treatment.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-025 LIPID MODIFICATION THERAPY FOR PRIMARY PREVENTION OF CARDIOVASCULAR DISEASE

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10.1136/ehjpharm-2019-eahpconf.174

Background Cardiovascular disease (CVD) is the leading cause of mortality worldwide, totalling almost one-third of all deaths. Lipid optimisation is a key public health priority to decrease CVD morbidity, mortality and consequential economic burden on healthcare systems. A reduction in cholesterol by 1 mmol with statin therapy reduces the risk of CVD events by 20%–24%, in people with an estimated 10 year CVD risk greater than 10%. In the UK, the National Institute of Clinical Excellence (NICE) recommends atorvastatin 20 mg for primary prevention of CVD in these people, using QRISK2 to estimate their level of risk.

Purpose To assess adherence to NICE lipid modification guidance in patients presenting with acute coronary syndrome (ACS).

Material and methods Data on lipid-lowering therapy was collected prospectively, over an 8 week period in August 2018, for all patients presenting with ACS. QRISK2 scores were calculated for patients admitted with ACS naïve to statin therapy. Ethics approval was not required.

Results Two-hundred and fifty-two patients presented with ACS: mean total cholesterol and low-density lipoprotein (LDL) levels on admission were 4.7 and 2.8 mmol/L respectively. One-hundred and thirty-six (54%) patients were naïve to statin therapy prior to admission, of these 91 (67%) had a QRISK2 score greater than 10% (mean 18.45%). All patients were subsequently discharged on high-intensity statins, 124 (91%) on atorvastatin 80 mg.

Conclusion Two-thirds of patients naïve to statin therapy prior to admission had a 10 year CVD risk of 10% or greater, as estimated using QRISK2, and would have been eligible for atorvastatin 20 mg for primary prevention of CVD as per NICE guidance. Identifying patients in primary care at risk of CVD events is key to ensuring appropriate lifestyle modifications are undertaken and statin therapy initiated, both of which have been shown to reduce CVD event rates. Community services, such as NHS health checks at community pharmacies, and development of GP practice-based pharmacists should be targeted and supported by secondary care to ensure high-risk patients are prescribed optimum lipid modification therapy for primary prevention of CVD, thereby reducing the

risk of CVD morbidity, mortality and associated financial implications to the health system.

REFERENCES AND/OR ACKNOWLEDGEMENTS

<https://www.nice.org.uk/guidance/cg181/chapter/1-Recommendations#lipid-modification-therapy-for-the-primary-and-secondary-prevention-of-cvd-2>

No conflict of interest.

4CPS-026 ADHERENCE AND EFFECTIVENESS OF PCSK9 INHIBITORS IN ROUTINE CLINICAL PRACTICE

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10.1136/ehjpharm-2019-eahpconf.175

Background Alirocumab and evolocumab are monoclonal antibodies that belong to a new class of cholesterol-lowering drugs by inhibiting the proprotein convertase subtilisin/kexin type-9 (PCSK9) enzyme.

Purpose The main objective of this study was to evaluate the adherence to alirocumab and evolocumab therapies and its relation to drug effectiveness.

Material and methods Observational, descriptive and retrospective study conducted in a tertiary hospital. All patients that initiated treatment with alirocumab and evolocumab from October 2016 to February 2018 were included.

Data sources were patients' electronic medical records and outpatients' electronic prescription and dispensation programme. Main variables collected were: gender, age, indication, prescriber's medical departments and low-density lipoprotein (LDL-C).

Adherence was calculated indirectly by consulting dispensing data in the outpatient prescription tool.

Effectiveness was defined as the percentage decrease in LDL-C from baseline to week 24.

Results Forty patients were included: 22 men (55%) and 18 women (45%), with median age 57 years (19–85). Nine patients (22.5%) had heterozygous primary hypercholesterolaemia, seven (17.5%) heterozygous primary hypercholesterolaemia and severe cardiovascular disease, 11 (27.5%) severe cardiovascular disease, 10 (25%) severe cardiovascular disease and statin intolerance, and three (7.5%) statin intolerance. Alirocumab was prescribed in 19 patients (47.5%) and evolocumab in 21 (52.5%).

Mean adherence index was 1.03 (SD 0.13). Mean basal LDL-C and LDL-C after 24 weeks were 125, 42 mg/dl (SD 43.34) and 61, 22 mg/dl (SD 44.17), respectively. The percentage decrease in LDL-C from baseline to week 24 was 43%, 31% in the alirocumab group and 54% in the evolocumab group. The adherence index in both groups was similar.

Twenty-eight patients (70%) had a percentage decrease in LDL-C >40% with an adherence index of 1.04 (SD 0.12), while 12 patients (30%) had a percentage decrease in LDL-C <40% with an adherence index of 1.01 (SD 0.15).

Conclusion

- Patients under PCSK9-inhibitors treatment are strong adherents to these therapies
- Effectiveness of PCSK9-inhibitors in routine clinical practice has been proven with data comparable to randomised clinical trials. Apparently, evolocumab shows better effectiveness than alirocumab.

- Despite the high adherence index for all patients, a slightly higher index has been found in patients with the best outcomes in LDL-C percentage decreases.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-027 REAL-WORLD EFFECTIVENESS OF EVOLOCUMAB AND ALIROCUMAB AT 12 MONTHS OF TREATMENT

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10.1136/ejhp-2019-eahpconf.176

Background Alirocumab and Evolocumab are proprotein convertase subtilisin/kexin type 9 inhibitors (PCSK9-I) that have been authorised by the Autonomous Health Service under the following conditions: uncontrolled familial hypercholesterolaemia (FH) with low-density lipoprotein (LDL-C) >130 mg/dL, uncontrolled stable atherosclerotic cardiovascular disease (ASCVD) with LDL-C >130 mg/dL or unstable ASCVD with LDL-C >100 mg/dL in combination with a statin and ezetimibe at maximum tolerated doses.

Purpose We aim is to analyse the effectiveness of PCSK9-I in patients treated at a tertiary care hospital

Material and methods Retrospective study of all patients treated with PCSK9-I from April 2016 to June 2017 and follow-up at 12 months of treatment. The variable of effectiveness analysed was the percentage of reduction in LDL-C.

Data were collected at the beginning and after the first annual visit from medical records (Millennium-Cerner), and were analysed by the IBM SPSS Statistics program.

Results Thirty-eight patients were included, median age of 56 years (35–80), 53% women. In 19 (50.0%) cases, PCSK9-I were indicated for ASCVD, in 15 (39.5%) for FH and in four (10.5%) for both indications: 15 (39.5%) patients were intolerant to statins and seven (18.4%) to ezetimibe. The mean level of initial LDL-C was 180.5±49.4 mg/dL. PCSK9-I were prescribed in combination with statins in 25 (65.8%) patients and ezetimibe 24 (63.2%). Evolocumab was indicated in 27 (71.1%) cases and alirocumab in 11 (28.9%). The recommended target for LDL-C was 100 mg/dl for 14 patients and 70 mg/dl for 24.¹ After 12 months, median 53 weeks (42–76), data were collected from 25 (65.8%) patients, in 11 cases (28.9%) the blood test was not done and two (5.3%) discontinued treatment. The mean LDL-C was 84.6±43.8 mg/dl, with a relative percentage reduction of 50.8±34.8%. There was no significant difference in effectiveness between evolucumab and alirocumab (–55.2% vs –40.8%, p=0.408). The therapeutic goal was achieved in 15 (60%) patients.

Conclusion PCSK9-I showed similar LDL-C reductions to those described in clinical trials (50%–70%), although only 60% of patients achieved the recommended goal after 1 year of treatment.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

4CPS-028 STATIN OVERUSE? EVALUATION OF STATIN INITIATION FOR PRIMARY PREVENTION DURING HOSPITALISATION BETWEEN TWO NEIGHBOURING COUNTRIES IN EUROPE IN HIGH-RISK PATIENTS

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10.1136/ejhp-2019-eahpconf.177

Background Due to Guidelines of the ESC/EAS the number of patients recommended to receive statin therapy for primary prevention of atherosclerotic cardiovascular disease (ASCVD) has increased. Critical voices expressed concern that implementation of these guidelines may lead to statin overuse.

ESC/EAS recommend using risk calculators for Systematic COronary Risk Evaluation (SCORE) to estimate patients' 10 year fatal ASCVD risk. However, data identifying statin utilisation based on SCORE in European hospitals is lacking.

Purpose The aim of the study was to evaluate whether there is a difference in the treatment of patients with high risk between two neighbouring countries in Europe according to ESC/EAS guidelines.

Material and methods A multi-site, international, retrospective, cross-sectional study was conducted in three hospitals in Austria and three hospitals in Slovenia. At each site approximately 20% monthly discharges from selected wards were reviewed. For each patient data on age, gender, lipid levels, smoking status, systolic blood pressure, serum creatinine, liver function, presence of cardiovascular disease (CVD) or diabetes and prescribed cholesterol lowering agents was collected. Ten-year risk for fatal CVD was calculated using SCORE low-risk charts. Patients with SCORE calculation ≥5 and patients with diabetes were classified as high risk.

Results We included 138 Austrian patients (mean age 61.9 ±10.3; 52.2% men) and 198 Slovenian patients (mean age 63.4±10.6; 57.6% men). Patients from Slovenia were at higher risk compared to patients from Austria (64.1% versus 49.3%; p=0.07). 77.1% of high-risk patients from Austria and 56.3% from Slovenia did not receive a statin during hospitalisation (p=0.009). In 16.7% of Austrian and 58.1% of Slovenian patients, LDL was measured during the hospital stay. 7.1% of high-risk Austrian patients with no statin had LDL <2.6 mmol/L compared with 8.5% of high-risk Slovenian patients.

Conclusion In the population we investigated that there is no risk of statin overuse so far. Despite robust evidence of their efficacy and safety, statin use is still low in high-risk patients in primary prevention for ASCVD in both countries according to ESC/EAS guidelines. Clinical pharmacists could play an important role in improving the use of statins and thus reducing preventable CVD morbidity and mortality.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.