and evolocumab were approved for primary hypercholesterolaemia (heterozygous family (HFFH) and non-familial (HNF)) and mixed dyslipidaemia (DM). Due to their recent approval and high cost, it is crucial to evaluate their real world results.

**Aim and objectives** To analyse the long term effectiveness of PCSK9i over 3 years, approved by the pharmacy service (PS).

**Material and methods** This was an observational retrospective study conducted at a third level hospital from January 2016 to March 2019. All PSCK9 were evaluated by the PS according to the criteria of the Regional Pharmacotherapeutic Commission. Patients approved who initiated the treatment were included.

Biodemographic, clinical and pharmacotherapy data was collected from the medical records. Parameters were evaluated at treatment initiation and after 6 months. Clinical response, defined as a reduction in low density lipoprotein (LDL) >30%, was analysed by indication.

**Results** PS accepted 93 of 123 patient requests. Only 72 patients (median age 58 years (37–84), 56% men) were included due to lack of data. Cardiovascular risk factors were: hypertension (47.2%), family history of ischaemic heart disease (40.3%), smoking (38.3%), obesity (15.3%), diabetes (12.5%) and ischaemic heart disease (58.3%).

Initial LDL values (mg/dL) were 100–129 (23.6%), 130–159 (34.8%), 160–190 (20.8%), and >190 (20.8%). Frequency of additional lipid lowering drugs were: atorvastatin (40.3%), rosuvastatin (27.8%), fluvastatin (2.8%), pitavastatin (2.8%), statin free (26.4%) and ezetimibe (72.2%). During the study, 41.7% of patients showed statin intolerance and 88.9% reached their maximum tolerated dose.

After initiating PCSK9i, 83.3% of patients maintained the same dose of statin, 8.3% reduced the dose, 6.9% stopped taking the medication, 4.3% switched to another statin and 1.4% increased the dose. LDL plasma concentration decreased by more than 50% in 52.1% of patients, by 30–50% in 31.2% of patient and by <30% in 16.7%, of patients. The clinical response in primary HFFH prevention was alirocumab 16.7% versus evolocumab 50%, and in secondary HFFH, alirocumab 68.8% versus evolocumab 83.3%. The clinical response in primary HNF prevention was alirocumab 60% (no evolocumab patient) and in HNF/DM secondary prevention, alirocumab 50% versus evolocumab 100%.

**Conclusion and relevance** We found that 16.7% of our population did not achieve a clinical response; PS may play a relevant role, suggesting treatment cessation in these patients. Evolocumab could be especially effective in HFH; more studies are needed to confirm this finding.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

No conflict of interest.

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**4CPS-021 ALIROCUMAB AND EVOLUCUMAB: RESULTS IN CLINICAL PRACTICE**

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**Background and importance** Hypercholesterolaemia is a well established risk factor for developing coronary heart disease and increasing the risk of cardiovascular events (RCE). Alirocumab and evolocumab, proprotein convertase subtilisin-kexin type 9 (PCSK9) inhibitors, can complement the management of patients who do not achieve target cholesterol levels with standard treatment or are intolerant to it.

**Aim and objectives** To study the correct use of PCSK9 inhibitors in real clinical practice in a third level hospital. To evaluate efficacy and adherence to treatment.

**Material and methods** This was an observational, analytical and retrospective study of patients treated with anti-PCSK9 who attended the pharmacy service for a consultation. On 30 September 2019, a cross section was performed and the data collected were: sex, prescribed anti-PCSK9, dosage, theoretical and real dispensed units, indication and analytical data at 0 and 12 weeks (total cholesterol, LDL-c, high density lipoprotein cholesterol and triglycerides).

**Results** A total of 82 patients (53 men, 29 women) were studied: 57(69.5%) patients received evolocumab and 25 (30.5%) alirocumab. The distribution by diagnoses were: 17.1% HF, 46.3% CVD, 13.3% statin intolerance and 15.8% other.

After 12 weeks, the mean reduction in LDL-c was 54.3%, reaching the LDL-c target <100 mg/dL in 89.0% of cases. However, 4.9% of patients experienced an increase in LDL-c levels. Adherence to treatment was calculated by an indirect method from the record of dispensions (medication possession rate=real/theoretical dispensed units×100). A patient with MPR >80% was considered adherent. Only 8.5% of patients were below the established limit, and were non-adherent.

**Conclusion and relevance** PCSK9 inhibitors are effective in decreasing LDL-c levels (<100 mg/dL). The reduction obtained in our study was similar to that obtained in pivotal studies. The prevalent diagnosis was uncontrolled CVD with maximum doses of statins. Only in 15.8% of cases was the PCSK9 inhibitor not indicated (initial LDL-c <100 mg/dL). Adherence to treatment was high but it could have been overestimated because it was assumed that the patient administered the dispensed medication. More long term studies are needed to corroborate the data. In real clinical practice, it would be interesting to assess if this reduction in LDL-c is associated with a decrease in cardiovascular events.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

No conflict of interest.
Aim and objectives To evaluate the effectiveness of alirocumab and evolocumab in reducing low density lipoprotein cholesterol (LDL-c) and RCE in patients with poorly controlled hyperlipidaemia.

Material and methods This was an observational and retrospective study which included every patient treated with alirocumab and evolocumab between March 2016 and September 2019. Demographics and clinical variables were collected from the electronic medical records: sex, age, drug, dose, frequency of administration, previous hypolipidaemic treatment, causes of suspension and analytical parameters at the start of treatment, and after 12 weeks and 24 weeks (total cholesterol (TC), LDL-c, high density lipoprotein (HDL)-cholesterol and triglycerides). To assess RCE, the Framingham scale was used, and if patients were diabetic or smokers was also recorded. To assess effectiveness, we calculated the percentage reduction (PR) of TC, LDL-c and RCE. Adverse effects (AE) were recorded to assess safety.

Results Forty-six patients were included (76% men, average age 60.8 (SD 11.1) years: 24 were treated with alirocumab and 22 with evolocumab. Median duration of treatment was 27.2 months (0.2–43.8). At drug initiation, 71.7% of patients were on high dose statins and 76.1% were on ezetimibe as an adjuvant. Six patients discontinued treatment: 4 for toxicity, 1 for associated pathology and 1 due to loss of follow up.

The mean baseline values for TC, LDL-c, HDL-cholesterol and triglycerides were, respectively: 237.6 (SD 79.5), 149.7 (SD 54.7), 52.3 (SD 13.9) and 166.2 (SD 111.5). After 12 weeks of treatment, the PR in TC, LDL-c and RCE were 31.1%, 49.3% and 34.1%, and at 24 weeks, 29.9%, 43.7% and 32.8%, respectively. Eight patients recorded AE: 37.5% headache, 25% arthralgias, 25% flu-like syndrome, 12.5% hypertransaminasemia and 12.5% syncope.

Conclusion and relevance PCSK9 inhibitors are an effective and safe therapeutic tool in the control of LDL-c and cardiovascular risk. In our patients, a more pronounced reduction in the parameters was observed in the first 12 weeks and was maintained afterwards. In addition, the results obtained were similar to those of clinical trials.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.