

BUDGETARY IMPACT OF PCSK9I DOSES REGIMEN OPTIMISATION

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Background and Importance

Hypercholesterolaemia produce a higher risk of atherosclerosis and cardiovascular events. The proprotein convertase subtilisin kexin type 9 inhibitors (PCSK9i), was approved in 2015, and they are available to manage patients who haven't achieved the target cholesterol levels or are intolerant to the standard treatment with statins or ezetimibe. Nevertheless, due to their high budgetary impact, it's crucial to find measures to optimize its use.

Material and methods



Retrospective cohort study



September 2017 and September 2021



Patients with a reduction in low density lipoprotein cholesterol (LDLc) > 50% or who have reached their target value, alirocumab 150 mg / 4 weeks or evolocumab 140 mg / 21d were proposed for optimization of the dosage



- Demographics variables: age and sex
- Clinical variables:
 1. Median Treatment Time
 2. Initial LDLc values
 3. Treatment
 4. Budget Impact



Treatment efficacy was calculated as per cent reduction in LDLc from baseline at treatment initiation to the end of the study period



The collected data were analysed using a Student's test through the SPSS programme

Aim and objectives

To analyse the effectiveness and costs of the optimized PCSK9i regimen compared to standard dosage regimen

Results



Twenty-two patients were included
2 were excluded because treatment were not effective



- Demographics variables: 40,9% men (n=9), 44.6 ±4.5 years
- Clinical variables:
 1. Median Treatment time: 22.52 months (1,27-49,30)
2 patients discontinued
 2. Initial LDLc values: 161 mg/dl (101-237)
 3. Treatment: 68% were treated with Alirocumab (n=15)
32% were treated with Evolocumab (n=7)
- 2. Saving of optimized dosis:
 - Alirocumab: 2040.97 eur/patient/year
 - Evolocumab: 1417.65 eur/patient/year



Patients in optimize dosis : 45% (n=9)

Mean LDLc value: 75.66mg/dl ± 41.21
% Reduction: 48.33% ± 26.87

Patients in standard doses :55% (n=11)

Mean LDLc value: 90.72mg/dl ± 59.70
% Reduction: 51.52% ± 26.72



The Student's t test showed no statistically significant difference (p>0.05).

Conclusion and relevance

The optimized use of PCSK9i is an effective measure and would mean a reduction in the direct costs in the treatment of hypercholesterolaemia.

It's necessary to search strategies that help to reduce the budgetary impact to optimize health resources without damaging the effectiveness of treatments.