L-Università ta' Malta
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LOW DENSITY LIPOPROTEIN CONTROL IN PATIENTS WITH ISCHAEMIC HEART DISEASE

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INTRODUCTION

The 2013 ACC/AHA guidelines on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular disease risk[1] recommend use of the appropriate intensity of statin and not a specific low density lipoprotein cholesterol (LDL-C) target.

The 2016 ESC/EAS guidelines for the management of dyslipidaemias[2] recommend a target LDL-C goal of <1.8 mmol/L or at least 50% relative reduction.

Patients with hyperlipidaemia are reported to be undertreated and not attaining recommended LDL-C goals.[3]

AIMS

To assess LDL-C control and statin prescribing in patients with ischaemic heart disease (IHD) according to the European guidelines

SETTING

Mater Dei Hospital, an acute general hospital in Malta

METHOD

Patients with coronary angiogram performed identified
(1 December 2014 - 31 March 2015)

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Patients who met inclusion criteria included in the study
(N=200)

- Coronary angiogram and diagnosed with IHD
- Referred for PCI, CABG or medical treatment
- No previous PCI or CABG
- ≥ 18 years old
- Both inpatients and outpatients
- Residing in Malta

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2 patients passed away after 6-12 months

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Patient cohort analysed consisted of 198 patients
at 13-18 and 19-24 months

Data analysed

LDL-C values and statin therapy

- Baseline (at time of angiogram)
- Follow-up (at 6-12, 13-18, 19-24 months after angiogram)

RESULTS

- Of the 200 patients identified at baseline (73% male, mean age 66.82 ±10.07 years), documented lipid profile results were available for 97% (n=194) of the patients at baseline, which decreased significantly ($p<0.001$) at the subsequent timepoints.
- LDL-C level was at target (≤1.8 mmol/L) in 40% (n=56) of patients at 19-24 months. Of the patients who did not achieve the LDL-C target, 7 patients obtained a 50% reduction from baseline.

Table 1: Mean LDL-C level at timepoints studied

Timepoint	Mean LDL-C (±SD, range) *in mmol/L*
Baseline (n=194)	2.98 (±1.04, 0.59-5.58)
6-12 months (n=149)	2.11 (±0.71, 1.01-4.99)
13-18 months (n=137)	2.15 (±0.72, 0.87-5.09)
19-24 months (n=139)	2.07 (±0.62, 0.88-4.32)

$t(132)=11.038$, $p<0.001$

- Mean LDL-C decreased significantly at each timepoint, but was still higher than the target at 19-24 months (Table 1).
- At baseline, 88% (n=172) of the patients were on simvastatin. Change in statin was recorded in 24% (n=47) of patients at 19-24 months, mostly simvastatin to atorvastatin (n=38). Mean LDL-C reduction from baseline to 19-24 months when statin was changed was significantly larger than when statin was unchanged (p=0.001) (Figure 1).

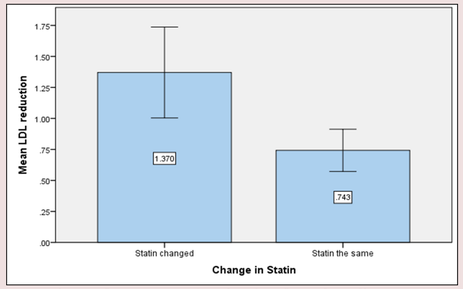

Figure 1: Comparison of mean LDL-C reduction from baseline to 19-24 months: Statin changed vs. statin unchanged (N=198)

CONCLUSION

Mean LDL-C level from baseline decreased significantly, however at 19-24 months only 40% of patients reached the target LDL-C specified in the ESC/EAS guidelines. Changing simvastatin to newer generation statins resulted in a significantly greater mean LDL-C reduction compared to patients kept on simvastatin.

REFERENCES

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