

TO STUDY THE USE OF GUIDELINES IN STATINS PRESCRIPTION AT TERTIARY CARE CENTRE OF NORTH INDIA

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Abstract

Background: To study the use of guidelines in statins prescription at tertiary care centre of North India

Methods: Study was conducted on Patients with indications for statins presenting to cardiology OPD, Medicine OPD and Endocrinology OPD and started on statins at PGIMER, Chandigarh, within a period of 9 months.

Results: In our study, 81.9% of total study population were receiving statins according to guideline and 18.1% were receiving statins not according to guideline. In the primary prevention group, 91(83.5%) patients were receiving statins according to guideline and 18(16.5%) were receiving not according to guideline. In the secondary prevention group, 108(80.6%) patients were receiving statins according to guideline and 26(19.4%) patients were receiving statins not according to guideline.

Concluded: In our study, more than two third of patients in our study were receiving prescriptions according to guideline

Keywords: Statin, Guideline, Use

Introduction

The existing guidelines for dyslipidemia management were revised in 2017 and 2018 by the American Heart Association(AHA) and American College of Cardiology (ACC). These guidelines expand the population of statin therapy eligible patients significantly, thus it is most likely that use of statin therapy is expected to increase dramatically. Statins also have cholesterol-independent (pleiotropic) effects hence they have wide scope of therapeutic use in various disease processes.¹

Medicines should be prescribed according to the available standard guidelines, for proper indication, in appropriate doses, meeting patient's requirement for appropriate duration, at a reasonable cost with clear instructions on its appropriate use and instructions for proper adherence. Since rational drug use is crucial for safe and effective therapy, it is imperative to study the factors associated with a drug use such as prescription patterns, indications, dosages, patient adherence, adverse effects (AEs) and whether physicians are prescribing as per the available latest guidelines or there is some disparity between the prescription pattern and actual recommendations. Since the role and benefits of using lipid-lowering drugs(LLDs) in active management of dyslipidemia is well established but whether these drugs are being prescribed for proper indications and in proper dosage according to the recent guidelines and further whether the desired effect is achieved or not has been less studied in North India as most of the studies are amongst the western population or other parts of India.²

Material and Methods

Study Area:

Patients with indications for statins presenting to cardiology OPD, Medicine OPD and Endocrinology OPD and started on statins at PGIMER, Chandigarh, within a period of 9 months.

Time Period:

The study was conducted for 6 months in Cardiology OPD, Medicine OPD Endocrinology OPD and follow up was done for 3 months (from December 2018 to August 2019).

Type of Study:

Descriptive cross-sectional for both primary and secondary objectives.

Study Population:

Patients with indications for statins being prescribed statins at Cardiology, Medicine and Endocrinology OPD PGIMER, Chandigarh

Study Subjects and Sample Size:

320 patients of both sexes and all ages with indications for statins being prescribed statins during the study period were chosen as cases.

Clinical records of all cases were reviewed for indications of statins and lipid profile was done at baseline and after 3 months in all the subjects to study the response to statin therapy.

Inclusion Criteria:

1. Patients with indications of statins for primary prevention according to AHA 2018 guidelines who are not on statins or have been receiving statins for not more than one month.
2. Patients receiving statins for secondary prevention of ASCVD, who are not on statins or have been receiving statins for not more than one month.

Exclusion Criteria:

1. Patients with contraindications to statins (deranged LFTs: AST/ALT more than 5 times ULN).
2. Patients with ESRD /renal failure.
3. Patients who didn't give consent.
4. Patients lost to follow up.
5. Patients having mortality during the study period.

6. Patients who are already on statins for more than 1 month.

Results

In our study, 81.9% of total study population were receiving statins according to guideline and 18.1% were receiving statins not according to guideline. In the primary prevention group, 91(83.5%) patients were receiving statins according to guideline and 18(16.5%) were receiving not according to guideline. In the secondary prevention group, 108(80.6%) patients were receiving statins according to guideline and 26(19.4%) patients were receiving statins not according to guideline. So more than two third of patients in our study were receiving prescriptions according to guideline.

Table 1: Distribution of prescriptions found according to guideline versus not according to guideline

	Prevention groups		Total
	Primary group (n=109)	Secondary group (n=134)	
G	91 (83.5%)	108 (80.6%)	199 (81.9%)
NG	18 (16.5%)	26 (19.4%)	44 (18.1%)

Data are presented as number (percentage). Abbreviations: G-according to guideline; NG-not according to guideline.

Discussion

In primary prevention group 91/109 prescriptions were found according to guideline. In these 91 prescriptions, the mean decrease in total cholesterol, triglycerides, LDL at the end of three months was 21%, 25.4%, 41.4% respectively and mean increase in HDL was 10.4%. In the primary prevention group receiving statins as per guidelines (91 patients), 93.7% in high risk group had LDL reduction more than 50% and 71% in moderate risk group achieved LDL reduction between 30-50% and 100% in low risk group achieved LDL reduction up to 30%.

In the secondary prevention group, 108/134 prescriptions were found as per guidelines. In these 108 prescriptions, the mean decrease in total cholesterol, triglyceride, VLDL and LDL levels after 3 months of statin treatment in comparison to baseline was 14.35%, 15.80%, 16.17% and 36.92% respectively and increase in mean HDL level was 8.77%. 34/108 patients (31.48%) actually achieved more than 50% LDL reduction at the end of three months.

Conclusion

In our study, more than two third of patients in our study were receiving prescriptions according to guideline

References

1. Davies JT, Delfino SF, Feinberg CE, Johnson MF, Nappi VL, Olinger JT, Schwab AP, Swanson HI. Current and emerging uses of statins in clinical therapeutics: a review. *Lipid insights*. 2016 Jan;9:LPI-S37450.
2. Grundy SM, Stone NJ, Bailey AL, Beam C, Birtcher KK, Blumenthal RS. ACC.AHA/ AACVPR/ AAPA/ABC/ACPM/ADA/GS/APhA/ASPC/NLA/PCNA guideline on the management of blood cholesterol: a report of the American College of Cardiology Foundation and the American Heart Association Task Force on Clinical Practice Guidelines. *J Am Coll Cardiol*; 2018.