

Changes in Our Times and in Cholesterol Targets

Tania Leme da Rocha Martinez¹ 

Hospital do Coração (HCor),¹ São Paulo, SP – Brazil

Short Editorial related to the article: *Cardiovascular Risk and Statin Eligibility in Primary Prevention: A Comparison between the Brazilian and the AHA/ACC Guidelines*

Since the 80s, many approaches have emerged regarding the interpretation of cholesterol levels in clinical practice.

There have even been medical meetings with titles such as: “Cholesterol: Myth or Truth”?

At that same time, HDL precipitation assays and LDL-cholesterol calculation using the Friedewald Formula became available in the laboratories.

Studies such as the PROCAM and The Framingham Heart Study were convincing regarding their importance and also of the risk and protection associated with LDL and HDL cholesterol, respectively.

Trials have been performed throughout all these years and several Guidelines and Consensus Documents have been presented and updated from time to time in many countries and in all continents.

Cholesterol as a risk factor is more accurately defined by both LDL and Non-HDL Cholesterol and the target value for each individual is defined by the Risk Scores that take all the risk factors into consideration.

At present, we are currently facing differences when comparing Brazilian Guidelines to the American and even to the European ones.

In this issue, the article of the Cesena et al.¹ compares our most recent Guidelines to the North American ones, regarding mainly the indication for statin use.

The same group of authors had done the same with the former in 2017 for both.¹

In both articles, the comparisons show that the Brazilian Guidelines are more prone to indicate the prescription of statins than the North American ones, considering the same risk stratification.

The Brazilian approach shows more similarities to the European guideline and it is very likely that the reason for the differences is very similar to the ones pointed out in a recent review² that compared the AHA to the ESC guidelines. Apart from comparing the criteria in each of them, the authors mention that “One of the main reasons for these differences is the incorporation of cost value considerations by the AHA-ACC guidelines, whereas the ESC-EAS guidelines consider an ideal setting with unlimited resources”.³⁻⁶

The main message from all of the guidelines is to take its scope into consideration and individualize it for each particular patient.

Considering the similarities of purpose of the guidelines, in reality there are gaps in beliefs and practice regarding the management of dyslipidemia in different countries, which has been very well documented in a web-based physician survey⁷ and taking into account globalization and web resources, these differences will be better shaped according to regional characteristics.

Last but not least, let us not forget the reminder for a global action regarding awareness for cases of Familial Hypercholesterolemia (FH), thus reducing the clinical and public burden of this presentation. This underdiagnosed and undertreated disease leads to premature morbidity and mortality due to atherosclerotic cardiovascular disease.⁸

In order to facilitate the tasks of Risk Stratification Calculation and of FH presumption there are two independent Apps in the Atherosclerosis Department section of the Brazilian Society of Cardiology site. The more accurate the setting of the goal of the LDL-cholesterol level to be achieved, the more effective the clinical practice will be.

Keywords

Cardiovascular Diseases/prevention and control; Risk Factors; Cholesterol-LDL; Hydroxymethylglutaryl- CoA Reductase Inhibitors.

Mailing Address: Tania Leme da Rocha Martinez •
Av. Dr. Eneas Carvalho Aguiar, 44, 4 andar. Postal Code 04004-030,
São Paulo, SP – Brazil
E-mail: tamar@uol.com.br

DOI: <https://doi.org/10.36660/abc.20200670>

References

1. Cesena FHY, Valente VA, Santos RD, Bittencourt MS. Cardiovascular Risk and Statin Eligibility in Primary Prevention: A Comparison between the Brazilian and the AHA/ACC Guidelines. *Arq Bras Cardiol.* 2020; 115(3):440-449.
2. Cesena FHY, Laurinavicius AG, Valente VA, Conceição RD, Santos RD, Bittencourt MS. Cardiovascular risk stratification and statin eligibility based on the Brazilian vs. North American Guidelines on Blood Cholesterol Management. *Arq Bras Cardiol.* 2017;108(6):508-17.
3. Singh M, McEvoy JW, Khan SU, Wood DA, Graham IM, Blumenthal RS, et al. Comparison of transatlantic approaches to lipid management: the AHA/ACC/Multisociety Guidelines vs the ESC/EAS Guidelines. *Mayo Clin Proc.* 2020;95(5):998-1014.
4. Barkas F, Milionis H, Kostapanos MS, Mikhailidis DP, Elisaf M, Liberopoulos E. How effective are the ESC/EAS and 2013 ACC/AHA guidelines in treating dyslipidemia? Lessons from a lipid clinic. *Curr Med Res Opin.* 2015;31(2):221-8..
5. Lee JC, Zdrojewski T, Pencina MJ, Wyzomirski A, Lachacz M, Opolski G, Bandosz P, Rutkowski M, Gaciong Z, Wyrzykowski B, Navar AM. Population effect of differences in cholesterol guidelines in Eastern Europe and the United States. *JAMA Cardiol.* 2016;1(6):700-7.
6. Mortensen MB, Nordestgaard BG, Afzal S, Falk E. ACC/AHA guidelines superior to ESC/EAS guidelines for primary prevention with statins in non-diabetic Europeans: the Copenhagen General Population Study. *Eur Heart J.* 2017;38(8):586-94.
7. Mahmood D, Jahan K, Habibullah K. Primary prevention with statins in cardiovascular diseases: A Saudi Arabian perspective. *J Saudi Heart Assoc.* 2015;27(3):179-91.
8. Barter PJ, Yamashita S, Laufs U, Ruiz AJ, Sy R, Fang MDG, et al. Gaps in beliefs and practice in dyslipidaemia management in Japan, Germany, Colombia and the Philippines: insights from a web-based physician survey. *Lipids Health Di.* 2020;19:131.
9. Representatives of the Global Familial Hypercholesterolemia Community. Reducing the Clinical and Public Health Burden of Familial Hypercholesterolemia: A Global Call to Action. *JAMA Cardiol.* 2020;5(2):217-29.

