Heart groups in South Africa advocate for tighter LDL-C control and lipoprotein(a) testing to curb atherosclerotic cardiovascular disease

To the Editor: The South African (SA) Heart Association (SA Heart) and the Lipid and Atherosclerosis Society of Southern Africa (LASSA) are urging healthcare professionals to adopt stricter low-density lipoprotein cholesterol (LDL-C) targets and incorporate lipoprotein(a) (Lp(a)) testing into routine practice for preventing atherosclerotic cardiovascular disease (ASCVD). This call aligns with updated European guidelines emphasising aggressive LDL-C lowering and Lp(a) assessment for improved ASCVD risk management.[1,2]

Sharper LDL-C goals for high-risk individuals

The latest European Society of Cardiology (ESC)/European Atherosclerosis Society (EAS) guidelines, published in 2019, recommend lower LDL-C targets for patients at very high ASCVD risk compared with the 2018 SA dyslipidaemia guideline.[2,3] These stricter targets are:

- <1.4 mmol/L for very high-risk patients
- <1 mmol/L for very high-risk patients who have experienced recurrent cardiovascular events.

SA Heart and LASSA highlight the importance of clinicians familiarising themselves with these and other LDL-C goals (high-risk <1.8 mmol/L, moderate <2.6 mmol/L, low <3 mmol/L) and integrating them into treatment decisions. Early intervention and LDL-C targeting, particularly after an acute coronary syndrome (ACS), are crucial for optimal outcomes.

Treatment landscape

Fortunately, a diverse armamentarium of therapies is available to SA healthcare providers and patients to effectively lower LDL-C and achieve target levels. These include:

- oral statins: The foundation of LDL-C-lowering therapy
- ezetimibe: An additional therapy for patients who require further LDL-C reduction beyond statins alone
- Proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitor drugs: injectable medications (every 2 weeks: alirocumab and evolocumab or 6 monthly: inclisiran) that offer significant additional LDL-C lowering, particularly for patients with familial hypercholesterolaemia or inadequate response to statins.

While PCSK9 inhibitors are highly effective, their higher cost necessitates maximising oral therapies first. SA Heart and LASSA are committed to advocating for increased affordability of these novel agents to ensure broader access.

The rising role of Lp(a) testing

Mounting evidence underscores the independent risk factor that Lp(a) poses for ASCVD and aortic valve stenosis, even in individuals with low LDL-C levels.[4] Elevated Lp(a) levels (>30 mg/dL or 75 nmol/L) warrant increased vigilance.

SA Heart and LASSA strongly recommend measuring serum Lp(a) at least once in all adults, especially those with:

- familial hypercholesterolaemia
- family history of premature ASCVD
- moderate ASCVD risk (as a risk enhancer).

Lp(a) levels are mainly genetically determined. Levels increase until age 5 years and gradually increase to adult levels by 20 years, and then remain fairly constant throughout life. Importantly, the 50th percentile in black people is equated with the 80th percentile in white people.[5] While lifestyle modifications have minimal impact on Lp(a), aggressive LDL-C lowering remains the cornerstone of mitigating Lp(a)-related risk. Promising new therapies specifically targeting Lp(a) are under investigation, with ongoing trials to confirm their clinical benefit in ASCVD and aortic stenosis prevention.

Conclusion

By adopting stricter LDL-C targets, incorporating Lp(a) testing into clinical practice and optimising LDL-C-lowering therapy with available options, we can significantly enhance ASCVD prevention efforts and improve patient outcomes. SA Heart and LASSA remain committed to providing guidance and advocating for wider access to effective treatment strategies for the benefit of all South Africans.

E Q Klug
Cardiologist, Netcare Sunninghill and Sunward Park hospitals, Johannesburg, South Africa; School of Clinical Medicine, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; and Division of Cardiology, Charlotte Maxeke Johannesburg Academic Hospital, South Africa
drklug@tickerdoc.co.za

F J Raal
Director, Carbohydrate and Lipid Metabolism Research Unit, University of the Witwatersrand, Johannesburg, South Africa; and Division of Endocrinology and Metabolism, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

1. Boren J, Chapman MJ, Krauss RM, et al. Low-density lipoproteins cause atherosclerotic cardiovascular disease: Pathophysiological, genetic, and therapeutic insights: A consensus statement from the European Atherosclerosis Society Consensus Panel. Eur Heart J 2020;41(24):2313-2330. https://doi.org/10.1093/eurheartj/ehz962
2. Mach F, Baigent C, Catapano AL, et al. ESC Scientific Document Group. 2019 ESC/EAS Guidelines for the management of dyslipidaemias: Lipid modification to reduce cardiovascular risk: The Task Force for the management of dyslipidaemias of the European Society of Cardiology (ESC) and European Atherosclerosis Society (EAS). Eur Heart J 2020;41(1):111-188. https://doi.org/10.1093/eurheartj/ehz455
3. Klug E, Raal FJ, Marais AD, et al. South African Dyslipidaemia Guideline Consensus Statement 2018. S Afr Med J 2018;108(Part 2):973-997. https://doi.org/10.7196/SAMJ.2018.v108i11.13383
4. Kronenberg F, Mora S, Stroes ESG, et al. Lipoprotein(a) in atherosclerotic cardiovascular disease and aortic stenosis: A European Atherosclerosis Society consensus statement. Eur Heart J 2022;43(39):3925-3946. https://doi.org/10.1093/eurheartj/ehac361
5. Virani SS, Brautbar A, Davis BC, et al. Associations between lipoprotein(a) levels and cardiovascular outcomes in black and white subjects: The atherosclerosis risk in communities (ARIC) study. Circulation 2012;125(2):241-249. https://doi.org/10.1161%2FCIRCULATIONAHA.111.045120

S Afr Med J 2024;114(5):e1973. https://doi.org/10.7196/SAMJ.2024.v114i5.1973