New ESC/EASD lipid guidelines emphasise need to expand cholesterol screening and treating to target in clinical practice

‘Clinicians are not measuring cholesterol levels often enough in at-risk patients worldwide, and the new ESC/EAS (European Society of Cardiology and European Atherosclerosis Society) task force recommends stronger action in this regard’, Prof Richard Hobbs, professor and head of Primary Care, University of Birmingham, UK, noted in his countrywide talks to South African doctors, sponsored by AstraZeneca. Cardiovascular disease is the most important cause of premature death on the planet and lipid levels are one of the major modifiable factors that drive death and disability from vascular disease worldwide.

The recently announced South African Lipid Guidelines are broadly based on these new guidelines and recommend immediate treatment of very high risk patients with established cardiovascular disease, type 2 diabetes, genetic dyslipidaemia and chronic kidney disease to an aggressive low-density lipoprotein (LDL) cholesterol target of 1.8 mmol/l or less.

An important differentiation in South Africa is with regard to screening. ‘In Europe, screening is advocated for at least one total cholesterol/low-density lipoprotein (LDL) cholesterol measurement in men before the age of 40 years and in women before the age of 50. In South Africa, with a higher prevalence of familial hypercholesterolaemia, total cholesterol screening is recommended at least once in young adults from 20 years of age’, Dr Hobbs noted.

Risk algorithms quantify risk in primary prevention patients and are useful in allocating limited resources to those patients with the highest risk who are most likely to benefit. Europe uses the SCORE algorithm (cardiovascular mortality only) while the updated Framingham algorithm is recommended in South Africa. The new Framingham algorithm estimates the risk of vascular events in all arterial territories and not only coronary artery risk, as in the previous versions (Table 1).

The older risk algorithms tend to discriminate against women and young people, so there are some tools available in the SCORE algorithm to more accurately assess risk in these patients. In women, the incorporation of high-density lipoprotein (HDL) cholesterol measurements into cardiovascular risk assessment is useful. In the younger population, a relative risk chart is used to assess the risk of a young smoker, for example, compared to a similar aged, normotensive, non-smoker’, Dr Hobbs said.

‘Statins are the recommended therapy and have an 1A level of evidence to recommend their use, based on evidence from 130 000 patients treated for more than five years in randomised clinical trials’, Prof Hobbs pointed out. In primary prevention of patients at low risk without pre-existing vascular disease, statin therapy results in a 12% reduction in relative risk of all-cause mortality.

‘Contrary to what we initially believed, you get early treatment benefit with statin therapy in the first few months of treatment, maturing over two years, and still continuing to show benefit with long-term statin therapy. Also, there is an increasing benefit with increasing intensity of stain use, with a third better reduction in relative risk of vascular events obtained with the higher doses and more potent statins.

‘In general, we expect a constant on-going benefit of LDL cholesterol lowering with a relative reduction of 21% every year for every 1 mmol/l reduction in LDL cholesterol levels, even at levels starting at 2 mmol/l’, Dr Hobbs noted. ‘Modern man with LDL cholesterol levels usually markedly above 1.5 mmol/l can be viewed as a completely abnormal phenotype and our physiological system in evolutionary terms has not been designed for these levels’, he said.

‘Statins are a remarkably safe group of drugs, except for the recent cautionary on simvastatin 80 mg and the risk of developing new-onset diabetes in a small proportion of patients.’ This has led to the FDA decision to include this potential risk in patient information on statin use. ‘The observation of a higher risk of developing diabetes must be evaluated in the context of the greater protection from cardiovascular events’, Dr Hobbs warned.

**Practical interactive session**

**Dr Dirk Blom, University of Cape Town**

In an informative session, Dr Blom answered questions at a practical clinical level, providing useful guidance.

**Key take-home message**

- Total cholesterol measurement is good enough for screening in a young person.
- A full lipogram should be done for patients at higher risk. Point-of-care screening, if done correctly, is useful and if warranted should then followed by a full lipogram.
- The Framingham chart, loved or hated, is here to stay. The newer charts estimate the risk of all vascular events and not only coronary heart disease risk.
- If the target is 1.8 mmol/l you will need an effective statin, and combination therapy may be necessary in many patients. Ezetimibe is the most useful agent for additional LDL cholesterol lowering.
- The PMB (prescribed minimum benefits) algorithms, despite the industry’s involvement in the consultation processes of the new South African lipid guidelines, are different from the professional society’s (LASSA’s) recommendations.
- An important aspect of statin treatment is patient motivation; the attrition rate is very high. Significant benefit is lost due to discontinuation of medication.
- Failure to up-titrate statin therapy is a worldwide problem from which South Africa is not exempt (CEPHEUS trial). Dealing with this pragmatically should lead to clinicians scripting a statin dose based on the baseline LDL cholesterol and target levels from the outset.
- Deprivation or race does not protect one from cardiovascular disease as it is not ‘a rich man’s disease’. In the INTERHEART study, African patients had their first myocardial infarction at a younger age than the other patients.
- The higher the absolute risk, the greater the absolute benefit of lowering LDL cholesterol.

**TABLE 1. LDL-C TREATMENT TARGETS**

<table>
<thead>
<tr>
<th>Total Framingham CVD risk (%)</th>
<th>ESC/EAS risk score</th>
<th>ESC/EAS target (mmol/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3</td>
<td>Low risk</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>3–15</td>
<td>Moderate risk</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>15–30</td>
<td>High risk</td>
<td>&lt; 2.5</td>
</tr>
<tr>
<td>&gt; 30</td>
<td>Very high risk</td>
<td>&lt; 1.8</td>
</tr>
</tbody>
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