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EAS Updates

First insights from the EAS familial hypercholesterolaemia collaboration registry: FH is still underdiagnosed and undertreated☆

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Individuals with familial hypercholesterolaemia (FH) are at elevated risk of premature atherosclerotic cardiovascular disease (ASCVD), a consequence of cumulative exposure to high levels of low-density lipoprotein cholesterol (LDL-C) [1]. In 2013, the European Atherosclerosis Society (EAS) Consensus Panel statement [2] highlighted the extent of underdiagnosis and undertreatment of this common lipid disorder. Registries are critical addressing the unmet challenges in FH care, yet most focus on individual countries, such as the Simon Broome Register in the UK [3], the Dutch Lipid Clinic Network [4], and the SAFEHEART Study in Spain [5], or specific regions, such as the Middle Eastern and North African Region (MENA) Registry [6]. To tackle the worldwide burden of FH, a global perspective is needed. The EAS Familial Hypercholesterolaemia Studies Collaboration (FHSC) Registry addresses this by involving investigators from 69 countries worldwide [7]. By establishing a standardised registry of patients with FH, the EAS FHSC aims to promote a uniform evidence-based standard-of-care, and ultimately instigate change in global health policy for screening and management of FH.

Initial insights from the FHSC Registry have underlined gaps in FH knowledge and care (Box 1) [8]. Yet, to improve FH care, information about this patient population is essential to provide a baseline 'snapshot' of global FH care. The 2019 European Society of Cardiology (ESC) Congress was the setting for first presentation of baseline data from FH patients enrolled to date in this Registry. This cross-sectional analysis focused on patients with heterozygous FH, which affects as many as one in 200–250 people [9].

1. Key findings

To date, the EAS FHSC has enrolled 61,370 patients with FH, of whom 42,136 were adults with probable or definite heterozygous FH as defined by clinical and/or genetic criteria. Most of these patients were enrolled within Europe (84%), which is not surprising given that FH initiatives and funding have been established in this region for some time. It is clear that further work is needed to address deficiencies in FH diagnosis and care in other global regions.

Consistent with evidence that FH is underdiagnosed, more than half of individuals with heterozygous FH were middle-aged at entry to the registry (mean age 46.7 years), implying that late FH diagnosis is the norm (mean age at diagnosis 44.9 years). This was evident across all world regions, including Europe.

Statins, in addition to lifestyle intervention, represent the first-line treatment for FH [10]. Yet at entry to the Registry, only 59% of patients were on lipid-lowering therapy (the majority, a statin). In these individuals, the median LDL-C at entry to the Registry was 211 mg/dL (5.46 mmol/L), substantially lower than in individuals who were not on lipid-lowering therapy at baseline (median LDL-C 163 mg/dL or 4.22 mmol/L).

The updated 2019 ESC/EAS Guidelines for Management of Dyslipidaemia published at the start of the Congress, place renewed emphasis on the cardiovascular risk associated with FH [10]. Patients with FH and ASCVD, or another major risk factor, are now classified as very high-risk with a corresponding LDL-C goal of less than 1.4 mmol/L (55 mg/dL); FH patients without known ASCVD or other risk factors are classified as high-risk, with a corresponding LDL-C goal of less than 1.8

☆ First data from the European Atherosclerosis Society Familial Hypercholesterolaemia Studies Collaboration Registry were presented during the European Society of Cardiology Congress 31 August-4 September 2019, Paris, France.

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Box 1
Gaps in FH knowledge: Survey of 63 countries in the EAS FHSC Registry

- Insufficient information relating to FH prevalence in all regions.
- Underdiagnosis and undertreatment remain problematic in all regions.
- LDL-C goal attainment is far from optimal.

mmol/L (70 mg/dL). Yet, in this analysis of heterozygous FH patients in the FHSC Registry, less than 3% had LDL-C levels < 1.8 mmol/L (70 mg/dL), underlining the extent of undertreatment of this high- and very high-risk patient population.

2. Implications

These first baseline data from the FHSC Registry provide a window to the enormity of the challenge in addressing the burden of FH. By failing to diagnose and initiate guideline-recommended therapy early, individuals with FH are at substantially increased risk of cardiovascular events and reduced lifespan. It is evident that there remains a major gap in quality FH care across the world.

What is the best way forward? One approach is cascade screening; indeed, preliminary data from the FHSC Registry indicate that individuals identified as a result of cascade screening from an index case have lower LDL-C levels and a lower prevalence of cardiovascular complications. However, a preferable approach may be to adopt universal cholesterol screening, at an opportune time during childhood, as already in operation in some countries [11]. By curtailing the burden of cardiovascular complications associated with long-term elevated LDL-C levels, this approach is also likely to prove cost-effective [12].

In 1988, a World Health Organization consultation on FH [13] recognised that cardiovascular complications associated with FH are largely avoidable if patients could be identified and treated earlier, specifically focusing on children. Reducing the global burden associated with FH places an onus on all stakeholders in FH care to address the gap in FH detection and treatment. These baseline findings from the FHSC Registry, the only global FH registry, show that there is much to do.

Declaration of Competing Interest

The author declared she does not have anything to disclose regarding conflict of interest with respect to this manuscript.

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