HEART UK 35th Annual Medical and Scientific Conference 2022

Lipids - One Huge Step for Healthcare? - CONFERENCE REVIEW

Wednesday 6th – Friday 8th July 2022

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The HEART UK conference this year celebrated 20 years since its formation following a merger between the Family Heart Association (FHA) with the British Hyperlipidaemia Association (BHA), in 2002. It marked a welcome return to the face-to-face conference format, albeit with a new hybrid approach, allowing virtual attendees to tune in and follow the conference too. Covering a diverse range of lipid updates this year, once again highlighting its important role, for informing those working within the Lipidology realm.

Session 1

Tackling Cholesterol Together - The Role of Pharmacy & New Therapeutic Options

Dr Rani Khatib **(Leeds, UK)** outlined to the audience the scale of unmet need in terms of optimising lipids in those with established cardiovascular disease (CVD). Data from a primary care cohort in his area, identified that 25% of patients with established CVD were not on any lipid lowering therapy. To add to this, in another study from his team, 45% of those on treatment were non-adherent to at least one secondary prevention medication, with statins topping this list, despite their clear importance in these patients. Having Pharmacy led clinics, however, was one approach which did lead to an improvement in medication adherence, better access to newer lipid lowering therapies, and achieving LDL-C targets.

CVD risk and gender reassignment

Dr Devi Nair **(London, UK)** highlighted how despite between 200-500,000 people in the UK identifying as transgender, we still do not have clear evidence on how cross-hormone treatment influences long-term cardiovascular risk. Robust clinical evidence is needed to aid clinicians, in how best to manage cardiovascular risk in this population, to avoid any potential health inequality.

Session 2

Fats versus carbs in lipid management - the controversy: Evidence for fats and carbs

Professor Bruce Griffin **(Surrey, UK)** reiterated the well-established notion that all forms of LDL cholesterol (LDL-C) are atherogenic and that, beyond doubt, higher LDL-C correlates with coronary heart disease risk. Therefore, with respect to this, caution is needed in relation to the lipid modifying effects of certain diets (e.g. ketogenic), whereby LDL-C may be seen to rise significantly.

Session 4

Statin myopathy and myositis

Professor Hector Chinoy (Manchester, UK) reminded delegates of the fact that severe myopathy with statin use, remains very rare. To assist clinical teams in determining whether muscle symptoms are likely statin related, he pointed the audience towards the Statin-Associated Muscle Symptom Clinical Index (SAMS-CI), which is a useful tool available online for this purpose. In those found to have significant creatine kinase elevation on statins, he discussed the rare presentation of statin-associated necrotizing myopathy; an autoimmune condition, which can be assessed for with anti-HMGCR antibody testing (Oxford Immunology).

The role of non-invasive CT coronary angiography in the Lipid Clinic

Dr Jonathan Rodrigues (Bath, UK) made the important point, that coronary calcification represents the end stage of atherosclerotic disease, as the plaque heals by calcification. A cardiac calcium score of zero, on this traditional screening modality, may therefore still miss patients at highest risk. Coronary artery disease is an inflammatory process and promising new technologies, such as CaRi-Heart®, can now take CT coronary angiogram images and stratify levels of blood vessel inflammation, to help identify the highest-risk patients.

Session 5

Lipids - Devolution Differences

Kate Shipman (Chichester, UK), Paul Hamilton (Belfast, UK), Sara Jenks (NHS Lothian, UK) & Yee Ping Teoh (Wales, UK).
This fascinating session looking at the regional variation in Lipid management, across the UK, highlighted some clear differences. Northern Ireland is currently leading the way with 23% of familial hypercholesterolaemia (FH) cases having been identified, followed by Wales at 14.5%; both considerably above the UK average of under 8% identification. A key factor in achieving this success, appears to be, having dedicated FH nurses to work on cascade screening.

Session 6

Lipoprotein (a): Cardiovascular Risk and Emerging Therapies

Professor Sam Tsimikas, (San Diego, USA) led the audience through all the latest on Lipoprotein (a). He highlighted how statins can significantly increase plasma Lipoprotein (a) levels, by approximately 8-24%, depending on the dose and statin used. Pelacarsan, an interfering RNA injectable medication, appears to lower Lipoprotein (a) levels by about 80%, with outcomes data expected in 2025. Four further drugs to lower Lipoprotein (a), are in earlier stage trials, indicating much promise in the fight against this independent risk factor for atherosclerotic vascular disease.

State of the nation - UK view on Lipoprotein (a)

Dr Jai Cegla (London, UK) – highlighted the regional variation in Lipoprotein (a) testing, with 20% of lipid clinics in their survey, still not offering Lipoprotein (a) measurement. She also directed the audience to the HEART UK consensus statement on Lipoprotein (a), from 2019, whose key statements included the recommendation to screen first degree relatives of those with raised serum Lipoprotein (a) > 200 nmol/l.

Session 8

Keynote Myant lecture: Severe familial hypercholesterolaemia – from a lethal disorder in childhood to a manageable dyslipidaemia today

Professor Frederick Raal (Johannesburg, South Africa) In the Myant lecture this year, Professor Raal, a titan within the familial hypercholesterolaemia (FH) community, took the audience on a journey to show just how much progress has been made in the management of homozygous FH (HoFH). Professor Raal's unit has one of the largest cohorts, if not the largest cohort, of HoFH patients in the world. From a previously lethal disorder in childhood, many of these patients are now well managed adults, through a diverse array of lipid lowering therapies, which are either LDL receptor (LDLR) dependent or independent, depending on how much LDLR function the patient has. Professor Raal outlined how the arteries of a 20-year-old HoFH patient, are exposed to same amount of cholesterol as a healthy 80-year-old individual; therefore, highlighting how starting treatment early and continuing lifelong, is key. Professor Raal finished off with a look to the future; could gene therapy eventually lead to a potential 'cure' for some with HoFH, by inducing LDLR expression in the liver?