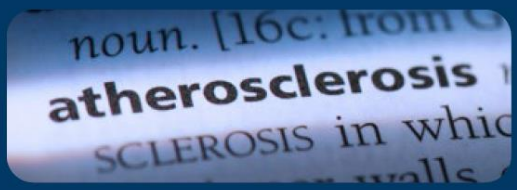

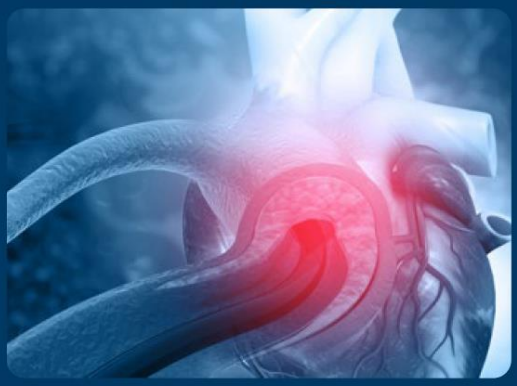

Glossary – Podcast 4

"It's written in the genes: Prevalence, pathology and the cumulative risk of familial hypercholesterolaemia."

Autosomal dominant: A disease with an autosomal dominant inheritance pattern results from a single mutated copy of a gene. A child born to a parent with a dominant trait (such as a disease) has a 50% chance of also suffering from that condition. An autosomal mutation is a genetic mutation located on one of the non-sex chromosomes. (1)

Atherosclerotic cardiovascular disease (ASCVD): Atherosclerotic cardiovascular disease refers to cardiovascular complications/events (ie. stroke and heart attacks) caused by atherosclerosis and it is the leading cause of death worldwide.(2)

Cholesterol: Cholesterol is a naturally occurring fatty (waxy) substance produced mainly by the liver. Cholesterol is vital to the structure and function of cells within the body. However, having too much cholesterol, particular of the bad kind may increase the risk of cardiovascular disease. There are two main types of cholesterol: HDL-C (High-density lipoprotein cholesterol, "good cholesterol") and LDL-C (Low-density lipoprotein cholesterol, "bad cholesterol"). Lipoprotein is the name given to cholesterol when combined with the proteins that transport it around the body.(3)

Cholesterol-year score: A simple tool which evaluates the length of time and the intensity to which blood vessels have been exposed to elevated cholesterol levels (cholesterol burden). A high cholesterol burden is associated with an increased atherosclerotic burden. (4,5)

Familial hypercholesterolaemia (FH): Familial hypercholesterolaemia is an inherited cholesterol disorder characterized by mutations in genes involved in LDL-C clearance. These genetic mutations lead to the accumulation of LDL-C ("bad cholesterol") in the blood and predisposes an individual to early onset cardiovascular disease. A person can present with either heterozygous FH (genetic mutation acquired from one parent) or homozygous FH (two copies of the same genetic mutation acquired from both parents). (3,6)

Hepatocytes: The main cell-type of the liver.

Myocardial infarction (MI): A myocardial infarction, commonly referred to as a "heart attack", results from damage to the heart muscle (myocardium). When a portion of the myocardium is starved of blood (due to a narrowed blood vessel) the cells become deprived of oxygen and consequently die. These events are medical emergencies usually requiring hospitalization and may even be catastrophic, resulting in sudden death. (7)

Mutation: A permanent and inheritable change in the genetic sequence of a gene (DNA) which may render the protein product of that gene functionally and/or structurally impaired. If the mutation alters the function and/or structure of the protein the consequence may be disease. [8]

Secondary causes of hyperlipidaemia: Secondary hyperlipidaemia, as opposed to primary hyperlipidaemia (inherited genetic disorder of lipid metabolism), can be caused by underlying disease (ie. hypothyroidism), the use of certain drugs or unhealthy lifestyle factors. Treatment of secondary hyperlipidaemia involves identifying and addressing the causative disease or drug/s. Differentiation between primary and secondary causes is important for effective and safe disease management. [9]

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