

Overview on Hyperlipidemia

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Introduction

It is a medical condition characterized by an elevation of any or all lipid profile and/or lipoproteins in the blood. This medical condition or problem divided into two subtypes which are: primary hyperlipidemia and secondary hyperlipidemia.

Primary hyperlipidemia which is usually taken place as a result of genetic problems i.e., mutation within receptor protein, while secondary hyperlipidemia will arises as a result of other underlining diseases like diabetes.

Alteration and/ or abnormality in the metabolism of lipid and lipoproteins is a very common condition that taken place within general population, and it consider as one of the main risk factor in the incidence of cardiovascular disease due to their influence on atherosclerosis.

Critical Factors that Play Role in Hyperlipidemia Incidence

There are several factors which play significant role in the incidence of this medical problem which are the following: family history, Chronic diseases (diabetes mellitus, renal failure, nephritic syndrome and hypothyroidism), alcoholism and smoking, obesity and un healthy diets intake.

Classifications of Hyperlipidemia

Besides the above classifications i.e., primary and secondary hyperlipidemia subtypes, hyperlipidemia also classified according to the type of lipid elevated which is hypercholesterolemia, hypertriglyceridemia or both in combined hyperlipidemia.

Diagnosis of Hyperlipidemia

In this part the patients have to fast for at least 12 hours before taking the blood sample, the main reason for this is that chylomicron clearance required at least 10 hours. The laboratory test for this case mainly focuses on the lipid profile i.e., measure lipid profile which include total plasma cholesterol, HDL, LDL, VLDL and triglycerides

levels. The mathematical way to calculate the VLDL is by dividing triglyceride value by 5, while for LDL it can be calculated by subtracting HDL cholesterol and VLDL cholesterol from total plasma cholesterol value.

Managements used for Hyperlipidemia

The major treatment used for hyperlipidemia divided into three parts which are:

- Dietary control: This point focus on reducing intake of foods that contain high amount of saturated fat and cholesterol i.e., foods of animal origin. On the other hand this point will encourage intake of food or supplements that include fish oil or olive oil which include a very low concentration of saturated fat. Or focusing on intake of vegetarian foods which are free of cholesterol. These types of food will significant play role in reducing elevated triglyceride levels.

- Lifestyle change: This will include focusing on daily exercises, since regular exercises will lead to an improvement within lipid concentrations i.e., daily walking will reduce triglyceride level by an average of 10 mg/dL and elevation within HDL level by 5 mg/dL.

- Medical treatments: These treatments will be indicated for those patients who suffer from hyperlipidemia since early childhood i.e., familial hyperlipidemia. These medications include: HMG CoA reductase inhibitors (first line treatment for elevated LDL levels), Fibrates (first line treatment for triglyceride elevation), Bile acid sequestrants (second line treatment for elevated LDL levels), Nicotinic acid (niacin) (second line treatment for all lipid disorders) and Ezetimibe and colesvelam (second line treatments to reduce absorption of cholesterol through gastrointestinal tract).

Conclusion

Therefore it is a very important point for the open access journals to encourage researchers and clinicians to work hard in order to clarify the main problems associated with hyperlipidemia and the proper treatment used to treat this medical problem.

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