Difference Between Dyslipidemia and Hyperlipidemia

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Key Difference – Dyslipidemia vs Hyperlipidemia

Dyslipidemia and hyperlipidemia are two medical conditions that affect the lipid levels of the body. Any deviation of the lipid level of the body from the normal and clinically appropriate values is identified as dyslipidemia. Hyperlipidemia is a form of dyslipidemia where the lipid levels are abnormally elevated. The key difference between dyslipidemia and hyperlipidemia is that dyslipidemia refers to any abnormality in the lipid levels whereas hyperlipidemia refers to an abnormal elevation in the lipid level.

What is Dyslipidemia?

Any abnormality in the lipid levels of the body is identified as dyslipidemia.

Different forms of dyslipidemia include

- Hyperlipidemia
- Hypolipidemia

Lipid levels of the body are abnormally reduced in this condition. Severe protein energy malnutrition, severe malabsorption, and intestinal lymphangiectasia are the causes.
Hypolipoproteinemia

This disease is caused by genetic or acquired causes. The familial form of hypolipoproteinemia is asymptomatic and does not require treatments. But there are some other forms of this condition which are extremely severe.

Genetic disorders associated with this condition are,

- Abeta lipoproteinemia
- Familial hypobetalipoproteinemia
- Chylomicron retention disease
- Lipodystrophy
- Lipomatosis
- Dyslipidemia in pregnancy

What is Hyperlipidemia?

Hyperlipidemia is a form of dyslipidemia that is characterized by abnormally elevated lipid levels.

Primary Hyperlipidemia
Primary hyperlipidemias are due to a primary defect in the lipid metabolism.

**Classification**

- Disorders of VLDL and chylomicrons- hypertriglyceridemia alone

The commonest cause of these disorders is the genetic defects in multiple genes. There is a modest increase in the VLDL level.

- Disorders of LDL- hypercholesterolemia alone

There are several subgroups of this category

**Heterozygous Familial Hypercholesterolemia**

This is a fairly common autosomal dominant monogenic disorder. In most of the cases, clinical signs and symptoms are absent and consequently, a majority of the patients remain undetected. Familial hypercholesterolemia should be suspected if the patient has a high plasma cholesterol concentration that does not respond to dietary modifications. Associated clinical features are xanthomatous thickening of the Achilles tendon and xanthomas over the extensor tendons of the fingers.

**Homozygous Familial Hypercholesterolemia**

This is an extremely rare condition seen among the children. This condition is characterized by the absence of LDL receptors in the liver. Patients have very high levels of LDL cholesterol in the blood.

**Mutations in the Apo protein B-100 Gene**

Patients suffering from this disorder also have very high levels of LDL in the blood.
Polygenic Hypercholesterolemia

- Disorders of HDL

This is an autosomal recessive disorder characterized by a very low HDL concentration.

Clinical features of this disease are

1. Accumulation of cholesterol in the arteries and reticuloendothelial cells result in orange colored tonsils and hepatosplenomegaly.
2. There is a high chance of developing cardiovascular diseases, corneal opacities, and polyneuropathy.

- Combined hyperlipidemia (combined hypercholesterolemia and hypertriglyceridemia)

There are two forms of this disease as familial combined hyperlipidemia and remnant hyperlipidemia.

Secondary Hyperlipidemias

When the lipid levels rise as a result of some underlying pathological condition it is called secondary hyperlipidemia.

Causes

- Hypothyroidism
- Diabetes mellitus
- Obesity
- Renal impairment
- Nephrotic syndrome
- Dysglobulinemia
- Hepatic dysfunction
- Alcoholism
- Certain drugs such as OCP
Management

Since most of the patients with hyperlipidemia remain asymptomatic until the development of systemic manifestations, screening of the individuals having the risk factors is of great importance.

Risk Factors

- Family history of coronary artery diseases
- Family history of lipid disorders
- The presence of a xanthoma
- The presence of xanthelasma or corneal arcus before the age of 40
- Obesity
- Diabetes
- Hypertension
- Acute pancreatitis

The management of the patients can be divided into two categories as pharmacological management and nonpharmacological management.

Nonpharmacological Management

Dietary modifications should be done under the guidance of a physician.

- Intake of saturated and trans unsaturated fat should be reduced to less than 7-10% of total energy.
- The daily cholesterol intake should be reduced to less than 250mg
- Consumption of high energy food such as soft drinks should be reduced
- Alcohol consumption should be minimized
- Intake of Omega three fatty acids containing food should be increased.

Pharmacological Management

- Predominant hypercholesterolemia can be treated with statins.
- A combination therapy is usually used in the treatment of mixed hyperlipidemia. Statins and fibrates are the drugs included in the drug regimen.
- Fibrates are used as the first line treatment in the management of predominant hypercholesterolemia.
What is the difference between Dyslipidemia and Hyperlipidemia?

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<td>Any abnormality in the lipid levels of the body is identified as dyslipidemia.</td>
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<tr>
<td>Lipid Level</td>
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<td>In dyslipidemia, lipid level can be either increased or decreased.</td>
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Summary – Dyslipidemia vs Hyperlipidemia

Dyslipidemia refers to any abnormality in the lipid levels whereas hyperlipidemia refers to an abnormal elevation in the lipid level. This is the main difference between dyslipidemia and hyperlipidemia. The long term use of lipid lowering drugs such as statins can have adverse effects including hepatic and renal damages. Therefore more attention should be given to the nonpharmacological management of lipid disorders through the life style modifications.

References:


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