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Dyslipidemia in a young adult Indian male: A case study

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Abstract

Cardiovascular diseases (CVD) are the most prevalent cause of death and disability in both developed as well as developing countries. Hyperlipidemia is a condition characterized by high quantities of lipids in the blood stream. Lipids include cholesterol, triglycerides and phospholipids. The most important risk factor for coronary artery disease is an elevated LDL and the second most important risk factor is depressed HDL. The dietary modification, exercise and weight control are the main foundations for the treatment of dyslipidemia.

Keywords: Dyslipidemia, young adult male, life style variables

Introduction

Cardiovascular diseases (CVD) are the most prevalent cause of death and disability in both developed as well as developing countries^[1]. South Asians around the globe have the highest rates of Coronary Artery Disease (CAD)^[2]. According to National Commission on Macroeconomics and Health (NCMH), a government of India undertaking, there would be around 62 million patients with CAD by 2015 in India and of these, 23 million would be patients younger than 40 years of age^[3]. Hypertriglyceridemia is defined as an abnormal concentration of triglyceride in the blood and has been associated with atherosclerosis, even in the absence of hypercholesterolemia^[4]. This case report is of 38-year-old man diagnosed to have hypertriglyceridemia who attended for routine screening in my clinic at Belagavi, Karnataka.

He does not have any habits like consumption of tobacco or alcohol. He uses to do regular exercise and use to consume balance diet with lot of fruits and vegetables. He was not taking any lipid lowering medications. He hailed from Belagavi and was employed in Government sector and lawyer by profession. His father died at the age of 59 years in a heart attack, but his mother is healthy and now almost 65 years of age, and he has two brothers one elder and another younger to him, both are healthy. His blood pressure was normal, his body-mass index was 27, and his waist circumference was 96 cm and hip circumference was 103. His waist/hip ratio was 0.932. I advised him life style modification and a consultation with dietician.

On analysis the following results were obtained

Fasting glucose: 192 mg/dL, total cholesterol: 88 mg/dL, Triglycerides: 368 mg/dL, High-density cholesterol: 3.70 mg/ dL, Low-density cholesterol: 2.90 mg/dL, VLDL: 83.20 mg/dL, Cholesterol/HDL-C ratio: 23.6:1, LDL-C/HDL-C: 0.07:1.

The biochemical investigations were repeated after ten days and the following results were obtained: Fasting glucose: 180- mg/dL, total cholesterol: 78 mg/dL, Triglycerides: 354mg/dL, High-density cholesterol: 3.60 mg/ dL, Low-density cholesterol: 3.10 mg/dL, VLDL: 82.24 mg/dL, Cholesterol/HDL-C ratio: 22.43:1, LDL-C/HDL-C: 0.84:1.

This study reveals hypertriglyceridemia with normal total cholesterol and very low LDL-C and HDL-C levels. Increased prevalence hypertriglyceridemia are more prominent in 31- 40 years age group as observed earlier studies^[4] conforms to the current report. Enas et al in their study on coronary artery disease in Indians (CADI) study reports the prevalence of diabetes to be three to six times higher among south Asian's than Europeans, Americans and other Asians^[5] which is also observed in this patient, showing fasting glucose as 186 mg/dL.

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predicting high blood glucose levels with hypertriglyceridemia. We Indians have relatively higher risk of predisposition to coronary artery disease even at relatively lower level of cholesterol [6]. High triglycerides levels have been associated with increased levels of small dense LDL which are considered to be highly atherogenic [7].

This study revealed the increased prevalence of dyslipidemia to be more prevalent in 31-40 year males, suggesting that this group is at increased risk of developing CAD leading to young infarcts. Combination lifestyle therapies i.e., enhanced physical activity and dietary modification and therapeutic intervention [8, 9] would help us in treatment and management of dyslipidemia.

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