

Impact of Chronicity on Lipid Profile of Type 2 Diabetics

Singh¹, Gurdeep & Kumar², Ashok

¹Ph.D. Research Scholar, Department of Sports Science, Punjabi University Patiala, India, Email: drgurdeep_sahni@yahoo.co.in

²Assistant Professor, Department of Sports Science, Punjabi University Patiala, India

Abstract

Aim: To study the impact of chronicity of type 2 diabetes on lipid profile in type 2 diabetics.

Material & Methods: This study was conducted on 120 Punjabi male type 2 diabetics. Their age ranged from 30 to 70 years. The subjects were categorized into three groups, on the basis of the duration of detection of type 2 diabetes- group 1(below 4 years), group 2 (between 4 to 8 years) and group 3(above 8 years).**Results:** There was sharp and definite increase in the percentage of patients having >200mg/dl total cholesterol after four years of diabetes mellitus from 16% to 25% and then to 55% after 8 years of duration. The percentage of patients having >150mg/dl of low density lipoproteins (LDL) after 8 years of diabetes mellitus was much high (67%) as compared to group 1 (29%) and group 2 (49%) . There was also an increase in the percentage of patients having <160mg/dl of triglycerides after four years of diabetes mellitus from 14% to 37% of diabetes and then to 56% after 8 years. **Conclusion:** The chronicity of Type 2 Diabetes mellitus disturb the normal levels of lipid profile that is dyslipidemia if unchecked this may lead to atherosclerosis and ultimately Cardio-Vascular Disease (CVD) and it is the commonest cause of death in type 2 diabetics.

Key words: Type 2 Diabetes Mellitus, Lipid profile, Dyslipidemia.

Introduction

Dyslipidemia is one of the major cardiovascular disease (CVD) risk factors and plays an important role in the progress of atherosclerosis, the underlying pathology of CVD. The prevalence of dyslipidemia in type 2 diabetes is double with respect to the general population (Haffner, 1998). In patients with type 2 diabetes, which is equivalent to CHD (Juutilainen et al. 2005); it is most commonly characterized by elevated TG and reduced HDL-C (Goldberg, 2001). These abnormalities can be present alone or in combination with other metabolic disorders. The prevalence of dyslipidemia varies depending on the population studied, geographic location,

socioeconomic development and the definition used (Wood et al, 1972; Berrios et al, 1997). Triglyceridemia has been associated with increased risk of coronary heart disease both in non-diabetic and type 2 diabetic subjects (Frank et al., 2002, Sridhar, 2002). Remnants of triglyceride rich lipoproteins seem to be extremely atherogenic (Car et al., 2004). LDL cholesterol is related to life style factors such as diet and exercise (Khatit et al., 2008). It has been associated with metabolic syndrome (Analava et al., 2007). The Pro-atherogenic properties of small LDL particles may relate to their ability to penetrate the arterial wall and thereby making them more susceptible to