

Medicine

Category: Clinical

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Pattern of dyslipidemia in young adults with type 1 diabetes

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Introduction:

Although dyslipidemia is the major preventable risk factor for coronary heart disease and the main cause of premature death in individuals with type 1 diabetes, studies have shown that it is largely underdiagnosed and undertreated. This study aims to assess the pattern of dyslipidemia in young adults with type 1 diabetes in Kuwait.

Methods:

In a cross-sectional study, data for young adults (12-30 years) with type 1 diabetes who attended the diabetes OPD clinic at Al-Sabah hospital were collected. Age, gender, smoking status, diabetes duration, body mass index (BMI), HbA1c, total cholesterol, low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), triglycerides, and presence of diabetic retinopathy and nephropathy were recorded. Presence of dyslipidemia was defined as LDL-C (>2.6 mmol/l), HDL-C (<1.0 for men and <1.3 mmol/l for women), and triglycerides (>1.7 mmol/l).

Results:

Lipid profile was available for 61 adults with type 1 diabetes. Mean age and duration of diabetes was 19.4 ± 3.9 , and 7.1 years respectively. More than half of the patients (53%) were male, and the majority (61%) were Kuwaiti citizens. Obesity ($BMI > 30$) was present in 15.1% of the patients, and 4.9% of the patients were hypertensive and current smoker. Mean HbA1c was $9.9 \pm 1.9\%$, and only 3.9% achieved the target ($<7\%$). Mean levels of LDL-C, HDL-C and, triglycerides were 2.9 ± 0.86 , 1.32 ± 0.35 , 1.18 ± 0.80 respectively. Dyslipidemia was present in 59.0%, 32.8% and 18.0% of the patients for LDL-C, HDL-C and, triglycerides respectively. Albuminuria and any retinopathy were present in 20.5% and 13.5% of the patients respectively. Higher total cholesterol, LDL-C and triglyceride levels were positively correlated with higher HbA1c levels.

Conclusions:

Young individuals with type 1 diabetes have high prevalence of dyslipidemia. Achieving good glycemic control and treatment of dyslipidemia are important steps to prevent future cardiovascular events.

Key Words: Diabetes; Dyslipidemia; Type 1

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