Adiponectin Gene Mutation Variant +276g/T (Rs1501299) and Type-2 Diabetes Mellitus Risk in Egyptian People with Obesity

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Abstract:

Objectives:

The present study aimed to indicate the relation between the adiponectin gene (ADIPOQ) mutation variant *+276G/T (rs1501299)* and the risk of T2DM among Egyptian people with obesity.

Background:

the condition of obesity together with insulin resistance increase the risk of Type 2 diabetes mellitus (T2DM). Adiponectin is a protein hormone derived from adipocytes that increases insulin sensitivity and controls diabetes by improving the oxidation of fatty acids and the uptake of glucose.

Methods:

This case-control study included 100 patients subdivided into four groups; group 1 (control group) was 25 non-obese non-diabetic cases, group 2 was 25 obese T2DM cases, group 3 was 25 obese non-diabetic cases and group 4 was non-obese T2DM cases. They were recruited and assessed for eligibility from the Endocrinology Outpatient Clinics and Inpatient Ward at Menoufia University Hospital.

Results:

Adiponectin gene Single-nucleotide polymorphism (SNP) *+276G/T (rs1501299)* is linked to T2DM and being obese. A high frequency of TT genotype was observed with increased fasting blood glucose, 2h postprandial blood glucose, and thyroid stimulating hormone (TSH) among diabetic obese Egyptian patients.

Conclusion:

Adiponectin gene SNP *+276G/T (rs1501299)* is linked to T2DM and obesity.

Keywords:

Obesity, The adiponectin gene, Type 2 diabetes mellitus.