# Clinical and Immunological Profile of Newly Diagnosed Diabetic Patients in A Cohort of Young Adults of National Hepatitis C Virus Survey in Egypt

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## ABSTRACT

### BACKGROUND

Type 2 diabetes has traditionally been considered a disease affecting older age groups. In recent years, however, Type 2 diabetes has become increasingly common in children, adolescents and young adults.

### OBJECTIVES:

To highlight the challenges in differentiating T1DM (type1 diabetes mellitus) from T2DM (type2 diabetes mellitus) in early onset diabetes in youth depending on clinical and laboratory characteristics.

### METHODS:

Our cross-sectional study was performed on two hundred newly diagnosed diabetic patients aged (18-30) years. All patients were subjected to full medical history and thorough clinical examination. Laboratory investigations included FBS, 2hPP, HbA1C, fasting C peptide, GADA, liver and kidney function tests. Patients with Medical disorders that would potentially confound results or patients receiving drugs that may affect blood glucose level as steroids were excluded from the study.

### RESULTS:

About 59% (118) of our patients were T2DM while (82) 41% were T1DM. T1DM was more dominant than T2DM in age group less than 25 years (T1DM 79% versus T2DM 21%, $P < 0.001$), while T2DM was more than T1DM in age group more than 25 years (T2DM 93% versus T1DM 17%, $P < 0.001$). GADA was detected in 73.2 % of T1DM patient and it was high titer while GADA was detected in only 8% of T2DM with low titer, in addition GADA positive patients were significantly younger than negative patients, age (20.9 ± 2.5 years vs 26.4 ± 3.5 years respectively) ($P < 0.001$). C peptide was predominantly higher in T2DM than T1DM (1.4 ± 0.5ng/ml T2D vs 0.7 ± 0.3 ng/ml T1D $P < 0.001$), DKA was higher in T1DM than T2DM in both the GADA positive and GADA negative patients (92.7% in T1DM, versus 5.1% in T2DM). Also, family history of diabetes was more common in T2DM (T2DM 70.3% versus T1DM 26.8%, $P < 0.001$), history of autoimmune diseases was more common in T1DM (T1DM 18.3% versus T2DM 2.5%, $P < 0.001$).

### CONCLUSION:

The prevalence of diabetes mellitus especially T2DM is increasing among youth may be due to changing lifestyle and genetic background, collection of detailed clinical and laboratory data has become fundamental to correctly evaluate diabetes trends in youth and to describe optimal treatment to different cases.



### KEYWORDS:

Diabetes Mellitus, C peptide, GADA


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