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Clinical and immunological characteristics of young Arabs (aged 12-30 years) with newly diagnosed diabetes

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Introduction:

To describe the clinical and immunological characteristics of young Arabs with newly diagnosed diabetes, and to establish the prevalence of glutamic acid decarboxylase (GAD) antibodies among young Arabs with type 1 diabetes.

Methods:

We evaluated 28 young Arabs (aged 12-30 years at diagnosis) with newly diagnosed diabetes that were referred to Diabetes outpatient clinic at Al-Sabah Hospital from 1997 to 2006 and followed up for at least one year. The clinical features documented were age of onset, BMI, BP, family history of diabetes, and modality of treatment within the first year of diagnosis. Patients were clinically diagnosed to be type 2 diabetes if they did not require insulin within the first year of diagnosis. Laboratory investigations included presenting blood glucose, diagnosis of ketoacidosis by serum bicarbonate or arterial PH, HbA1c%, triglycerides, HDL- and LDL-Cholesterol, GAD antibodies, thyroid function parameters (T4, TSH, and thyroid antibodies).

Results:

Out of the 28 patients, 25% were diagnosed as having type 2 diabetes. Diabetic ketoacidosis (DKA) was present in 75% of type 1 diabetic patients at diagnosis, whereas none of type 2 diabetics had DKA. Compared with type 2 diabetics, type 1 diabetics had significantly lower BMI (22.8 $\pm$ 7.8 vs. 31.8 $\pm$ 4.9 kg/m², $p < 0.05$), lower LDL cholesterol (2.7 $\pm$ 0.8 vs. 3.6 $\pm$ 1.0 mmol/l, $p < 0.05$), and higher presenting plasma glucose (32.1 $\pm$ 12.9 vs. 16.0 $\pm$ 2.9 mmol/l, $p < 0.005$). Prevalence of GAD antibodies in type 1 diabetics was 58.3 %, whereas none of type 2 diabetics was GAD positive. There was no statistical difference in other parameters.

Conclusions:

This study shows that type 2 diabetes in young Arabs is an emerging alarming health problem. Presenting plasma glucose, DKA, BMI, LDL level, and GAD antibodies are helpful distinguishing clinical and immunological features

Key Words: Diabetes; GAD antibodies; Arabs;

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