Has the Required Importance Been given to the Diagnosis and Treatment of Prediabetes?

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Letters to Editor

DEAR EDITOR,

The incidence of prediabetes increases steadily due to increasing obesity, consumption of fast food and sedentary lifestyle. Diet, increasing physical activities and metformin/acarbose therapy are used in prediabetic patients to slow down the progression to diabetes.[1-3] According to the guidelines, oral glucose tolerance test (OGTT) is indicated in the presence of obesity, dyslipidemia, hypertension, inactivity, positive family history of diabetes, and being older than 45 years.[4]

The patients included in this study had a sedentary lifestyle, body mass index (BMI) more than 25 and positive family history of diabetes. They visited our outpatient internal medicine clinic with complaints of weakness, sleepy after meals, inability to lose weight with diet and exercise, excessive hunger, and sugar craving.

The selected patients had no history of any disease or drug usage. A total of 167 patients who had fasting plasma glucose (FPG) level at least once between 100 and 125 mg/dL were included in the study and OGTT was performed for each of them. The test was performed according to the guidelines.[5] Test results of 7 subjects were normal, so they were excluded from the study.

Previous hospital documents were evaluated retrospectively and 160 patients were accepted as prediabetes. We recorded the number of times of the patients FPG levels between 100 and 125 mg/dL. The patients were asked whether they were given information by previous physicians about prediabetes. In the 2nd h of OGTT, 5 patients (4 females and 1 male) who had plasma glucose level >200 mg/dL were accepted as diabetes and their results were separated from the other individuals.

A total of 155 subjects (115 females and 40 males) were considered to be prediabetes. The mean age of patients with prediabetes was 48 ± 12 years and BMI was 32 ± 5 kg/m^2. The mean FPG when they visited our clinic was 107 ± 6 mg/dL. OGTT results were as follows: FPG in the 0 h was 102 ± 9 mg/dL, 1st h was 154 ± 40 mg/dL and 2nd h was 117 ± 29 mg/dL. The number of patients diagnosed with impaired fasting glucose (IFG) was 118 and the number of those who diagnosed with impaired glucose tolerance (IGT) was 37 patients. The mean of the first determined high FPG value was 107 ± 6 mg/dL and the duration between the elevated FPG level and OGTT test was 29 ± 23 months (min/max: 1-73). The number of times that FPG of 100-125 mg/

dl was not taken into consideration during the period between the initial value and the diagnosis was 1-8 min/max (once: 34.9%, twice: 23.1%, 3 times: 16.6%, 4 times: 5.9%, 5 times: 2.4%, 6 times: 5.3%, 7 times: 1.8%, and 8 times: 1.2%).

The mean age of the patients who were diagnosed with diabetes was 50 ± 7 years. FPG was found to be between 100 and 125 mg/dl twice in two patients and once in 3 patients; however, further tests were not performed. The estimated delay of the diagnosis in 1 patient was 44 months; in 1 patient was 15 months, in 1 patient was 6 months and in the other 2 patients was 2 months.

While 4% of the subjects had normal OGTT, 2.9% of them were obvious diabetics, 76% of them IFG and 24% were IGT. Nearly 42% of the patients had 3 or more times estimated overlooked diagnosis of prediabetes. The delay in the prediabetes screening was estimated to be nearly 29 months. According to the guidelines, when taking into consideration BMI, age and other characteristics, it is not known whether patients with FPG between 100 and 125 mg/dl to be prediabetes or not after performing screening tests such as OGTT and HbA1c so further investigations are needed in this regard. This study has shown that there was a delay in further investigations by doctors or patients. Even though our patients had elevated FPG levels 4-8 times (16, 6% of the patients) further investigation was not made.

A study conducted on prediabetes with a large population and long-term patient follow-up has reported that only few patients were aware of the condition.[6] In this study, only 27% of the patients reported being informed by their doctors that their blood glucose was slightly elevated. These patients had no diet or exercise program. This condition can be explained by the fact that patients had not been sufficiently informed by their doctors or patients had not fully grasped the importance of prediabetes. On the other hand, 73% of the patients believed that they had normal blood glucose levels. Their doctors did not inform them or patients did not understand the subject.

Prediabetes is diagnosed by FPG, OGTT and HbA1c levels.[7,8] Doctors especially in our country do not use HbA1c much as a screening test for diabetes and prediabetes due to its high cost and different results obtained in each laboratory.[9] In our study, we did not check HbA1c due to its high cost. Early diagnosis and treatment for prediabetes are very important. This study conducted on obese patients with high blood sugar has suggested that both doctors and the majority of patients to be unaware of prediabetes.

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