

## **DIAGNOSTIC VALUES OF FASTING PLASMA GLUCOSE, HbA1c AND OGTT STIMULATED GLUCOSE LEVELS IN OBESE PATIENTS WITH PREDIABETES**

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Prediabetes is defined based on different methods such as fasting glucose, glucose at 2-hour in OGTT and HbA1c. All these methods measure disorder of glucose metabolism, and guidelines do not differentiate between the diagnostic values of them. We aimed to evaluate prevalence of prediabetes and association between fasting and OGTT stimulated glucose levels with HbA1c in obese patients with prediabetes. A total of 350 obese patients (BMI 30 kg/m<sup>2</sup>) without known diabetes who admitted to our Endocrinology Department from the March 2014 to the January 2017 were assessed with HbA1c and fasting plasma glucose for the diagnosis of prediabetes according to ADA criteria. Then, oral glucose tolerance tests (OGTTs) were performed in patients who met the prediabetes criteria. A total 111 patients (32.2%) were diagnosed as prediabetes based on fasting plasma glucose, HbA1c or both. In these patients diagnosis of prediabetes was based on HbA1c (5.7 to 6.4%) alone in 91 (82.8%) patients and fasting plasma glucose (100 to 125mg/dl) alone in 82 (73.9%) patients. Then, OGTTs were performed in these patients. HbA1c contributed to identify prediabetes not detected by fasting plasma glucose in 26% of patients. However, fasting plasma glucose contributed to identify prediabetes not detected by HbA1c in 18 % of patients. Similarly, OGTT identified diabetes not detected by HbA1c or fasting plasma glucose in 10.8% of patients. Prevalence of prediabetes is high in patients with obesity. HbA1c is superior for detecting prediabetes compared to fasting plasma glucose. OGTT may be needed to differentiate diabetes from prediabetes.