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PREVALENCE OF PREDIABETES AMONG PATIENTS PRESENTING IN OUTDOOR DEPARTMENT

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ABSTRACT:
Prediabetes is a component of the metabolic syndrome and is characterized by elevated blood sugar levels that fall below the threshold to diagnose diabetes mellitus. This cross-sectional study was conducted among the patients presenting in the medical outdoor department of different hospitals. Name, age, gender and random blood sugar levels were noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. A total of 90 patients were included in this study i.e., 45 males (50%) and 45 females (50%). The mean age of the patients was 32.12±3.50 years. Out of 90 patients, thirteen patients were having prediabetes. Further workup of these patients was advised.

KEYWORD: PREDIABETES
INTRODUCTION:
Prediabetes is a component of the metabolic syndrome and is characterized by elevated blood sugar levels that fall below the threshold to diagnose diabetes mellitus. It usually does not cause symptoms but people with prediabetes often have obesity (especially abdominal or visceral obesity), dyslipidemia with high triglycerides and/or low HDL cholesterol, and hypertension. It is also associated with increased risk for cardiovascular disease (CVD). Prediabetes is more accurately considered an early stage of diabetes as health complications associated with type 2 diabetes often occur before the diagnosis of diabetes. Prediabetes can be diagnosed by measuring hemoglobin A1c, fasting glucose, or glucose tolerance test. Many people may be diagnosed through routine screening tests. The primary treatment approach includes lifestyle changes such as exercise and dietary adjustments. Some medications can be used to reduce the risks associated with prediabetes. There is a high rate of progression to type 2 diabetes but not everyone with prediabetes develops type 2 diabetes. Prediabetes can be a reversible condition with lifestyle changes.

For many people, prediabetes and diabetes is diagnosed through a routine screening at a check-up. However, an additional routine screening done by dentists, a new and promising concept, and not only medical doctors, can be very effective in early detection and treatment. The earlier prediabetes is diagnosed, the more likely an intervention will be successful. Prediabetes typically has no distinct signs or symptoms except the sole sign of high blood sugar. Patients should monitor for signs and symptoms of type 2 diabetes mellitus such as increased thirst, increased urination, and feeling tired. The cause of prediabetes is multifactorial and is known to have contributions from lifestyle and genetic factors. Ultimately prediabetes occurs when control of insulin and blood glucose in the body becomes abnormal, also known as insulin resistance. Risk factors for prediabetes include family history of
diabetes, older age, women who have a history of gestational diabetes or high birth weight babies (greater than 9 lbs.)

The increasing rates of prediabetes and diabetes suggest lifestyle and/or environmental factors that contribute to prediabetes. It remains unclear which dietary components are causative and risk is likely influenced by genetic background. Lack of physical activity is a risk factor for type 2 diabetes and physical activity can reduce the risk of progressing to type 2 diabetes (1-3). The objective of this study was to see the trends of prediabetes among the patients presenting in the medical outdoor department.

MATERIAL AND METHODS:
This cross-sectional study was conducted among the patients presenting in the medical outdoor department of different hospitals. Name, age, gender and random blood sugar levels were noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. The quantitative variables were presented as mean and standard deviation. The qualitative variables were presented as frequency and percentages.

RESULTS:
A total of 90 patients were included in this study i.e., 45 males (50%) and 45 females (50%). The mean age of the patients was 32.12±3.50 years. Out of 90 patients, thirteen patients were having prediabetes. Further workup of these patients was advised.

DISCUSSION:
Prediabetes can be diagnosed with fasting blood sugar (glucose) level of 110 to 125 mg/dL (6.1 mmol/L to 6.9 mmol/L) – WHO criteria and 100 to 125 mg/dL (5.6 mmol/L to 6.9 mmol/L) – ADA criteria. Impaired fasting glycemia or impaired fasting glucose (IFG) refers to a condition in which the fasting blood glucose is elevated above what is considered normal levels but is not
high enough to be classified as diabetes mellitus. It is considered a pre-diabetic state, associated with insulin resistance and increased risk of cardiovascular pathology, although of lesser risk than impaired glucose tolerance (IGT). IFG sometimes progresses to type 2 diabetes mellitus. Fasting blood glucose levels are in a continuum within a given population, with higher fasting glucose levels corresponding to a higher risk for complications caused by the high glucose levels. Some patients with impaired fasting glucose also may be diagnosed with impaired glucose tolerance, but many have normal responses to a glucose tolerance test. Fasting glucose is helpful in identifying prediabetes when positive but has a risk of false negatives. World Health Organization (WHO) criteria for impaired fasting glucose differs from the American Diabetes Association (ADA) criteria, because the normal range of glucose is defined differently by each. Fasting plasma glucose levels 100 mg/dL (5.5 mmol/L) and higher have been shown to increase complication rates significantly, however, WHO opted to keep its upper limit of normal at under 110 mg/dL for fear of causing too many people to be diagnosed as having impaired fasting glucose, whereas the ADA lowered the upper limit of normal to a fasting plasma glucose under 100 mg/dL (4-6).

REFERENCES:
