ORIGINAL RESEARCH PAPER

Medicine

C-PEPTIDE LEVELS IN DIABETES MELLITUS TYPE 2 PATIENTS AND ITS CORRELATION WITH OBESITY AND INSULIN RESISTANCE

KEY WORDS: C-peptide, type 2 DM, Obesity

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ABSTRACT

Background: With the advent of newer drugs to overcome insulin resistance it has become all the more important to know about the pathophysiology of diabetes, whether endogenous insulin secretion is normal and to know about insulin resistance. Keeping this perspective in mind, the assessment of endogenous insulin secretory function in type 2 diabetics can be done by assessing C-peptide level. **Aims and Objectives:** This study is done with the aim of estimation of C-Peptide levels in type 2 Diabetics to assess the endogenous insulin secretory function and to find out if there is any correlation between Obesity and Insulin resistance. **Material & Methods:** The study was conducted between January 2023 and May 2023 at Department of Family Medicine, D.Y. Patil University, School of Medicine & Hospital, a tertiary care hospital in Navi Mumbai. The patients who fulfilled the inclusion criteria and were willing to participate in the study, were included in the study. Patients already taking oral hypoglycemic agents were asked to stop the drugs for 3 days. Brief clinical history was taken and BMI was calculated. Venous blood samples were withdrawn in the fasting state and fasting blood glucose levels and C-peptide levels estimated. **Results :** In the present study, 100 cases of type 2 DM who were not on treatment for at least 3 days or newly diagnosed, were evaluated. The patient's fasting venous blood samples were analysed for plasma glucose levels and C-peptide levels. The HbA1c levels were also determined. Most of them (43%) were between 50-60 years of age. The number of patients with diabetes having obesity was 39%, while non-obese was 61%. The number of patients with poor insulin reserve was only 5% shown by C-peptide < 0.8. The fasting C-peptide level in the obese patients was increased compared to the non obese individuals, indicating insulin resistance. **Conclusions:** Obese patients had higher C-peptide levels as well as higher levels of FBS and HbA1c compared to the non obese, indicating insulin resistance.