AMJ
ISSN: 0005-2523

ISSN: 0005-2523
Volume 62, Issue 06, August, 2022

Serum level of periostin in patients with Type 2 Diabetes Mellitus in Bsrah, Iraq

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Keywords:
T2DM, Periostin, FBG, HbA1C

ABSTRACT

Diabetes mellitus is a group of metabolic disorders characterized by the presence of hyperglycemia in the absence of treatment. The heterogeneous aetio-pathology includes a defect in insulin secretion, action, or both. Periostin is a matricellular protein that is a member of the fasciclin (fasc) family and has structural similarities with the transforming growth factor—β inducible protein and insect axon guidance fasciclin1. The objective of this study was to comparison of the serum level of periostin in patients with T2DM and control to assess if there is an association of periostin with diabetic control in diabetic patients and to study the effect of age and duration of disease on the serum level of periostin. In the present study, included 175 participants categorized into two main categories; 89 patients with type 2 diabetes mellitus as cases, and 86 healthy individuals matched for both age and sex with cases. Body weight, height, and waist circumference were measured and body mass index was calculated for each participant. Overnight fasting blood samples (5-7ml) were collected. A part of (2ml) from each drawn sample was dispensed in a tube containing K3EDTA to measure glycated hemoglobin. The rest of the blood samples were placed in a serum separator tube, they were centrifuged to get the serum to measure fasting blood glucose, lipid profile, and periostin.

1. Introduction

Diabetes mellitus (DM) is a group of heterogeneous metabolic disorders characterized by increment levels of blood glucose that resulting from impairments secretion, and action of insulin, or both [1]. Type 2 diabetes mellitus is the most common and widespread type of diabetes in the worldwide. It is characterized by insulin resistance and/or insulin insufficiency and accounts for more than 90% of diabetic patients [2]. In 2019 the global prevalence was about 9.3% of DM in the adult population and is rising to 10.2 percent by 2030 and 10.9 percent by 2045 [3]. In Iraq, about 1.4 million have diabetes and the prevalence ranges from 8.5-13.9% [4]. In Basrah, Iraq, the age-adjusted prevalence of diabetes in adults age is 19.7 percent, of which 8.7 percent had previously been diagnosed, as well as 11 percent, were found to have diabetes through screening, therefore other studies have been conducted in Basrah to study diabetes from various