



## Study of Some Biochemical Parameters, Insulin resistance and Clinical markers for Male Type2 Diabetes Mellitus Patients in Al-Najaf Al-Ashraf Governorate

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**Abstract:**Type 2 diabetes mellitus or non-insulin dependent diabetes mellitus (NIDDM) is the most common type of diabetes, accounting for 90-95% of all diabetes. Obesity is found in approximately 55% of patients diagnosed with type 2 diabetes. The result is an excessive release of free fatty acids into the blood stream (due to increased lipolysis), and an increase in hepatic glucose production, both of which have the effect of exacerbating peripheral insulin resistance and increasing the likelihood of NIDDM. This study was conducted in endocrinology and diabetic center in Alsader medical city /Najaf, Samples were fasting selected from the patients attending the diabetic consultation unit at the hospital during the period from February 2016 to November 2016. The patients and control groups were with age ranged between (35-70) years. Study was carried out on 60 patient with type 2 diabetes mellitus(60 male) and 30 apparently healthy subjects(30 male) how dealt with as control group.

Insulin resistance was evaluated by four methods. They include homeostatic model assessment (HOMA), quantitative insulin check index (QUIKI), McAulye (McA), and fasting insulin (FI) methods. Insulin resistance was found in 40 (66.7%), 38 (63.3%), 27 (45%) and 17 (28.3%) out of the 60 type 2 diabetes mellitus patients by HOMA, QUICKi, McA and FI methods respectively. Type 2 insulin resistant (40) diabetic patients (IRP) that obtained through the HOMA method were assessed for the other biochemical Parameters. Results of the present study show was a significant gender difference (female more than male) and significant positive correlation with lipid profile. Serum cholesterol, LDL-cholesterol and TG were significantly high in type2 diabetic patients group compared with normal non-obese control group ( $P < 0.05$ ), while serum HDL-cholesterol level was low in NIDDM patients group compared with normal non-obese control group ( $P > 0.05$ ). The aim of the present study was to investigate the possible relationships between insulin, interleukin-8 and lipid profile levels and NIDDM with or without obesity. Results also show that mean value of serum insulin was significantly high ( $P < 0.05$ ) in type 2 diabetic patients group and in obese group compared with normal non-obese control group. Although Serum IL-8 mean value was high in type 2 diabetic patients group and in obese group than normal non-obese control group, but it shows no significant difference between them ( $P > 0.05$ ).

**Key word:** Male Type2 Diabetes Mellitus, Insulin hormone, IL-8, Obesity and dyslipidemia.