

The study sample size was 100 patients whom they have been recruited from Diabetes Unit in Marjan Teaching Hospital. We divided the sample into two groups; 88 with normal ECGs (group1) and 12 with abnormal ECG changes the (group2). The range of their age 17-76 years old. The study includes nine risk factors that causes coronary artery disease (CAD) which are, High density lipoprotein (HDL-C), Low density lipoprotein (LDL-C), Total cholesterol (TC), Triglyceride (TG), Body mass index BMI, Age, Glucose, Duration and BP. Laboratory analyses of HDL-C, LDL-C, TC, TG, and glucose reveal, that, LDL-C correlated negatively with TGs and positively with HDL-C in the (group1), and TGs show positive correlation LDL-C size in (group2). The only positive significant correlation coefficient was the glucose in (group1), 394.36 ± 40.82 compared to 244.75 ± 54.4 (group2) with p value < 0.01 . While 51% of all patients associated with hypertension. Duration of type 2 Diabetes Mellitus (T2DM) was 10-32 years for all patients.

Factor analyses for both groups variants result in: Variables analyses of component matrix of (group1) represent the risk factors on four categories while (group2) variables describe three risk factor categories, according to their performance percent on Coronary Artery Disease (CAD). Factor analysis reveals that; first, the factor of lipid profile had the great percentage of risk factor on CAD in both groups. Second; there was unobserved risk factors, one of these risk factors might be cytomegalovirus (CMV) which can infect pancreatic islet cells result in T2DM the main CAD risk factor. The group1 with abnormal electrocardiogram (ECG) changes reveals that 30.787% may be affected with CMV or even other reason rather than the common risk factors. Third; a glance to the percent, 42.16%, of first factor variance of the (group2) with normal ECGs, and 24.822% first factor variance of the (group1) match, tell more positive significant difference. Pearson correlation coefficients demonstrate no significant difference between all variables in both groups except glucose (394.36 ± 40.8) expose an increase difference in group1 compared to (244.75 ± 54.4) group2 with ($P < 0.01$). And 51% of all patients associated with hypertension