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Title of Thesis: Correlation between HbA1c level and severity of coronary atherosclerosis in non-diabetics

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Abstract

Aims: the present study was conducted to detect if there is relation between elevated HbA1c level and coronary artery disease in nondiabetics and to assess the correlation between the HbA1c level and the severity of coronary artery disease in nondiabetics

Methods and results:All the studied population was subjected to full history taking, detailed clinical examination, 12 lead ECG, fasting blood sugar and 2 hpp, HbA1c level, CBC, Complete lipid profile, echocardiography and diagnostic coronary angiography with detailed interpretation of its result using Gensini scoring system, we also divided the non-diabetics patient into two groups, prediabetics group and non-diabetics group for better evaluation.

Our study shows that there is highly significant relation between HbA1c level and coronary artery disease in nondiabetics. Our results shows also that as the HbA1c level increases in non-diabetics the coronary artery pathology calculated by Gensini scoring system increases also until the patient enters the prediabetic category the risk becomes equal and high independent at the level of HbA1c.

Conclusion:In the non-diabetic patients, higher HbA1c levels are significantly associated with coronary atherosclerosis and coronary artery disease. This correlation is linear and more significant in the non-diabetic group. Although, the risk of coronary artery disease is higher in the prediabetics than the non-diabetic group but as the patient reaches the prediabetes the risk is equal and high independent of the HbA1c level. We found also that the possibility and duration of silent ischemia are more on the prediabetic group. Accordingly, HbA1c could be utilized as an independent risk factor and predictor of CAD and its severity in non-diabetic subjects.

Keywords: HbA1c - coronary atherosclerosis - non-diabetics